**3GPP TSG-RAN WG4 Meeting #110-bis R4-24xxxxx**

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

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## 1 Opening of the meeting

The Chair Xizeng Dai (Huawei) opened the meeting at RAN4#110 on 26/02/2024 at 09:00.

Thomas Chapman provided the welcome speech.

**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 Shan Yang (China Telecom), and BS RF Test Demod session was chaired by RAN4 Vice Chair Gene Fong (Qualcomm). 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 or two additional offline(s) / adhoc session(s) may be scheduled according to RAN conclusion. Total three parallel GTW sessions would be scheduled. Plus, any additonal Offline(s) / ad hoc sesion(s) = ad hoc room or breakout 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 one-way remote participation (going forward there is no longer two-way remote)**

When it is a face-to-face (ordinary) meeting with one-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: 2952**

**Figure 1: Breakdown of contributions type areas for RAN4#110 pre-meeting**

At the beginning of the meeting, there are 1086 CRs (102 was either withdrawn/revised) that have been submitted to the meeting.

- For Rel-15, there are 55 CRs submitted under agenda item 4, 5 and 6.

- For Rel-16, there are 124 CRs submitted under agenda item 4, 5 and 6.

- For Rel-17, there are 317 CRs submitted under agenda item 4, 5 and 6.

- For Rel-18, there are 588 CRs submitted

- There are 80 CAT B CRs

- There are 508 CAT A, D and F CRs

## 2 Meeting agenda, arrangement and meeting report

[**R4-2400001**](file:///D:\RAN4%23110\Docs\R4-2400001.zip) **RAN4#109 Meeting Report**

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

**Decision: Approved.**

[**R4-2400002**](file:///D:\RAN4%23110\Docs\R4-2400002.zip) **Agenda for RAN4#110**

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

**Decision: Approved.**

[**R4-2400003**](file:///D:\RAN4%23110\Docs\R4-2400003.zip) **RAN4#110 Meeting Arrangements and Guidelines**

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

**Decision: Approved.**

## 3 Incoming LS

[**R4-2400004**](file:///D:\RAN4%23110\Docs\R4-2400004.zip) **Reply LS on CPP**

*Type: LS in For: Information  
 Original outgoing LS: R1- 2312393, to RAN2, cc RAN4, RAN3, SA2  
 Source: RAN1*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400005**](file:///D:\RAN4%23110\Docs\R4-2400005.zip) **Reply LS on L1 measurements in LTM**

*Type: LS in For: Information  
 Original outgoing LS: R1-2312443, to RAN2, cc RAN4  
 Source: RAN1*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400006**](file:///D:\RAN4%23110\Docs\R4-2400006.zip) **Reply LS on monitoring of paging occasions for CG-SDT with HD-FDD RedCap UEs**

*Type: LS in For: Information  
 Original outgoing LS: R1-2312522, to RAN2, RAN4, cc -  
 Source: RAN1*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400007**](file:///D:\RAN4%23110\Docs\R4-2400007.zip) **Response on LS on the system parameters for NTN above 10 GHz**

*Type: LS in For: Information  
 Original outgoing LS: R1-2312553, to RAN4, cc -  
 Source: RAN1*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400008**](file:///D:\RAN4%23110\Docs\R4-2400008.zip) **LS On Relative Phase/Power Error Requirements within Port Groups for 8TX UE**

*Type: LS in For: Information  
 Original outgoing LS: R1-2312566, to RAN4, cc -  
 Source: RAN1*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400009**](file:///D:\RAN4%23110\Docs\R4-2400009.zip) **LS on Rel-18 RAN1 UE features list for LTE after RAN1#115**

*Type: LS in For: Information  
 Original outgoing LS: R1-2312571, to RAN2, cc RAN4  
 Source: RAN1*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400010**](file:///D:\RAN4%23110\Docs\R4-2400010.zip) **LS on Rel-18 RAN1 UE features list for NR after RAN1#115**

*Type: LS in For: Information  
 Original outgoing LS: R1-2312574, to RAN2, RAN4, cc -  
 Source: RAN1*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400011**](file:///D:\RAN4%23110\Docs\R4-2400011.zip) **LS on Rel-18 higher-layers parameter list**

*Type: LS in For: Information  
 Original outgoing LS: R1-2312661, to RAN2, RAN3, cc RAN4  
 Source: RAN1*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400012**](file:///D:\RAN4%23110\Docs\R4-2400012.zip) **LS on inter-frequency neighbour cells supporting NR dedicated spectrum less than 5 MHz for FR1**

*Type: LS in For: Information  
 Original outgoing LS: R1-2312668, to RAN2, RAN4, cc -  
 Source: RAN1*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400013**](file:///D:\RAN4%23110\Docs\R4-2400013.zip) **LS on updates to the Rel-18 RAN1 UE features list for NR after RAN1#115**

*Type: LS in For: Information  
 Original outgoing LS: R1-2312707, to RAN2, cc RAN4  
 Source: RAN1*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400014**](file:///D:\RAN4%23110\Docs\R4-2400014.zip) **LS on Rel-18 higher-layers parameter list**

*Type: LS in For: Information  
 Original outgoing LS: R1-2312710, to RAN2, RAN3, cc RAN4  
 Source: RAN1*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400015**](file:///D:\RAN4%23110\Docs\R4-2400015.zip) **Response LS on PEMAX,CA for SL CA**

*Type: LS in For: Information  
 Original outgoing LS: R2-2313605, to RAN4, cc RAN1  
 Source: RAN2*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400016**](file:///D:\RAN4%23110\Docs\R4-2400016.zip) **Reply LS on frequencyInfo for NR SL RSRP measurements**

*Type: LS in For: Information  
 Original outgoing LS: R2-2313618, to RAN5, cc RAN1, RAN4  
 Source: RAN2*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400017**](file:///D:\RAN4%23110\Docs\R4-2400017.zip) **Reply LS on network assistant signalling for advanced receivers**

*Type: LS in For: Information  
 Original outgoing LS: R2-2313706, to RAN4, cc RAN1  
 Source: RAN2*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400018**](file:///D:\RAN4%23110\Docs\R4-2400018.zip) **LS on applicability of maximum aggregated bandwidth UE capabilities to intra-band FR1 CA.**

*Type: LS in For: Information  
 Original outgoing LS: R2-2313745, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400019**](file:///D:\RAN4%23110\Docs\R4-2400019.zip) **LS to RAN4 on Intra-band non-collocated NR-CA. EN-DC**

*Type: LS in For: Information  
 Original outgoing LS: R2-2313889, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400020**](file:///D:\RAN4%23110\Docs\R4-2400020.zip) **LS on UAV UE capabilities and NS values**

*Type: LS in For: Information  
 Original outgoing LS: R2-2313949, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400021**](file:///D:\RAN4%23110\Docs\R4-2400021.zip) **Reply LS to RAN4 on BWP operation without restriction**

*Type: LS in For: Information  
 Original outgoing LS: R2-2313951, to RAN4, cc RAN1  
 Source: RAN2*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400022**](file:///D:\RAN4%23110\Docs\R4-2400022.zip) **LS on UL Tx switching**

*Type: LS in For: Information  
 Original outgoing LS: R2-2313959, to RAN1, RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400023**](file:///D:\RAN4%23110\Docs\R4-2400023.zip) **LS on mobility enhancements for IoT NTN UEs**

*Type: LS in For: Information  
 Original outgoing LS: R2-2313964, to RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400024**](file:///D:\RAN4%23110\Docs\R4-2400024.zip) **LS on RAN2 agreements for satellite switch with resync**

*Type: LS in For: Information  
 Original outgoing LS: R2-2314016, to RAN1, RAN4, cc -  
 Source: RAN2*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400025**](file:///D:\RAN4%23110\Docs\R4-2400025.zip) **LS on defining the missing relative angular offsets and UE gain-related parameters for different power classes**

*Type: LS in For: Information  
 Original outgoing LS: R5-237837, to RAN4, cc -  
 Source: RAN5*

**Abstract:**

[RAN4#110][100] Main Session

**Decision: Noted.**

[**R4-2400333**](file:///D:\RAN4%23110\Docs\R4-2400333.zip) **Parameters of terrestrial component of IMT for sharing and compatibility studies in the frequency bands 4 400-4 800 MHz, 7 125-8 400 MHz and 14.8-15.35 GHz**

*Type: LS in For: Information  
 Original outgoing LS: 240131-TD-0028, to RAN, RAN4, ARIB, ATIS, CCSA, ETSI, IEEE, ITRI, TIA, TSDSI, TTA, TTC, WiMAX Forum, cc -  
 Source: WP5D*

**Decision: Noted.**

[**R4-2400334**](file:///D:\RAN4%23110\Docs\R4-2400334.zip) **LS to 3GPP RAN4 on in-block output power requirements for bands n100 and n101 and on additional unwanted emission limits for band n100**

*Type: LS in For: Information  
 Original outgoing LS: FM(24)058Annex24, to RAN4, cc ETSI TC ERM, ETSI TC RT, UIC UGFA  
 Source: WG FM*

**Decision: Noted.**

[**R4-2402265**](file:///D:\RAN4%23110\Docs\R4-2402265.zip) **Availability of Addendum 1 to Circular Letter 5/LCCE/109**

*Type: LS in For: Information  
 Original outgoing LS: 240131-TD-0028, to RAN, 5G Americas, RAN4, ARIB, ATIS, CCSA, EBU, ETSI, GSMA, IEEE, ITRI, NGMN-Alliance, one6G, TIA, TSDSI, TTA, TTC, WiFi-Alliance, WiMAX-Forum, Wireless Innovation Forum, XGP Forum, cc -  
 Source: WP5D*

**Decision: Noted.**

## 3A Topic Summary (pre-meeting)

This agenda item is only for at-meeting-generated content related to topic summary.

### 3A.1 Main session topic summaries

### 3A.2 RRM session topic summaries

### 3A.3 BSRF\_Demod session topic summaries

## 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 6.1.15/AI 6.2.8, 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.

- The contributions corresponding to incoming LS for Rel-17 and Rel-18 are expected to be submitted in AI 12, if there is a dedicated agenda in AI 12.

### 4.1 UE RF requirements

**Missing MSD evaluation**

[**R4-2400169**](file:///D:\RAN4%23110\Docs\R4-2400169.zip) **On missing MSD for combinations with 3 Bands**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

**Power class fallback**

[**R4-2400180**](file:///D:\RAN4%23110\Docs\R4-2400180.zip) **On misconception of power class fallback**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

**Missing UL MIMO feature in FR1+FR2**

[**R4-2400185**](file:///D:\RAN4%23110\Docs\R4-2400185.zip) **On inter-band CA and NR-DC between FR1 and FR2**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2400181**](file:///D:\RAN4%23110\Docs\R4-2400181.zip) **CR to 38.101-3 on adding the missing UE transmitter requirements for inter-band NR-DC**

*Type: CR For: Agreement  
 38.101-3 v15.24.0 CR-1110 rev Cat: F (Rel-15)  
  
 Source: Apple*

Samsung: In suffix 4, there is description ”Terminal that sup-ports inter-band NR-DC between FR1 and FR2 configuration shall meet the requirements for corresponding CA configuration (suffix A), unless otherwise specified.” It seems enough with this clarification and no need to add new clause for NR-DC,unless NR-CA does nothave such requirements which NR-DC needs. In addition, there is a agreement made in past RAN-P, NR-CA combos shall be specified in advance or atleast proposed in the same meeting with NR-DC, which is because the aforementioned rule.

NTT DOCOMO: We would like to include missing UL MIMO feature in this CR as proposed by [R4-2400185](file:///D:\RAN4%23110\Docs\R4-2400185.zip)(Apple) if it is agreed in this meeting. It seems this aspect is not included in the current version of CRs.Only updating UL CA section is fine to us, as Samsung pointed out above.

Qualcomm: This is not needed since 6.1 already states that ”Unless otherwise stated, requirements for NR transmitter written in TS 38.101-1 [2] and TS 38.101-2 [3] apply and are assumed anchor agnostic.” In addition, it i just a clarification with a possiblity to create a NBC change and infact as Apple explains in discussion paper, it removes the feature when FR1 supports ULMIMO. We could adopt a more general text just referring to 38.101-1 and 38.101-2 witout any sub-clause numbers if ithis change is nsisted.

CHTTL: The added description ”clause 6.2.1 and clause 6.2.1D of TS38.101-2 [3] for NR single carrier and UL-MIMO independently” seems not adding FR1 UL MIMO, some modification might be needed.

ZTE: why only Tx requirements are included? how about Rx requirements? Noted that the FR1-FR1 NR DC requirements in TS38.101-1 have both Tx and Rx requirements sub-clauses although it refer to the corresponding inter-band CA combination

Apple: Thanks companies for the valuable comments. My apology for causing the confusion between the CRs for adding missing Tx requirements and the separate discussion paper to add UL MIMO feature in FR1 band. These are actually two independent proposals. For the CRs, our original thought is that since inter-band CA between FR1 and FR2 has all the Tx require-ments spelt out, we would also need to do the same for inter-band NR DC between FR1 and FR2. Thanks to Samsung’s comment on the Clause 4 clarification: ”Terminal that supports inter-band NR-DC between FR1 and FR2 configuration shall meet the requirements for corresponding CA configuration (suffix A), unless otherwise specified.” We agree that with this clarification, the proposed changes are not needed. We also agree with ZTE that if we would spell out all the requirements, both Tx and Rx requirements should be added. With that being said, we are okay to note the two CAT F CRs and withdraw all the CAT A CRs. For the discussion paper to add UL MIMO feature in FR1 band under inter-band CA and NR-DC between FR1 and FR2, our intention is to first have RAN4’s consent that adding UL MIMO in FR1 band is not a new feature introduction for such configurations. If RAN4 can agree to introduce the feature via a CAT F CR without going through a new WI, then we will bring the CR in next meeting. Or if possible, since adding UL MIMO feature in FR1 band is relatively simple, we can revise the aforementioned CRs to only add the UL MIMO feature for FR1 band in the respective Tx requirements for inter-band CA between FR1 and FR2.

**Decision: Not pursued.**

[**R4-2400182**](file:///D:\RAN4%23110\Docs\R4-2400182.zip) **CR to 38.101-3 on adding the missing UE transmitter requirements for inter-band NR-DC**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1111 rev Cat: F (Rel-16)  
  
 Source: Apple*

Samsung: same comment as above.

NTT DOCOMO: same comment as above.

**Decision: Not pursued.**

[**R4-2400183**](file:///D:\RAN4%23110\Docs\R4-2400183.zip) **CR to 38.101-3 on adding the missing UE transmitter requirements for inter-band NR-DC**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1112 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Withdrawn.**

[**R4-2400184**](file:///D:\RAN4%23110\Docs\R4-2400184.zip) **CR to 38.101-3 on adding the missing UE transmitter requirements for inter-band NR-DC**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1113 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Withdrawn.**

**Receiver sensitivity reference antenna**

[**R4-2400444**](file:///D:\RAN4%23110\Docs\R4-2400444.zip) **[NR\_newRAT-Core] On receiver sensitivity reference antenna**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2400445**](file:///D:\RAN4%23110\Docs\R4-2400445.zip) **(NR\_newRAT-Core) CR on receiver sensitivity reference antenna - R15**

*Type: CR For: Agreement  
 38.101-2 v15.24.0 CR-0692 rev Cat: F (Rel-15)  
  
 Source: Apple*

Qualcomm: The specification of a reference antenna is crucial to translate between dBm of DL power (dBm) and the strength of the DL field (power density in dBm/m^2). Among the options provided by the proponent, the option to improve the existing wording is preferred (and welcome). Exact wording will benefit from discussion in the group.

Vivo: in our understanding, except the tralslate between power of filed and the received power, the 0 dBi reference antenna also imply where the reference point of the REFSENS requirement. In the link budget of REFSENS, the antenna gain and beam forming gain are included which means the referecne point is after anntena array where the power is summed and the 0 dBi reference antenna was applied, so we think current wording is no problem. We are open to discuss furhter to polish current wording rather than remove it.

Nokia: We do not agree.

Apple Reply: Thank you for your comments.

@Qualcomm: If I understand you correctly, this need for reference antenna is to ensure the power at the

reference point (i.e., the center of quiet zone) is indeed the intended value. However, this is part of the testing testup calibration and does not need to be captured in the core requirement for the UE receiver.

If you feel strongly about keeping it here, we can discuss how to improve it. My current thinking is to

change the sentence to something like ”The test signals for receiver requirements is defined assuming a 0 dBi reference antenna located at the center of the quiet zone.” Note test signals include both wanted signal such as receiver sensitivity and interference power.

@vivo: please see above my comments. In addition, I want to clarify that the reference point is the center

of quiet zone, it does not include UE antenna gain.

@Nokia: can you elaborate why you don’t agree? It would be useful to understand your concerns and see

how we can address them.

**Decision: Revised to** [**R4-2403796**](file:///D:\RAN4%23110\Docs\R4-2403796.zip) **(from** [**R4-2400445**](file:///D:\RAN4%23110\Docs\R4-2400445.zip)**).**

[**R4-2403796**](file:///D:\RAN4%23110\Docs\R4-2403796.zip) **(NR\_newRAT-Core) CR on receiver sensitivity reference antenna - R15**

*Type: CR For: Agreement  
 38.101-2 v15.24.0 CR-0692 rev Cat: F (Rel-15)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400446**](file:///D:\RAN4%23110\Docs\R4-2400446.zip) **(NR\_newRAT-Core) CR on receiver sensitivity reference antenna - R16**

*Type: CR For: Agreement  
 38.101-2 v16.18.0 CR-0693 rev Cat: A (Rel-16)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400447**](file:///D:\RAN4%23110\Docs\R4-2400447.zip) **(NR\_newRAT-Core) CR on receiver sensitivity reference antenna - R17**

*Type: CR For: Agreement  
 38.101-2 v17.12.0 CR-0694 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400448**](file:///D:\RAN4%23110\Docs\R4-2400448.zip) **(NR\_newRAT-Core) CR on receiver sensitivity reference antenna - R18**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0695 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

**Channel spacing for intra-band EN-DC**

[**R4-2400868**](file:///D:\RAN4%23110\Docs\R4-2400868.zip) **(NR\_newRAT-Core)Discussion on the channel spacing for intra-band EN-DC**

*Type: other For: Approval  
 38.101-3 v CR- rev Cat: (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2400864**](file:///D:\RAN4%23110\Docs\R4-2400864.zip) **(NR\_newRAT-Core)R15 Cat-F CR 38.101-3 channel spacing for intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v15.24.0 CR-1138 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

Nokia: This CR looks a strange way to fix the field issue. UE should be fixed instead of the standard in my view.

CHTTL: Maybe it is better not to change the definition of non-contiguous intra-band EN-DC, maybe we can wait the result of the discussion.

Huawei: Reply to Nokia Hisashi: UE changing behavior may lead to additional test case. The change is aligned with RAN4’s conclusion in Rel-15 [R4-1813862](file:///D:\RAN4%23110\Docs\R4-1813862.zip) that if a UE supports non-contiguous that it also supports contiguous for intra-band EN-DC.

Nokia: Reply to Huawei: The proposed change is inconsistent with the definition of non-contiguous CA, which has been used since LTE. If UE supports contiguous EN-DC, then UE shall signal its capability to the network. Including the con-tiguous EN-DC into the category of non-contiguous CA looks a strange solution to us.

HuaWei: Reply to Nokia:

Thank you Hisashi-san for sharing the view. Again, the CR is based on RAN4 conclusion for intra-band EN-DC, rather than intra-band CA. Actually for contiguity of intra-band EN-DC, the UE reports nothing if it only supports the contiguous spectrum for the intra-band EN-DC combination. In this case, contiguous as a default capability should be supported when UE reports ’non-contiguous’. The network can configure intra-band contiguous EN-DC to a UE that reports ’contiguous’. Based on the CR, the field issue can be solved. In addition, in your initial comments, UE should be fixed. I’d appreciate it if you could provide the specific way how the UE be fixed.

**Decision: Not pursued.**

[**R4-2400865**](file:///D:\RAN4%23110\Docs\R4-2400865.zip) **(NR\_newRAT-Core)R16 Cat-A CR 38.101-3 channel spacing for intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1139 rev Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

[**R4-2400866**](file:///D:\RAN4%23110\Docs\R4-2400866.zip) **(NR\_newRAT-Core)R17 Cat-A CR 38.101-3 channel spacing for intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1140 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

[**R4-2400867**](file:///D:\RAN4%23110\Docs\R4-2400867.zip) **(NR\_newRAT-Core)R18 Cat-A CR 38.101-3 channel spacing for intra-band EN-DC**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1141 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

**Unify the symbol of the minimum guardband**

[**R4-2401206**](file:///D:\RAN4%23110\Docs\R4-2401206.zip) **Discussion on the symbols for guardband**

*Type: discussion For: Endorsement  
 Source: xiaomi*

**Decision: Noted.**

[**R4-2401207**](file:///D:\RAN4%23110\Docs\R4-2401207.zip) **CR for Rel-15 38.101-1 to unify the minimum guardband symbol**

*Type: CR For: Agreement  
 38.101-1 v15.24.0 CR-2073 rev Cat: F (Rel-15)  
  
 Source: Xiaomi*

Nokia flag: for Rel-15 we should be careful about the changes.

CHTTL: seems like there is no GBChannel(k) in the definition after the changes

Xiaomi Reply: Answer CHTTL: I don’t think GBChannel(k) is needed, like the definition of BWChannel(k), it can be added the sequence number natruely based on BWChannel.

**Decision: Withdrawn.**

[**R4-2401208**](file:///D:\RAN4%23110\Docs\R4-2401208.zip) **CR for Rel-16 38.101-1 to unify the minimum guardband symbol**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2074 rev Cat: A (Rel-16)  
  
 Source: xiaomi*

**Decision: Withdrawn.**

[**R4-2401209**](file:///D:\RAN4%23110\Docs\R4-2401209.zip) **CR for Rel-17 38.101-1 to unify the minimum guardband symbol**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2075 rev Cat: A (Rel-17)  
  
 Source: xiaomi*

**Decision: Withdrawn.**

[**R4-2401210**](file:///D:\RAN4%23110\Docs\R4-2401210.zip) **CR for Rel-18 38.101-1 to unify the minimum guardband symbol**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2076 rev Cat: A (Rel-18)  
  
 Source: xiaomi*

**Decision: Revised to** [**R4-2403797**](file:///D:\RAN4%23110\Docs\R4-2403797.zip) **(from** [**R4-2401210**](file:///D:\RAN4%23110\Docs\R4-2401210.zip)**).**

[**R4-2403797**](file:///D:\RAN4%23110\Docs\R4-2403797.zip) **CR for Rel-18 38.101-1 to unify the minimum guardband symbol**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2076 rev Cat: F (Rel-18)  
  
 Source: xiaomi*

**Decision: Agreed.**

[**R4-2401211**](file:///D:\RAN4%23110\Docs\R4-2401211.zip) **CR for Rel-15 38.101-2 to unify the minimum guardband symbol.**

*Type: CR For: Agreement  
 38.101-2 v15.24.0 CR-0711 rev Cat: F (Rel-15)  
  
 Source: Xiaomi*

Nokia flag

**Decision: Withdrawn.**

[**R4-2401212**](file:///D:\RAN4%23110\Docs\R4-2401212.zip) **CR for Rel-16 38.101-2 to unify the minimum guardband symbol**

*Type: CR For: Agreement  
 38.101-2 v16.18.0 CR-0712 rev Cat: A (Rel-16)  
  
 Source: xiaomi*

**Decision: Withdrawn.**

[**R4-2401213**](file:///D:\RAN4%23110\Docs\R4-2401213.zip) **CR for Rel-17 38.101-2 to unify the minimum guardband symbol**

*Type: CR For: Agreement  
 38.101-2 v17.12.0 CR-0713 rev Cat: A (Rel-17)  
  
 Source: xiaomi*

**Decision: Withdrawn.**

[**R4-2401214**](file:///D:\RAN4%23110\Docs\R4-2401214.zip) **CR for Rel-18 38.101-2 to unify the minimum guardband symbol**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0714 rev Cat: A (Rel-18)  
  
 Source: xiaomi*

**Decision: Revised to** [**R4-2403798**](file:///D:\RAN4%23110\Docs\R4-2403798.zip) **(from** [**R4-2401214**](file:///D:\RAN4%23110\Docs\R4-2401214.zip)**).**

[**R4-2403798**](file:///D:\RAN4%23110\Docs\R4-2403798.zip) **CR for Rel-18 38.101-2 to unify the minimum guardband symbol**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0714 rev Cat: F (Rel-18)  
  
 Source: xiaomi*

**Decision: Agreed.**

**MOP table for inter-band EN-DC HPUE**

[**R4-2401991**](file:///D:\RAN4%23110\Docs\R4-2401991.zip) **Further discussion on the HPUE inter-band uplink EN-DC support in the MOP table**

*Type: discussion For: Discussion  
 Source: CHTTL*

**Decision: Noted.**

[**R4-2401992**](file:///D:\RAN4%23110\Docs\R4-2401992.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 v16.18.0 CR-1162 rev Cat: F (Rel-16)  
  
 Source: CHTTL*

Qualcomm: Qualcomm (Toni) flags [R4-2401992](file:///D:\RAN4%23110\Docs\R4-2401992.zip): Why is DC\_66A-66A\_n78A removed from MOP instead of adding related requirements to other tables. It seems corresponding NR CA configuration is supported in rel-16.

**Decision: Agreed.**

[**R4-2401995**](file:///D:\RAN4%23110\Docs\R4-2401995.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 v17.12.0 CR-1163 rev Cat: F (Rel-17)  
  
 Source: CHTTL*

Qualcomm (Toni) flags [R4-2401995](file:///D:\RAN4%23110\Docs\R4-2401995.zip): similar comment as rel-16

**Decision: Agreed.**

[**R4-2401996**](file:///D:\RAN4%23110\Docs\R4-2401996.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 v18.4.0 CR-1164 rev Cat: F (Rel-18)  
  
 Source: CHTTL*

Skyworks: For some combinations, this CR introduces power class requirements for UL con-figurations that are not specified in ”Table 5.5B.4.1-1 Inter-band EN-DC configurations within FR1 (two bands)”. For example: PC3 for UL DC\_3C\_n5A, and PC3 for UL DC\_40C\_n41A.

Qualcomm (Toni) flags [R4-2401996](file:///D:\RAN4%23110\Docs\R4-2401996.zip): DC\_7A-n80A still remains in wrong position in the table. DC\_41C\_n77A powerclass is downgraded.

**Decision: Revised to** [**R4-2403799**](file:///D:\RAN4%23110\Docs\R4-2403799.zip) **(from** [**R4-2401996**](file:///D:\RAN4%23110\Docs\R4-2401996.zip)**).**

[**R4-2403799**](file:///D:\RAN4%23110\Docs\R4-2403799.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 v18.4.0 CR-1164 rev Cat: F (Rel-18)  
  
 Source: CHTTL*

Skyworks: For some combinations, this CR introduces power class requirements for UL con-figurations that are not specified in ”Table 5.5B.4.1-1 Inter-band EN-DC configurations within FR1 (two bands)”. For example: PC3 for UL DC\_3C\_n5A, and PC3 for UL DC\_40C\_n41A.

Qualcomm (Toni) flags [R4-2401996](file:///D:\RAN4%23110\Docs\R4-2401996.zip): DC\_7A-n80A still remains in wrong position in the table. DC\_41C\_n77A powerclass is downgraded.

**Decision: Agreed.**

**FR2 PRACH requirements**

[**R4-2401792**](file:///D:\RAN4%23110\Docs\R4-2401792.zip) **(NR\_newRAT-Core) Discussion on FR2 PRACH requirements**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2402257**](file:///D:\RAN4%23110\Docs\R4-2402257.zip) **(NR\_newRAT-Core) Discussion and LS on PRACH requirements handling**

*Type: other For: Decision  
 Source: Samsung*

**Abstract:**

MCC: This is a discussion paper on PRACH requirements handling. In the annex a draft LS is proposed to RAN5 on conformance test of PRACH requirements.

**Decision: Noted.**

[**R4-2402258**](file:///D:\RAN4%23110\Docs\R4-2402258.zip) **(NR\_newRAT-Core) Clarification on requirements for initial access and RRC\_Inactive**

*Type: CR For: Agreement  
 38.101-2 v15.24.0 CR-0722 rev Cat: F (Rel-15)  
  
 Source: Samsung*

Qualcomm: [R4-2402258](file:///D:\RAN4%23110\Docs\R4-2402258.zip) Disucssion needed - not clear why this wording is required.

Nokia: (R15) This feature belongs to Rel18. If we change the earlier release correspondingly, then what is the difference between Rel 15 and Rel18. (Hisashi)

Samsung Reply: Response to Qualcomm and Nokia:

- without this change, a R15 UE is required to meet both min peak EIRP and spherical coverage of PRACH, while a R18 UE only need to meet spherical coverage of PRACH. it seems R15 UE is more advanced than R18 UE.

- with this change, it demonstrates that only advanced UE (R18 onwards) need to meet spherical coverage of PRACH. previous release UE is not required to meet the requirements for enhanced feature.

Nokia: I think before the PRACH requirement was defined in Rel18, no need to test PRACH in both Rel15 and Rel18. Now we have it in Rel18 only, but it does not mean Rel15 needs to support it. I still think we do not need to clarify it. But it is OK for us if other companies share the same opinion with Samsung.

**Decision: Revised to** [**R4-2403800**](file:///D:\RAN4%23110\Docs\R4-2403800.zip) **(from** [**R4-2402258**](file:///D:\RAN4%23110\Docs\R4-2402258.zip)**).**

[**R4-2403800**](file:///D:\RAN4%23110\Docs\R4-2403800.zip) **(NR\_newRAT-Core) Clarification on requirements for initial access and RRC\_Inactive**

*Type: CR For: Agreement  
 38.101-2 v15.24.0 CR-0722 rev Cat: F (Rel-15)  
  
 Source: Samsung*

**Decision: Agreed.**

[**R4-2402259**](file:///D:\RAN4%23110\Docs\R4-2402259.zip) **(NR\_newRAT-Core) Clarification on requirements for initial access and RRC\_Inactive**

*Type: CR For: Agreement  
 38.101-2 v16.18.0 CR-0723 rev Cat: A (Rel-16)  
  
 Source: Samsung*

**Decision: Agreed.**

[**R4-2402260**](file:///D:\RAN4%23110\Docs\R4-2402260.zip) **(NR\_newRAT-Core) Clarification on requirements for initial access and RRC\_Inactive**

*Type: CR For: Agreement  
 38.101-2 v17.12.0 CR-0724 rev Cat: A (Rel-17)  
  
 Source: Samsung*

**Decision: Agreed.**

[**R4-2402261**](file:///D:\RAN4%23110\Docs\R4-2402261.zip) **(NR\_newRAT-Core) Clarification on requirements for initial access and RRC\_Inactive**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0725 rev Cat: A (Rel-18)  
  
 Source: Samsung*

**Decision: Agreed.**

**Missing A-MPR for B53**

[**R4-2402266**](file:///D:\RAN4%23110\Docs\R4-2402266.zip) **Discussion on missing AMPR for B53**

*Type: discussion For: Approval  
 36.101 v CR- rev Cat: (Rel-16)  
  
 Source: MediaTek Inc.*

**Abstract:**

Chair: Treat this under email thread [101].

**Decision: Noted.**

[**R4-2402274**](file:///D:\RAN4%23110\Docs\R4-2402274.zip) **CR for LTE B53 AMPR requirements**

*Type: CR For: Agreement  
 36.101 v16.19.0 CR-6041 rev Cat: F (Rel-16)  
  
 Source: MediaTek Inc.*

**Abstract:**

Chair: Treat this under email thread [101].

Nokia: [R4-2402274](file:///D:\RAN4%23110\Docs\R4-2402274.zip) (R16) Bit late to be changed. Furthermore there are no simulation results shown. (Petri)

Qualcomm: Qualcomm (Toni) flags [R4-2402274](file:///D:\RAN4%23110\Docs\R4-2402274.zip): The original Tdoc where the need for A-MPR is raised is based on different emission requirements that ended up being specified. Further check (until next meeting) is needed if the A-MPR is really needed.

**Decision: Postponed.**

[**R4-2402280**](file:///D:\RAN4%23110\Docs\R4-2402280.zip) **CR for LTE B53 AMPR requirements**

*Type: CR For: Agreement  
 36.101 v17.12.0 CR-6042 rev Cat: A (Rel-17)  
  
 Source: MediaTek Inc.*

**Abstract:**

Chair: Treat this under email thread [101].

**Decision: Withdrawn.**

[**R4-2402281**](file:///D:\RAN4%23110\Docs\R4-2402281.zip) **CR for LTE B53 AMPR requirements**

*Type: CR For: Agreement  
 36.101 v18.4.0 CR-6043 rev Cat: A (Rel-18)  
  
 Source: MediaTek Inc.*

**Abstract:**

Chair: Treat this under email thread [101].

**Decision: Withdrawn.**

**NR-U channel spacing**

[**R4-2400364**](file:///D:\RAN4%23110\Docs\R4-2400364.zip) **NR-U Nominal channel spacing**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc., Nokia*

**Decision: Noted.**

[**R4-2400644**](file:///D:\RAN4%23110\Docs\R4-2400644.zip) **NR-U Nominal Channel Spacing and Intra-band CA combinations**

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

**Abstract:**

Considerations on how to resolve the existing discrepancy between specified NR-U Intra-band Contiguous CA combinations and nominal channel spacing are provided in this contribution.

**Decision: Noted.**

[**R4-2400361**](file:///D:\RAN4%23110\Docs\R4-2400361.zip) **CR to TS 38.101-1 Rel-16 NR-U Nominal channel spacing**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2006 rev Cat: F (Rel-16)  
  
 Source: Skyworks Solutions, Inc., Nokia*

Huawei: Huawei (Liehai) flags [R4-2400361](file:///D:\RAN4%23110\Docs\R4-2400361.zip), [R4-2402238](file:///D:\RAN4%23110\Docs\R4-2402238.zip), For NR-U the charnels are fixed with aobout 20 MHz spacing, so no need to define the spacing by NR method.

Ericsson: Flag [R4-2400361](file:///D:\RAN4%23110\Docs\R4-2400361.zip)/[R4-2402238](file:///D:\RAN4%23110\Docs\R4-2402238.zip), the nominal carrier spacing is a single value for a given BW combination, can be specified as in [R4-2001318](file:///D:\RAN4%23110\Docs\R4-2001318.zip) (not agreed) for example.

Qualcomm: Qualcomm flags [R4-2400361](file:///D:\RAN4%23110\Docs\R4-2400361.zip) and [R4-2302238](file:///D:\RAN4%23110\Docs\R4-2302238.zip). We need more discussion and time to check how to handle this topic. We outlined a few options in our Tdoc [R4-2300644](file:///D:\RAN4%23110\Docs\R4-2300644.zip).

**Decision: Postponed.**

[**R4-2400360**](file:///D:\RAN4%23110\Docs\R4-2400360.zip) **CR to TS 38.101-1 Rel-17 NR-U Nominal channel spacing**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2005 rev Cat: A (Rel-17)  
  
 Source: Skyworks Solutions Inc., Nokia*

**Decision: Withdrawn.**

[**R4-2400359**](file:///D:\RAN4%23110\Docs\R4-2400359.zip) **CR to TS 38.101-1 Rel-18 NR-U Nominal channel spacing**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2004 rev Cat: A (Rel-18)  
  
 Source: Skyworks Solutions Inc., Nokia*

**Decision: Withdrawn.**

**AS-SRS relaxation for FR2**

[**R4-2401884**](file:///D:\RAN4%23110\Docs\R4-2401884.zip) **(NR\_newRAT-Core) CR for Rel-15 TS 38.101-2: Introduction of ?TRxSRS**

*Type: CR For: Agreement  
 38.101-2 v15.24.0 CR-0718 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

Qualcomm: Discussion needed, not sure why this change is required. CR merely identiies ’porting’ from FR1 as moti-vation but hardware assumptions between FR1 and FR2 differ.

Vivo: In my understanding, the number of Tx chain and Rx chain is equal in typical FR2 device currently, so the SRS antenna switching is not needed. Considering the UL performance is already not good enough, we prefer not to further encourage UE to pursue lower performance. In addition, the value of adiitional insertion loss also need more discussion.

Nokia: [R4-2401884](file:///D:\RAN4%23110\Docs\R4-2401884.zip) (R15) (Hiro)

HUAWEI: It would be beneficial to firstly discuss whether imbalance Tx/Rx number indication on AS-SRS capability can be possible especially we consider e.g. a Rel-18 UE which supports multiRx but not STxMP. We can hold on the discussion on specific relaxation dB for the time being.

HUAWEI: To Vivo: Thank you for sharing your understanding. But our CR is only for AS-SRS transmission instead of touching PUSCH’s core RF requirements including max/min EIRP or spherical coverage.

NTT DOCOMO:

Flag [R4-2401884](file:///D:\RAN4%23110\Docs\R4-2401884.zip)(Huawei) Justification is needed such as assumption of UE RF architecture and how delta TRxSRS comes from in FR2 case before agreeing the CRs.

**Decision: Not pursued.**

[**R4-2401885**](file:///D:\RAN4%23110\Docs\R4-2401885.zip) **(NR\_newRAT-Core) CR for Rel-16 TS 38.101-2: Introduction of ?TRxSRS**

*Type: CR For: Agreement  
 38.101-2 v16.18.0 CR-0719 rev Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

[**R4-2401886**](file:///D:\RAN4%23110\Docs\R4-2401886.zip) **(NR\_newRAT-Core) CR for Rel-17 TS 38.101-2: Introduction of ?TRxSRS**

*Type: CR For: Agreement  
 38.101-2 v17.12.0 CR-0720 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

[**R4-2401887**](file:///D:\RAN4%23110\Docs\R4-2401887.zip) **(NR\_newRAT-Core) CR for Rel-18 TS 38.101-2: Introduction of ?TRxSRS**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0721 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

**CRs for 38.101-1**

NR-U A-MPR

[**R4-2400517**](file:///D:\RAN4%23110\Docs\R4-2400517.zip) **CR to TS38.101-1 Rel-16 CAT-F: On corrections for NR-U R16 A-MPR requirements**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2009 rev Cat: F (Rel-16)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400518**](file:///D:\RAN4%23110\Docs\R4-2400518.zip) **CR to TS38.101-1 Rel-17 CAT-A: On corrections for NR-U R16 A-MPR requirements**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2010 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400519**](file:///D:\RAN4%23110\Docs\R4-2400519.zip) **CR to TS38.101-1 Rel-18 CAT-A: On corrections for NR-U R16 A-MPR requirements**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2011 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

Missing DMRS configuration

[**R4-2400569**](file:///D:\RAN4%23110\Docs\R4-2400569.zip) **(NR\_RF\_FR1) Introduction of missing DMRS configuration restriction for intra-ULCA in FR1**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2016 rev Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Aligning FR1 with FR2 practice. Restriction is applicable when multiple CCs are transmitted from the same Tx chain

Nokia: [R4-2400569](file:///D:\RAN4%23110\Docs\R4-2400569.zip) Should be in RAN1 specs. (Johannes)

**Decision: Agreed.**

[**R4-2400570**](file:///D:\RAN4%23110\Docs\R4-2400570.zip) **(NR\_RF\_FR1) Introduction of missing DMRS configuration restriction for intra-ULCA in FR1**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2017 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Aligning FR1 with FR2 practice. Restriction is applicable when multiple CCs are transmitted from the same Tx chain

**Decision: Agreed.**

[**R4-2400571**](file:///D:\RAN4%23110\Docs\R4-2400571.zip) **(NR\_RF\_FR1) Introduction of missing DMRS configuration restriction for intra-ULCA in FR1**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2018 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Aligning FR1 with FR2 practice. Restriction is applicable when multiple CCs are transmitted from the same Tx chain

**Decision: Agreed.**

A-MPR for PC2

[**R4-2400630**](file:///D:\RAN4%23110\Docs\R4-2400630.zip) **(TEI16) almost contiguous A-MPR for PC2**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2041 rev Cat: F (Rel-16)  
  
 Source: Nokia*

Qualcomm (Toni) flag (R16): Also PC1.5 is missing from the CR, we aim to check during this week if same allowance works for PC1.5.

**Decision: Revised to R4-2403870 (from R4-2400630).**

[**R4-2403870**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403870.zip) **(TEI16) almost contiguous A-MPR for PC2**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2041 rev Cat: F (Rel-16)  
  
 Source: Nokia*

Qualcomm (Toni) flag (R16): Also PC1.5 is missing from the CR, we aim to check during this week if same allowance works for PC1.5.

**Decision: Agreed.**

[**R4-2400631**](file:///D:\RAN4%23110\Docs\R4-2400631.zip) **(TEI16) almost contiguous A-MPR for PC2**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2042 rev Cat: A (Rel-17)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2400632**](file:///D:\RAN4%23110\Docs\R4-2400632.zip) **(TEI16) almost contiguous A-MPR for PC2**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2043 rev Cat: A (Rel-18)  
  
 Source: Nokia*

**Decision: Agreed.**

CA MPR correction

[**R4-2400708**](file:///D:\RAN4%23110\Docs\R4-2400708.zip) **(NR\_RF\_FR1-Core) CA MPR correction**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2046 rev Cat: F (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

[**R4-2400709**](file:///D:\RAN4%23110\Docs\R4-2400709.zip) **CA MPR correction**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2047 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

[**R4-2400710**](file:///D:\RAN4%23110\Docs\R4-2400710.zip) **CA MPR correction**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2048 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Decision: Agreed.**

P-MPR for intra-band NC CA

[**R4-2400940**](file:///D:\RAN4%23110\Docs\R4-2400940.zip) **CR to 38.101-1 Correct P-MPR in PcmaxL calculation formula for intra-band non-contiguous CA**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2062 rev Cat: F (Rel-16)  
  
 Source: China Telecom*

**Abstract:**

Correct the P-MPR to be P-MPRc in the PCMAX\_L calculation formula for intra-band contiguous CA in 6.2A.4.1.2.

CHTTL: flag [R4-2400940](file:///D:\RAN4%23110\Docs\R4-2400940.zip) Note that there is a description on the above There is one power management term for

the UE, denoted P-MPR, and P-MPR c = P-MPR.

Huawei: Huawei (Jin) flags [R4-2400940](file:///D:\RAN4%23110\Docs\R4-2400940.zip). The change is not needed for the reason as CHTTL points out. For [R4-2401380](file:///D:\RAN4%23110\Docs\R4-2401380.zip), ”device is capable of power class x” is changed to ”device supports power class x”, which has no difference. Note that RAN4 used ”supported power class” and ”highest supported power class” in past discussions. We prefer the wording in our CR [R4-2402219](file:///D:\RAN4%23110\Docs\R4-2402219.zip), which says ”device is power class x”. We believe this is equivalent to say ”power class x device”.

**Decision: Not pursued.**

[**R4-2400941**](file:///D:\RAN4%23110\Docs\R4-2400941.zip) **CR to 38.101-1 Correct P-MPR in PcmaxL calculation formula for intra-band non-contiguous CA**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2063 rev Cat: A (Rel-17)  
  
 Source: China Telecom*

**Decision: Withdrawn.**

[**R4-2400942**](file:///D:\RAN4%23110\Docs\R4-2400942.zip) **CR to 38.101-1 Correct P-MPR in PcmaxL calculation formula for intra-band non-contiguous CA**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2064 rev Cat: A (Rel-18)  
  
 Source: China Telecom*

**Decision: Withdrawn.**

Harmonic mixing MSD

[**R4-2401252**](file:///D:\RAN4%23110\Docs\R4-2401252.zip) **(NR\_newRAT-Core) Correct on the NOTE for harmonic mixing MSD valid test point**

*Type: CR For: Agreement  
 38.101-1 v15.24.0 CR-2079 rev Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2401253**](file:///D:\RAN4%23110\Docs\R4-2401253.zip) **(NR\_newRAT-Core) Correct the equation in the NOTE for harmonic mixing MSD**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2080 rev Cat: F (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2401254**](file:///D:\RAN4%23110\Docs\R4-2401254.zip) **(NR\_newRAT-Core) Correct the equation in the NOTE for harmonic mixing MSD**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2081 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2401255**](file:///D:\RAN4%23110\Docs\R4-2401255.zip) **(NR\_newRAT-Core) Correct the equation in the NOTE for harmonic mixing MSD**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2082 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

Pcmax tolerance

[**R4-2401256**](file:///D:\RAN4%23110\Docs\R4-2401256.zip) **(NR\_newRAT-Core) Correct the Pcmax tolerance for inter-band CA**

*Type: CR For: Agreement  
 38.101-1 v15.24.0 CR-2083 rev Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

Qualcomm (Ville) f;ag [R4-2401256](file:///D:\RAN4%23110\Docs\R4-2401256.zip)/[R4-2401258](file:///D:\RAN4%23110\Docs\R4-2401258.zip). While the chenge maybe ok, I would like to requst more time to check with my backoffice. Last week was holiday week in US. I woudl appreceita if we could come back in the next meeting.

**Decision: Postponed.**

[**R4-2401257**](file:///D:\RAN4%23110\Docs\R4-2401257.zip) **(NR\_newRAT-Core) Correct the Pcmax tolerance for inter-band CA**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2084 rev Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Withdrawn.**

[**R4-2401258**](file:///D:\RAN4%23110\Docs\R4-2401258.zip) **(NR\_newRAT-Core) Correct the Pcmax tolerance for inter-band CA and TxD**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2085 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Postponed.**

[**R4-2401259**](file:///D:\RAN4%23110\Docs\R4-2401259.zip) **(NR\_newRAT-Core) Correct the Pcmax tolerance for inter-band CA and TxD**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2086 rev Cat: A (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Withdrawn.**

Power class x capable UE

[**R4-2401380**](file:///D:\RAN4%23110\Docs\R4-2401380.zip) **(NR\_newRAT-Core) CR to remove the word "capable" in "power class x capable UE" - TS38.101-1, Rel-15, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v15.24.0 CR-2091 rev Cat: F (Rel-15)  
  
 Source: Anritsu Limited*

Samsung: Samsung (Tina) flag [R4-2401380](file:///D:\RAN4%23110\Docs\R4-2401380.zip) (Anritsu) and [R4-2402219](file:///D:\RAN4%23110\Docs\R4-2402219.zip)(Huawei): We are supportive to the midifica-

tion. Either the description of Anristsu’s CR or Huawei’s CR is fine for us. Two CR can be merged.

CHTTL: Similar changes in [R4-2401380](file:///D:\RAN4%23110\Docs\R4-2401380.zip) and [R4-2402219](file:///D:\RAN4%23110\Docs\R4-2402219.zip), maybe can be merged.

**Decision: Merged (with R4-24xxxxx).**

[**R4-2401381**](file:///D:\RAN4%23110\Docs\R4-2401381.zip) **(NR\_newRAT-Core) CR to remove the word "capable" in "power class x capable UE" - TS38.101-1, Rel-16, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2092 rev Cat: F (Rel-16)  
  
 Source: Anritsu Limited*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2401382**](file:///D:\RAN4%23110\Docs\R4-2401382.zip) **(NR\_newRAT-Core) CR to remove the word "capable" in "power class x capable UE" - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2093 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2401383**](file:///D:\RAN4%23110\Docs\R4-2401383.zip) **(NR\_newRAT-Core) CR to remove the word "capable" in "power class x capable UE" - TS38.101-1, Rel-18, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2094 rev Cat: F (Rel-18)  
  
 Source: Anritsu Limited*

**Decision: Merged (with R4-24xxxxx).**

Specific channel bandwidths for CA including n48

[**R4-2401387**](file:///D:\RAN4%23110\Docs\R4-2401387.zip) **(NR\_n48-Core) CR to correct or add note applicable for specific channel bandwidths for CA including band n48 - TS38.101-1, Rel-16, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2098 rev Cat: F (Rel-16)  
  
 Source: Anritsu Limited*

Nokia: [R4-2401387](file:///D:\RAN4%23110\Docs\R4-2401387.zip) - 89 (R16)Very confusing reason for change, (Petri)

CHTTL: flag [R4-2401387](file:///D:\RAN4%23110\Docs\R4-2401387.zip) Seems not very big difference before and after the changes?

**Decision: Agreed.**

[**R4-2401388**](file:///D:\RAN4%23110\Docs\R4-2401388.zip) **(NR\_n48-Core) CR to correct or add note applicable for specific channel bandwidths for CA including band n48 - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2099 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

[**R4-2401389**](file:///D:\RAN4%23110\Docs\R4-2401389.zip) **(NR\_n48-Core) CR to correct or add note applicable for specific channel bandwidths for CA including band n48 - TS38.101-1, Rel-18, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2100 rev Cat: F (Rel-18)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

Definition of suffix used for SUL

[**R4-2401392**](file:///D:\RAN4%23110\Docs\R4-2401392.zip) **(NR\_newRAT-Core) CR to correct "Supplement" to "Supplementary" in the definition of the suffix used for SUL - TS38.101-1, Rel-15, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v15.24.0 CR-2103 rev Cat: F (Rel-15)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

[**R4-2401393**](file:///D:\RAN4%23110\Docs\R4-2401393.zip) **(NR\_newRAT-Core) CR to correct "Supplement" to "Supplementary" in the definition of the suffix used for SUL - TS38.101-1, Rel-16, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2104 rev Cat: F (Rel-16)  
  
 Source: Anritsu Limited*

**Decision: Revised to** [**R4-2403825**](file:///D:\RAN4%23110\Docs\R4-2403825.zip) **(from** [**R4-2401393**](file:///D:\RAN4%23110\Docs\R4-2401393.zip)**).**

[**R4-2403825**](file:///D:\RAN4%23110\Docs\R4-2403825.zip) **(NR\_newRAT-Core) CR to correct "Supplement" to "Supplementary" in the definition of the suffix used for SUL - TS38.101-1, Rel-16, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2104 rev Cat: F (Rel-16)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

[**R4-2401394**](file:///D:\RAN4%23110\Docs\R4-2401394.zip) **(NR\_newRAT-Core) CR to correct "Supplement" to "Supplementary" in the definition of the suffix used for SUL - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2105 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

**Decision: Revised to** [**R4-2403802**](file:///D:\RAN4%23110\Docs\R4-2403802.zip) **(from** [**R4-2401394**](file:///D:\RAN4%23110\Docs\R4-2401394.zip)**).**

[**R4-2403802**](file:///D:\RAN4%23110\Docs\R4-2403802.zip) **(NR\_newRAT-Core) CR to correct "Supplement" to "Supplementary" in the definition of the suffix used for SUL - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2105 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

[**R4-2401395**](file:///D:\RAN4%23110\Docs\R4-2401395.zip) **(NR\_newRAT-Core) CR to correct "Supplement" to "Supplementary" in the definition of the suffix used for SUL - TS38.101-1, Rel-18, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2106 rev Cat: F (Rel-18)  
  
 Source: Anritsu Limited*

**Decision: Revised to** [**R4-2403803**](file:///D:\RAN4%23110\Docs\R4-2403803.zip) **(from** [**R4-2401395**](file:///D:\RAN4%23110\Docs\R4-2401395.zip)**).**

[**R4-2403803**](file:///D:\RAN4%23110\Docs\R4-2403803.zip) **(NR\_newRAT-Core) CR to correct "Supplement" to "Supplementary" in the definition of the suffix used for SUL - TS38.101-1, Rel-18, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2106 rev Cat: F (Rel-18)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

Finterferer (offset) for intra-band CA ACS and IBB requirements

[**R4-2401771**](file:///D:\RAN4%23110\Docs\R4-2401771.zip) **(NR\_newRAT-Core) CR for TS 38.101-1 to correct the Finterferer (offset) for intra-band CA ACS and IBB requirements (R15)**

*Type: CR For: Agreement  
 38.101-1 v15.24.0 CR-2116 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

Nokia: [R4-2401771](file:///D:\RAN4%23110\Docs\R4-2401771.zip) (R15) Foffset is not defined anywhere, I wonder if more changes are needed. In LTE Finter-

ferer(offset) is a number and do not include Foffset (Petri)

HUAWEI: To Petri (clarification for 2401771), if we check the clause 3.2 symbol, we can find the definition of Foffset.

Foffset Frequency offset from FC\_high to the higher edge or FC\_low to the lower edge. The issue is here that we have different meaning of FInterferer (offset) between <=2700MHz case and >=3300MHz case in NR spec. We have to fix them. I guess LTE Finterferer(offset) has the same meaning of <=2700MHz case for NR.

Ericsson: Flag [R4-2401771](file:///D:\RAN4%23110\Docs\R4-2401771.zip): are these changes to Rel-15 necessary? F\_offset is not defined.

Qualcomm: Qualcomm (Antti) flags [R4-2401771](file:///D:\RAN4%23110\Docs\R4-2401771.zip). The intention is understood, but this has been in the specs since Rel-15 so not sure if this must be done.

**Decision: Agreed.**

[**R4-2401772**](file:///D:\RAN4%23110\Docs\R4-2401772.zip) **(NR\_newRAT-Core) CR for TS 38.101-1 to correct the Finterferer (offset) for intra-band CA ACS and IBB requirements (R16)**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2117 rev Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2401773**](file:///D:\RAN4%23110\Docs\R4-2401773.zip) **(NR\_newRAT-Core) CR for TS 38.101-1 to correct the Finterferer (offset) for intra-band CA ACS and IBB requirements (R17)**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2118 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2401774**](file:///D:\RAN4%23110\Docs\R4-2401774.zip) **(NR\_newRAT-Core) CR for TS 38.101-1 to correct the Finterferer (offset) for intra-band CA ACS and IBB requirements (R18)**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2119 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

Channel raster

[**R4-2402143**](file:///D:\RAN4%23110\Docs\R4-2402143.zip) **(NR\_RF\_FR1) CR to TS 38.101-1: Channel raster to resource element mapping**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2141 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

Nokia: [R4-2402143](file:///D:\RAN4%23110\Docs\R4-2402143.zip) (R16) (Hisashi)

Nokia: We had our proposed changes in [R4-2312525](file:///D:\RAN4%23110\Docs\R4-2312525.zip) last year. If we fix this section, we should make it crystal clear without any potential confusion. So can you consider revising a CR taking our proposal into account? What must be mapped to channel raster is not very clear to us yet.

Ericsson: Flag [R4-2402143](file:///D:\RAN4%23110\Docs\R4-2402143.zip): the n\_PRB in this clause is not according to the 38.211 (n\_PRB = 0 is at the start of the BWP according to 38.211). A change can be made as shown [R4-2319433](file:///D:\RAN4%23110\Docs\R4-2319433.zip). There should be no other changes to this section other than correcting the erroneous n\_PRB and reference to 38.211.

**Decision: Revised to** [**R4-2403801**](file:///D:\RAN4%23110\Docs\R4-2403801.zip) **(from** [**R4-2402143**](file:///D:\RAN4%23110\Docs\R4-2402143.zip)**).**

[**R4-2403801**](file:///D:\RAN4%23110\Docs\R4-2403801.zip) **(NR\_RF\_FR1) CR to TS 38.101-1: Channel raster to resource element mapping**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2141 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2402144**](file:///D:\RAN4%23110\Docs\R4-2402144.zip) **(NR\_RF\_FR1) CR to TS 38.101-1: Channel raster to resource element mapping**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2142 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2402145**](file:///D:\RAN4%23110\Docs\R4-2402145.zip) **(NR\_RF\_FR1) CR to TS 38.101-1: Channel raster to resource element mapping**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2143 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

Update for power class related requirements

[**R4-2402219**](file:///D:\RAN4%23110\Docs\R4-2402219.zip) **(NR\_newRAT-Core) CR to remove the word capable in power class related requirements**

*Type: CR For: Agreement  
 38.101-1 v15.24.0 CR-2147 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

Samsung (Tina) flag [R4-2401380](file:///D:\RAN4%23110\Docs\R4-2401380.zip) (Anritsu) and [R4-2402219](file:///D:\RAN4%23110\Docs\R4-2402219.zip)(Huawei): We are supportive to the midifica-

tion. Either the description of Anristsu’s CR or Huawei’s CR is fine for us. Two CR can be merged.

CHTTL: Similar changes in [R4-2401380](file:///D:\RAN4%23110\Docs\R4-2401380.zip) and [R4-2402219](file:///D:\RAN4%23110\Docs\R4-2402219.zip), maybe can be merged.

**Decision: Agreed.**

[**R4-2402220**](file:///D:\RAN4%23110\Docs\R4-2402220.zip) **(NR\_newRAT-Core) CR to remove the word capable in power class related requirements**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2148 rev Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2402221**](file:///D:\RAN4%23110\Docs\R4-2402221.zip) **(NR\_newRAT-Core) CR to remove the word capable in power class related requirements**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2149 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2402222**](file:///D:\RAN4%23110\Docs\R4-2402222.zip) **(NR\_newRAT-Core) CR to remove the word capable in power class related requirements**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2150 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

Correction of band number in uplink config. for RFSENS

[**R4-2402227**](file:///D:\RAN4%23110\Docs\R4-2402227.zip) **(NR\_newRAT-Core) CR to TS38.101-1: Correction of band number in uplink configuration for reference sensitivity table**

*Type: CR For: Agreement  
 38.101-1 v15.24.0 CR-2151 rev Cat: F (Rel-15)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2402228**](file:///D:\RAN4%23110\Docs\R4-2402228.zip) **(NR\_newRAT-Core) CR to TS38.101-1: Correction of band number in uplink configuration for reference sensitivity table**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2152 rev Cat: A (Rel-16)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2402229**](file:///D:\RAN4%23110\Docs\R4-2402229.zip) **(NR\_newRAT-Core) CR to TS38.101-1: Correction of band number in uplink configuration for reference sensitivity table**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2153 rev Cat: A (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2402230**](file:///D:\RAN4%23110\Docs\R4-2402230.zip) **(NR\_newRAT-Core) CR to TS38.101-1: Correction of band number in uplink configuration for reference sensitivity table**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2154 rev Cat: A (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

**CRs for 38.101-2**

CA A-MPR requirements

[**R4-2400512**](file:///D:\RAN4%23110\Docs\R4-2400512.zip) **(NR\_newRAT-Core) Correction to CA A-MPR requirements**

*Type: CR For: Agreement  
 38.101-2 v15.24.0 CR-0696 rev Cat: F (Rel-15)  
  
 Source: Rohde & Schwarz*

**Decision: Agreed.**

[**R4-2400513**](file:///D:\RAN4%23110\Docs\R4-2400513.zip) **(NR\_newRAT-Core) Correction to CA A-MPR requirements**

*Type: CR For: Agreement  
 38.101-2 v16.18.0 CR-0697 rev Cat: A (Rel-16)  
  
 Source: Rohde & Schwarz*

**Decision: Agreed.**

[**R4-2400514**](file:///D:\RAN4%23110\Docs\R4-2400514.zip) **(NR\_newRAT-Core) Correction to CA A-MPR requirements**

*Type: CR For: Agreement  
 38.101-2 v17.12.0 CR-0698 rev Cat: A (Rel-17)  
  
 Source: Rohde & Schwarz*

**Decision: Agreed.**

[**R4-2400515**](file:///D:\RAN4%23110\Docs\R4-2400515.zip) **(NR\_newRAT-Core) Correction to CA A-MPR requirements**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0699 rev Cat: A (Rel-18)  
  
 Source: Rohde & Schwarz*

**Decision: Agreed.**

FR2 ACS interferer

[**R4-2400565**](file:///D:\RAN4%23110\Docs\R4-2400565.zip) **(NR\_newRAT-Core) FR2 ACS interferer specification fix**

*Type: CR For: Agreement  
 38.101-2 v15.24.0 CR-0702 rev Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Interferer specification in section 7.6 is aligned with that of blocker (section 7.7)

**Decision: Agreed.**

[**R4-2400566**](file:///D:\RAN4%23110\Docs\R4-2400566.zip) **(NR\_newRAT-Core) FR2 ACS interferer specification fix**

*Type: CR For: Agreement  
 38.101-2 v16.18.0 CR-0703 rev Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Interferer specification in section 7.6 is aligned with that of blocker (section 7.7)

**Decision: Agreed.**

[**R4-2400567**](file:///D:\RAN4%23110\Docs\R4-2400567.zip) **(NR\_newRAT-Core) FR2 ACS interferer specification fix**

*Type: CR For: Agreement  
 38.101-2 v17.12.0 CR-0704 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Interferer specification in section 7.6 is aligned with that of blocker (section 7.7)

**Decision: Agreed.**

[**R4-2400568**](file:///D:\RAN4%23110\Docs\R4-2400568.zip) **(NR\_newRAT-Core) FR2 ACS interferer specification fix**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0705 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Interferer specification in section 7.6 is aligned with that of blocker (section 7.7)

**Decision: Agreed.**

MPR requirement for CA

[**R4-2402371**](file:///D:\RAN4%23110\Docs\R4-2402371.zip) **(NR\_newRAT-Core) CR for Rel-15 TS 38.101-2 on correction of MPR reqirement for CA**

*Type: CR For: Agreement  
 38.101-2 v15.24.0 CR-0726 rev Cat: F (Rel-15)  
  
 Source: MediaTek*

**Decision: Agreed.**

[**R4-2402377**](file:///D:\RAN4%23110\Docs\R4-2402377.zip) **(NR\_newRAT-Core) CR for Rel-16 TS 38.101-2 on correction of MPR reqirement for CA**

*Type: CR For: Agreement  
 38.101-2 v16.18.0 CR-0727 rev Cat: A (Rel-16)  
  
 Source: MediaTek (Shenzhen) Inc.*

**Decision: Agreed.**

[**R4-2402378**](file:///D:\RAN4%23110\Docs\R4-2402378.zip) **(NR\_newRAT-Core) CR for Rel-17 TS 38.101-2 on correction of MPR reqirement for CA**

*Type: CR For: Agreement  
 38.101-2 v17.12.0 CR-0728 rev Cat: A (Rel-17)  
  
 Source: MediaTek (Shenzhen) Inc.*

**Decision: Agreed.**

[**R4-2402379**](file:///D:\RAN4%23110\Docs\R4-2402379.zip) **(NR\_newRAT-Core) CR for Rel-18 TS 38.101-2 on correction of MPR reqirement for CA**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0729 rev Cat: A (Rel-18)  
  
 Source: MediaTek (Shenzhen) Inc.*

**Decision: Agreed.**

**CRs for 38.101-3**

Missing MSD requirements

[**R4-2400158**](file:///D:\RAN4%23110\Docs\R4-2400158.zip) **CR for TS 38.101-3 Rel-15 CAT-F: Introducing missing Rel-15 MSD requirements**

*Type: CR For: Agreement  
 38.101-3 v15.24.0 CR-1098 rev Cat: F (Rel-15)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400159**](file:///D:\RAN4%23110\Docs\R4-2400159.zip) **CR for TS 38.101-3 Rel-16 CAT-A: Introducing missing Rel-15 MSD requirements**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1099 rev Cat: A (Rel-16)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400160**](file:///D:\RAN4%23110\Docs\R4-2400160.zip) **CR for TS 38.101-3 Rel-17 CAT-A: Introducing missing Rel-15 MSD requirements**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1100 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400161**](file:///D:\RAN4%23110\Docs\R4-2400161.zip) **CR for TS 38.101-3 Rel-18 CAT-A: Introducing missing Rel-15 MSD requirements**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1101 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Approved.**

[**R4-2400162**](file:///D:\RAN4%23110\Docs\R4-2400162.zip) **CR for TS 38.101-3 Rel-16 CAT-F: Introducing missing Rel-16 MSD requirements**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1102 rev Cat: F (Rel-16)  
  
 Source: Apple*

Samsung Tina flag: A minor comment, Following the sequent, DC\_3A\_n5A-n78A should be5in front of DC\_3A-5A\_n79A

**Decision: Revised to** [**R4-2403804**](file:///D:\RAN4%23110\Docs\R4-2403804.zip) **(from** [**R4-2400162**](file:///D:\RAN4%23110\Docs\R4-2400162.zip)**).**

[**R4-2403804**](file:///D:\RAN4%23110\Docs\R4-2403804.zip) **CR for TS 38.101-3 Rel-16 CAT-F: Introducing missing Rel-16 MSD requirements**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1102 rev Cat: F (Rel-16)  
  
 Source: Apple*

Samsung Tina flag: A minor comment, Following the sequent, DC\_3A\_n5A-n78A should be5in front of DC\_3A-5A\_n79A

**Decision: Agreed.**

[**R4-2400163**](file:///D:\RAN4%23110\Docs\R4-2400163.zip) **CR for TS 38.101-3 Rel-17 CAT-A: Introducing missing Rel-16 MSD requirements**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1103 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400164**](file:///D:\RAN4%23110\Docs\R4-2400164.zip) **CR for TS 38.101-3 Rel-18 CAT-A: Introducing missing Rel-16 MSD requirements**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1104 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400168**](file:///D:\RAN4%23110\Docs\R4-2400168.zip) **CR for TS 38.101-3 Rel-18 CAT-F: Correcting MSD requirement**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1108 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

PC3 MSD for DC

[**R4-2400584**](file:///D:\RAN4%23110\Docs\R4-2400584.zip) **(NR\_newRAT-Core) CR to R15 TS 38.101-3 correct PC3 MSD for DC\_19A\_n77A and DC\_3A-19A\_n79A**

*Type: CR For: Agreement  
 38.101-3 v15.24.0 CR-1128 rev Cat: F (Rel-15)  
  
 Source: NTT DOCOMO, INC., Qualcomm Inc., MediaTek Inc.*

**Abstract:**

R15 Cat-F CR to add missing MSD requirements for DC\_19A\_n77A and DC\_19A\_n78A, and also revise the MSD requirements for DC\_3A-19A\_n79A. Also, some editorial errors are corrected.

**Decision: Agreed.**

[**R4-2400585**](file:///D:\RAN4%23110\Docs\R4-2400585.zip) **(NR\_newRAT-Core) CR to R16 TS 38.101-3 correct PC3 MSD for DC\_19A\_n77A and DC\_3A-19A\_n79A**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1129 rev Cat: A (Rel-16)  
  
 Source: NTT DOCOMO, INC., Qualcomm Inc., MediaTek Inc.*

**Abstract:**

Cat-A CR for R16

**Decision: Agreed.**

[**R4-2400586**](file:///D:\RAN4%23110\Docs\R4-2400586.zip) **(NR\_newRAT-Core) CR to R17 TS 38.101-3 correct PC3 MSD for DC\_19A\_n77A and DC\_3A-19A\_n79A**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1130 rev Cat: A (Rel-17)  
  
 Source: NTT DOCOMO, INC., Qualcomm Inc., MediaTek Inc.*

**Abstract:**

Cat-A CR for R17

**Decision: Agreed.**

[**R4-2400587**](file:///D:\RAN4%23110\Docs\R4-2400587.zip) **(NR\_newRAT-Core) CR to R18 TS 38.101-3 correct PC3 MSD for DC\_19A\_n77A and DC\_3A-19A\_n79A**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1131 rev Cat: A (Rel-18)  
  
 Source: NTT DOCOMO, INC., Qualcomm Inc., MediaTek Inc.*

**Abstract:**

Cat-A CR for R18

**Decision: Agreed.**

EN-DC power class

[**R4-2400625**](file:///D:\RAN4%23110\Docs\R4-2400625.zip) **(NR\_newRAT-Core) CR for 38.101-3 corrections to EN-DC power class table**

*Type: CR For: Agreement  
 38.101-3 v15.24.0 CR-1134 rev Cat: F (Rel-15)  
  
 Source: Nokia*

CHTTL Flag

It seems that originally it was defined as N/A intentionally during Rel.15 ex: if we check up to TS 38.101-3 V15.8.0, the spec seems correct. Then in 2020/02, the config it was fixed by a CR for correction. Wonder if it might be correct to change from Rel.16. At least the MSD seems not analysis yet.

**Decision: Revised to** [**R4-2403805**](file:///D:\RAN4%23110\Docs\R4-2403805.zip) **(from** [**R4-2400625**](file:///D:\RAN4%23110\Docs\R4-2400625.zip)**).**

[**R4-2403805**](file:///D:\RAN4%23110\Docs\R4-2403805.zip) **(NR\_newRAT-Core) CR for 38.101-3 corrections to EN-DC power class table**

*Type: CR For: Agreement  
 38.101-3 v15.24.0 CR-1134 rev Cat: F (Rel-15)  
  
 Source: Nokia, CHTTL*

CHTTL Flag

It seems that originally it was defined as N/A intentionally during Rel.15 ex: if we check up to TS 38.101-3 V15.8.0, the spec seems correct. Then in 2020/02, the config it was fixed by a CR for correction. Wonder if it might be correct to change from Rel.16. At least the MSD seems not analysis yet.

**Decision: Agreed.**

[**R4-2400626**](file:///D:\RAN4%23110\Docs\R4-2400626.zip) **(NR\_newRAT-Core) CR for 38.101-3 corrections to EN-DC power class table**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1135 rev Cat: A (Rel-16)  
  
 Source: Nokia*

**Decision: Revised to** [**R4-2403806**](file:///D:\RAN4%23110\Docs\R4-2403806.zip) **(from** [**R4-2400626**](file:///D:\RAN4%23110\Docs\R4-2400626.zip)**).**

[**R4-2403806**](file:///D:\RAN4%23110\Docs\R4-2403806.zip) **(NR\_newRAT-Core) CR for 38.101-3 corrections to EN-DC power class table**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1135 rev Cat: F (Rel-16)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2400627**](file:///D:\RAN4%23110\Docs\R4-2400627.zip) **(NR\_newRAT-Core) CR for 38.101-3 corrections to EN-DC power class table**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1136 rev Cat: A (Rel-17)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2400628**](file:///D:\RAN4%23110\Docs\R4-2400628.zip) **(NR\_newRAT-Core) CR for 38.101-3 corrections to EN-DC power class table**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1137 rev Cat: A (Rel-18)  
  
 Source: Nokia*

**Decision: Agreed.**

Spurious emissions for inter-band EN-DC

[**R4-2400985**](file:///D:\RAN4%23110\Docs\R4-2400985.zip) **(DC\_R16\_1BLTE\_1BNR\_2DL2UL) CR to 38.101-3 Rel-16 Cat-F for Spurious Emissions for Inter-band EN-DC within FR1**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1143 rev Cat: F (Rel-16)  
  
 Source: CAICT*

**Decision: Agreed.**

[**R4-2400986**](file:///D:\RAN4%23110\Docs\R4-2400986.zip) **(DC\_R16\_1BLTE\_1BNR\_2DL2UL) CR to 38.101-3 Rel-17 Cat-A for Spurious Emissions for Inter-band EN-DC within FR1**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1144 rev Cat: A (Rel-17)  
  
 Source: CAICT*

**Decision: Agreed.**

[**R4-2400987**](file:///D:\RAN4%23110\Docs\R4-2400987.zip) **(DC\_R16\_1BLTE\_1BNR\_2DL2UL) CR to 38.101-3 Rel-18 Cat-A for Spurious Emissions for Inter-band EN-DC within FR1**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1145 rev Cat: A (Rel-18)  
  
 Source: CAICT*

**Decision: Agreed.**

FR2 testing with NR-DC/CA

[**R4-2401602**](file:///D:\RAN4%23110\Docs\R4-2401602.zip) **(NR\_newRAT) Clarifications for FR2 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-3 v15.24.0 CR-1153 rev Cat: F (Rel-15)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Resusbmission of [R4-2322000](file:///D:\RAN4%23110\Docs\R4-2322000.zip) which was technically endorsed in RAN4#109

**Decision: Agreed.**

[**R4-2401603**](file:///D:\RAN4%23110\Docs\R4-2401603.zip) **(NR\_newRAT) Clarifications for FR3 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1154 rev Cat: A (Rel-16)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Resusbmission of [R4-2318826](file:///D:\RAN4%23110\Docs\R4-2318826.zip) which was technically endorsed in RAN4#109

**Decision: Agreed.**

[**R4-2401604**](file:///D:\RAN4%23110\Docs\R4-2401604.zip) **(NR\_newRAT) Clarifications for FR4 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1155 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Resusbmission of [R4-2318827](file:///D:\RAN4%23110\Docs\R4-2318827.zip) which was technically endorsed in RAN4#109

**Decision: Agreed.**

[**R4-2401605**](file:///D:\RAN4%23110\Docs\R4-2401605.zip) **(NR\_newRAT) Clarifications for FR5 testing with NR-DC and NR-CA**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1156 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Abstract:**

Resusbmission of [R4-2318828](file:///D:\RAN4%23110\Docs\R4-2318828.zip) which was technically endorsed in RAN4#109

**Decision: Agreed.**

MSD correction for DC

[**R4-2402746**](file:///D:\RAN4%23110\Docs\R4-2402746.zip) **[NR\_CADC\_R16\_3BDL\_2BUL] CR to TS 38.101-3: DC\_1-41\_n77 MSD correction**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1177 rev Cat: F (Rel-16)  
  
 Source: Qualcomm Inc., KDDI*

CHTTL flag [R4-2402746](file:///D:\RAN4%23110\Docs\R4-2402746.zip). For DC\_1-41\_n77, Some border of the cell is missing„ not sure if you also want to fix it.

**Decision: Revised to** [**R4-2403807**](file:///D:\RAN4%23110\Docs\R4-2403807.zip) **(from** [**R4-2402746**](file:///D:\RAN4%23110\Docs\R4-2402746.zip)**).**

[**R4-2403807**](file:///D:\RAN4%23110\Docs\R4-2403807.zip) **[NR\_CADC\_R16\_3BDL\_2BUL] CR to TS 38.101-3: DC\_1-41\_n77 MSD correction**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1177 rev Cat: F (Rel-16)  
  
 Source: Qualcomm Inc., KDDI*

**Decision: Revised to R4-2403853 (from R4-2403807).**

[**R4-2403853**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403853.zip) **(NR\_CADC\_R16\_3BDL\_2BUL) CR to TS 38.101-3: DC\_1-41\_n77 MSD correction**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1177 rev Cat: F (Rel-16)  
  
 Source: Qualcomm Inc., KDDI*

**Decision: Agreed.**

[**R4-2402747**](file:///D:\RAN4%23110\Docs\R4-2402747.zip) **[NR\_CADC\_R16\_3BDL\_2BUL] CR to TS 38.101-3: DC\_1-41\_n77 MSD correction**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1178 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Inc., KDDI*

**Decision: Revised to R4-2403854 (from R4-2402747).**

[**R4-2403854**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403854.zip) **(NR\_CADC\_R16\_3BDL\_2BUL) CR to TS 38.101-3: DC\_1-41\_n77 MSD correction**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1178 rev Cat: A (Rel-17)  
  
 Source: Qualcomm Inc., KDDI*

**Decision: Agreed.**

[**R4-2402748**](file:///D:\RAN4%23110\Docs\R4-2402748.zip) **[NR\_CADC\_R16\_3BDL\_2BUL] CR to TS 38.101-3: DC\_1-41\_n77 MSD correction**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1179 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Inc., KDDI*

**Decision: Revised to R4-2403855 (from R4-2402748).**

[**R4-2403855**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403855.zip) **(NR\_CADC\_R16\_3BDL\_2BUL) CR to TS 38.101-3: DC\_1-41\_n77 MSD correction**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1179 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Inc., KDDI*

**Decision: Agreed.**

**CRs for 38.104**

[**R4-2402146**](file:///D:\RAN4%23110\Docs\R4-2402146.zip) **(NR\_RF\_FR1) CR to TS 38.104: Channel raster to resource element mapping**

*Type: CR For: Agreement  
 38.104 v16.18.0 CR-0573 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

Nokia: [R4-2402146](file:///D:\RAN4%23110\Docs\R4-2402146.zip) (R16) (Hisashi)

Ericsson: comment as above CR.

**Decision: Revised to** [**R4-2403808**](file:///D:\RAN4%23110\Docs\R4-2403808.zip) **(from** [**R4-2402146**](file:///D:\RAN4%23110\Docs\R4-2402146.zip)**).**

[**R4-2403808**](file:///D:\RAN4%23110\Docs\R4-2403808.zip) **(NR\_RF\_FR1) CR to TS 38.104: Channel raster to resource element mapping**

*Type: CR For: Agreement  
 38.104 v16.18.0 CR-0573 rev Cat: F (Rel-16)  
  
 Source: Huawei, HiSilicon*

Nokia:

Ericsson: comment as above CR.

**Decision: Agreed.**

[**R4-2402147**](file:///D:\RAN4%23110\Docs\R4-2402147.zip) **(NR\_RF\_FR1) CR to TS 38.104: Channel raster to resource element mapping**

*Type: CR For: Agreement  
 38.104 v17.12.0 CR-0574 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2402148**](file:///D:\RAN4%23110\Docs\R4-2402148.zip) **(NR\_RF\_FR1) CR to TS 38.104: Channel raster to resource element mapping**

*Type: CR For: Agreement  
 38.104 v18.4.0 CR-0575 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**CRs for 36.101**

[**R4-2400667**](file:///D:\RAN4%23110\Docs\R4-2400667.zip) **CR to 36.101 on table referencing corrections for spurious emission band UE co-existence for CA**

*Type: CR For: Agreement  
 36.101 v16.19.0 CR-6032 rev Cat: F (Rel-16)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400668**](file:///D:\RAN4%23110\Docs\R4-2400668.zip) **CR to 36.101 on table referencing corrections for spurious emission band UE co-existence for CA**

*Type: CR For: Agreement  
 36.101 v17.12.0 CR-6033 rev Cat: A (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400669**](file:///D:\RAN4%23110\Docs\R4-2400669.zip) **CR to 36.101 on table referencing corrections for spurious emission band UE co-existence for CA**

*Type: CR For: Agreement  
 36.101 v18.4.0 CR-6034 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

**Withdrawn**

[**R4-2400143**](file:///D:\RAN4%23110\Docs\R4-2400143.zip) **CR for 38.101-3 Spurious Emissions for Inter-band EN-DC within FR1 R16**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1095 rev Cat: F (Rel-16)  
  
 Source: CAICT*

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

[**R4-2400144**](file:///D:\RAN4%23110\Docs\R4-2400144.zip) **CR for 38.101-3 Spurious Emissions for Inter-band EN-DC within FR1 R17**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1096 rev Cat: A (Rel-17)  
  
 Source: CAICT*

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

[**R4-2400145**](file:///D:\RAN4%23110\Docs\R4-2400145.zip) **CR for 38.101-3 Spurious Emissions for Inter-band EN-DC within FR1 R18**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1097 rev Cat: A (Rel-18)  
  
 Source: CAICT*

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

[**R4-2400589**](file:///D:\RAN4%23110\Docs\R4-2400589.zip) **[NR\_newRAT-Core] CR to remove the word "capable" in "power class x capable UE" - TS38.101-1, Rel-15, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v15.24.0 CR-2019 rev Cat: F (Rel-15)  
  
 Source: Anritsu Limited*

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

[**R4-2400590**](file:///D:\RAN4%23110\Docs\R4-2400590.zip) **[NR\_newRAT-Core] CR to remove the word "capable" in "power class x capable UE" - TS38.101-1, Rel-16, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2020 rev Cat: F (Rel-16)  
  
 Source: Anritsu Limited*

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

[**R4-2400591**](file:///D:\RAN4%23110\Docs\R4-2400591.zip) **[NR\_newRAT-Core] CR to remove the word "capable" in "power class x capable UE" - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2021 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

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

[**R4-2400592**](file:///D:\RAN4%23110\Docs\R4-2400592.zip) **[NR\_newRAT-Core] CR to remove the word "capable" in "power class x capable UE" - TS38.101-1, Rel-18, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2022 rev Cat: F (Rel-18)  
  
 Source: Anritsu Limited*

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

[**R4-2400596**](file:///D:\RAN4%23110\Docs\R4-2400596.zip) **[NR\_n48-Core] CR to correct or add note applicable for specific channel bandwidths for CA including band n48 - TS38.101-1, Rel-16, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2026 rev Cat: F (Rel-16)  
  
 Source: Anritsu Limited*

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

[**R4-2400597**](file:///D:\RAN4%23110\Docs\R4-2400597.zip) **[NR\_n48-Core] CR to correct or add note applicable for specific channel bandwidths for CA including band n48 - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2027 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

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

[**R4-2400598**](file:///D:\RAN4%23110\Docs\R4-2400598.zip) **[NR\_n48-Core] CR to correct or add note applicable for specific channel bandwidths for CA including band n48 - TS38.101-1, Rel-18, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2028 rev Cat: F (Rel-18)  
  
 Source: Anritsu Limited*

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

[**R4-2400601**](file:///D:\RAN4%23110\Docs\R4-2400601.zip) **[NR\_newRAT-Core] CR to correct "Supplement" to "Supplementary" in the definition of the suffix used for SUL - TS38.101-1, Rel-15, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v15.24.0 CR-2031 rev Cat: F (Rel-15)  
  
 Source: Anritsu Limited*

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

[**R4-2400602**](file:///D:\RAN4%23110\Docs\R4-2400602.zip) **[NR\_newRAT-Core] CR to correct "Supplement" to "Supplementary" in the definition of the suffix used for SUL - TS38.101-1, Rel-16, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2032 rev Cat: F (Rel-16)  
  
 Source: Anritsu Limited*

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

[**R4-2400603**](file:///D:\RAN4%23110\Docs\R4-2400603.zip) **[NR\_newRAT-Core] CR to correct "Supplement" to "Supplementary" in the definition of the suffix used for SUL - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2033 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

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

[**R4-2400604**](file:///D:\RAN4%23110\Docs\R4-2400604.zip) **[NR\_newRAT-Core] CR to correct "Supplement" to "Supplementary" in the definition of the suffix used for SUL - TS38.101-1, Rel-18, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2034 rev Cat: F (Rel-18)  
  
 Source: Anritsu Limited*

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

[**R4-2400958**](file:///D:\RAN4%23110\Docs\R4-2400958.zip) **(NR\_newRAT-Core) CR for Rel-15 TS 38.101-2: Introduction of ?TRxSRS**

*Type: CR For: Agreement  
 38.101-2 v15.24.0 CR-0706 rev Cat: F (Rel-15)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

The CR number is missing on the CR coversheet. Parsing Failure: Change request number wrong on CR cover for TDoc [R4-2400958](file:///D:\RAN4%23110\Docs\R4-2400958.zip). Database value : 0706. CR cover value : . A revision will be required.

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

[**R4-2400959**](file:///D:\RAN4%23110\Docs\R4-2400959.zip) **(NR\_newRAT-Core) CR for Rel-16 TS 38.101-2: Introduction of ?TRxSRS**

*Type: CR For: Agreement  
 38.101-2 v16.18.0 CR-0707 rev Cat: A (Rel-16)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

The CR number is missing on the CR coversheet. Parsing Failure: Change request number wrong on CR cover for TDoc [R4-2400959](file:///D:\RAN4%23110\Docs\R4-2400959.zip). Database value : 0707. CR cover value : . A revision will be required.

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

[**R4-2400960**](file:///D:\RAN4%23110\Docs\R4-2400960.zip) **(NR\_newRAT-Core) CR for Rel-17 TS 38.101-2: Introduction of ?TRxSRS**

*Type: CR For: Agreement  
 38.101-2 v17.12.0 CR-0708 rev Cat: A (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

The CR number is missing on the CR coversheet. Parsing Failure: Change request number wrong on CR cover for TDoc [R4-2400960](file:///D:\RAN4%23110\Docs\R4-2400960.zip). Database value : 0708. CR cover value : . A revision will be required.

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

[**R4-2400961**](file:///D:\RAN4%23110\Docs\R4-2400961.zip) **(NR\_newRAT-Core) CR for Rel-18 TS 38.101-2: Introduction of ?TRxSRS**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0709 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

The CR number is missing on the CR coversheet. Parsing Failure: Change request number wrong on CR cover for TDoc [R4-2400961](file:///D:\RAN4%23110\Docs\R4-2400961.zip). Database value : 0709. CR cover value : . A revision will be required.

**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

**CRs for 38.101-1**

UL configurations

[**R4-2400622**](file:///D:\RAN4%23110\Docs\R4-2400622.zip) **(TEI16) CR for 38.101-1 corrections for UL CA conigurations R16**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2037 rev Cat: F (Rel-16)  
  
 Source: Nokia*

**Abstract:**

Chair: Treat this under email thread [101].

**Decision: Agreed.**

**CRs for 38.101-1**

Uplink Tx switching with dual TAG

[**R4-2401836**](file:///D:\RAN4%23110\Docs\R4-2401836.zip) **Minimum requirements for uplink TX switching with dual TAG [UL TX switching]**

*Type: CR For: Agreement  
 38.101-1 v16.18.0 CR-2125 rev Cat: B (Rel-16)  
  
 Source: Ericsson*

**Abstract:**

RAN4 is tasked by RAN to bring for RAN#103 REL-16/17 cat.B/C CRs instead of capturing the UL TX switching functionality for REL-16 and REL-17 into 38.307 REL-18 WI NR\_MC\_enh. Chair: Treat this under email thread [101].

**Decision: Agreed.**

[**R4-2401837**](file:///D:\RAN4%23110\Docs\R4-2401837.zip) **Minimum requirements for uplink TX switching with dual TAG [UL TX switching]**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2126 rev Cat: B (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

RAN4 is tasked by RAN to bring for RAN#103 REL-16/17 cat.B/C CRs instead of capturing the UL TX switching functionality for REL-16 and REL-17 into 38.307 REL-18 WI NR\_MC\_enh. Chair: Treat this under email thread [101].

**Decision: Agreed.**

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

[**R4-2401060**](file:///D:\RAN4%23110\Docs\R4-2401060.zip) **Topic summary for [110][101] Upto\_R16\_UERF\_maintenance**

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

**Abstract:**

[110][101] Upto\_R16\_UERF\_maintenance AI 4.1, 4.7

**Decision: Noted.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/04.Thursday/05.%5B101%5D_R4-2401060%20Topic%20summary%20for%20%5B110%5D%5B101%5D%20Upto_R16_UERF_maintenance%20v2-with%20NWM.docx>

**Issue 1-1-1: Missing MSD evaluation of DC\_3A\_n41A-n79A and DC\_21A-28A\_n79A**

**Chair: Encourage companies to provide the simulation/measurement results in the next meeting for this issue.**

**Issue 3-1-1: FR1 UL MIMO support for inter-band CA and NR-DC between FR1 and FR2**

**Agreement:**

* Add FR1 UL-MIMO support for inter-band CA and NR-DC between FR1 and FR2.

**Issue 8-1-1: Whether min peak EIRP and relax spherical coverage changes should also be applied to R15/16/17?**

**Agreement:**

* Both min peak EIRP and spherical coverage are not applied to Rel-15/16/17

**Issue 8-1-2: Whether MPR requirements for PRACH should be removed given no minimum peak EIRP available?**

**Agreement:**

* MPR requirements for PRACH should be removed given no minimum peak EIRP available

## 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 6.1.15/AI 6.2.8, 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.

- The contributions corresponding to incoming LS for Rel-17 and Rel-18 are expected to be submitted in AI 12, if there is a dedicated agenda in AI 12.

### 5.1 Rel-17 spectrum related WI maintenance

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

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

**Topic#5 Requirements for band combinations**

n48(A-C) intra-band CA

[**R4-2400900**](file:///D:\RAN4%23110\Docs\R4-2400900.zip) **CR to TS 38.101-1 (Rel-17): CR for removing n48(A-C) intra-band CA configuration**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2056 rev Cat: F (Rel-17)  
  
 Source: Verizon, Ericsson, Samsung*

**Decision: Agreed.**

[**R4-2400901**](file:///D:\RAN4%23110\Docs\R4-2400901.zip) **CR to TS 38.101-1 (Rel-18): CR for removing n48(A-C) intra-band CA configuration**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2057 rev Cat: A (Rel-18)  
  
 Source: Verizon, Ericsson, Samsung*

**Decision: Agreed.**

**Topic#0 CRs for directly discussinos**

REFSENS exception due to IMD

[**R4-2401384**](file:///D:\RAN4%23110\Docs\R4-2401384.zip) **(NR\_CADC\_R17\_2BDL\_xBUL-Core) CR to correct carrier frequencies used in REFSENS exceptions due to IMD for CA\_n26-n70 - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2095 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

[**R4-2401385**](file:///D:\RAN4%23110\Docs\R4-2401385.zip) **(NR\_CADC\_R17\_2BDL\_xBUL-Core) CR to correct carrier frequencies used in REFSENS exceptions due to IMD for CA\_n26-n70 - TS38.101-1, Rel-18, Cat-A**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2096 rev Cat: A (Rel-18)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

[**R4-2400593**](file:///D:\RAN4%23110\Docs\R4-2400593.zip) **[NR\_CADC\_R17\_2BDL\_xBUL-Core] CR to correct carrier frequencies used in REFSENS exceptions due to IMD for CA\_n26-n70 - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2023 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

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

[**R4-2400594**](file:///D:\RAN4%23110\Docs\R4-2400594.zip) **[NR\_CADC\_R17\_2BDL\_xBUL-Core] CR to correct carrier frequencies used in REFSENS exceptions due to IMD for CA\_n26-n70 - TS38.101-1, Rel-18, Cat-A**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2024 rev Cat: A (Rel-18)  
  
 Source: Anritsu Limited*

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

[**R4-2400599**](file:///D:\RAN4%23110\Docs\R4-2400599.zip) **[NR\_RF\_FR1\_enh-Core] CR to add clarification regarding the configurations of the UL CCs for suffix H - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2029 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

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

MSD for CA\_n28-n41-n79

[**R4-2400639**](file:///D:\RAN4%23110\Docs\R4-2400639.zip) **(NR\_CADC\_R17\_2BDL\_xBUL-Core) Correction to MSD IMD test points**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2044 rev Cat: F (Rel-17)  
  
 Source: Qualcomm France*

**Decision: Revised to** [**R4-2403813**](file:///D:\RAN4%23110\Docs\R4-2403813.zip) **(from** [**R4-2400639**](file:///D:\RAN4%23110\Docs\R4-2400639.zip)**).**

[**R4-2403813**](file:///D:\RAN4%23110\Docs\R4-2403813.zip) **(NR\_CADC\_R17\_2BDL\_xBUL-Core) Correction to MSD IMD test points**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2044 rev Cat: F (Rel-17)  
  
 Source: Qualcomm France*

**Decision: Agreed.**

UL CA configuration

[**R4-2400623**](file:///D:\RAN4%23110\Docs\R4-2400623.zip) **(TEI17) CR for 38.101-1 corrections for UL CA conigurations R17**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2038 rev Cat: F (Rel-17)  
  
 Source: Nokia*

**Decision: Agreed.**

[**R4-2400624**](file:///D:\RAN4%23110\Docs\R4-2400624.zip) **(TEI18) CR for 38.101-1 corrections for UL CA conigurations R18**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2039 rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Agreed.**

Inter-band operating bands

[**R4-2400907**](file:///D:\RAN4%23110\Docs\R4-2400907.zip) **(LTE\_CA\_R17\_xBDL\_2BUL-Core) CR for TS 36.101 on inter-band CA operating bands (R17)**

*Type: CR For: Agreement  
 36.101 v17.12.0 CR-6037 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2400908**](file:///D:\RAN4%23110\Docs\R4-2400908.zip) **(LTE\_CA\_R17\_xBDL\_2BUL-Core) CR for TS 36.101 on inter-band CA operating bands (R18\_CAT\_A)**

*Type: CR For: Agreement  
 36.101 v18.4.0 CR-6038 rev Cat: A (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2400909**](file:///D:\RAN4%23110\Docs\R4-2400909.zip) **(NR\_CADC\_R17\_3BDL\_2BUL) CR for TS 38.101-1 on inter-band CA for n46-n48-n96 (R17)**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2059 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation, Charter Communications*

**Decision: Agreed.**

[**R4-2400910**](file:///D:\RAN4%23110\Docs\R4-2400910.zip) **(NR\_CADC\_R17\_3BDL\_2BUL) CR for TS 38.101-1 on inter-band CA for n46-n48-n96 (R18\_CAT\_A)**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2060 rev Cat: A (Rel-18)  
  
 Source: ZTE Corporation, Charter Communications*

**Decision: Agreed.**

Removing DC\_n77(2A) from uplink NR DC configurations

[**R4-2401243**](file:///D:\RAN4%23110\Docs\R4-2401243.zip) **(NR\_CADC\_R17\_2BDL\_xBUL-Core) CR for TS38.101-3: Remove unsupported NR-DC configuration from FR1-FR2 NR-DC combination table**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1147 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2401244**](file:///D:\RAN4%23110\Docs\R4-2401244.zip) **(NR\_CADC\_R17\_2BDL\_xBUL-Core) CR for 38.101-3: Remove unsupported NR DC configuration from FR1-FR2 NR-DC combination table**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1148 rev Cat: A (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

CA\_n3A-n8A-n79A

[**R4-2401769**](file:///D:\RAN4%23110\Docs\R4-2401769.zip) **(NR\_CA\_R17\_3BDL\_1BUL-Core) CR for TS 38.101-1 to add missing combo CA\_n3A-n8A-n79A (R17)**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2114 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2401770**](file:///D:\RAN4%23110\Docs\R4-2401770.zip) **(NR\_CA\_R17\_3BDL\_1BUL-Core) CR for TS 38.101-1 to add missing combo CA\_n3A-n8A-n79A (R18)**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2115 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

DC\_1\_n41-n77

[**R4-2402272**](file:///D:\RAN4%23110\Docs\R4-2402272.zip) **(DC\_R17\_xBLTE\_2BNR\_yDL2UL)Rel17 Cat F CR for 38.101-3 Add the missing MSD exception notes for DC\_1\_n41-n77**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1169 rev Cat: F (Rel-17)  
  
 Source: Samsung, KDDI*

**Decision: Revised to** [**R4-2403814**](file:///D:\RAN4%23110\Docs\R4-2403814.zip) **(from** [**R4-2402272**](file:///D:\RAN4%23110\Docs\R4-2402272.zip)**).**

[**R4-2403814**](file:///D:\RAN4%23110\Docs\R4-2403814.zip) **(DC\_R17\_xBLTE\_2BNR\_yDL2UL)Rel17 Cat F CR for 38.101-3 Add the missing MSD exception notes for DC\_1\_n41-n77**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1169 rev Cat: F (Rel-17)  
  
 Source: Samsung, KDDI*

**Decision: Agreed.**

[**R4-2402273**](file:///D:\RAN4%23110\Docs\R4-2402273.zip) **(DC\_R17\_xBLTE\_2BNR\_yDL2UL)Rel18 Cat A CR for 38.101-3 Add the missing MSD exception notes for DC\_1\_n41-n77**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1170 rev Cat: A (Rel-18)  
  
 Source: Samsung, KDDI*

**Decision: Revised to** [**R4-2403815**](file:///D:\RAN4%23110\Docs\R4-2403815.zip) **(from** [**R4-2402273**](file:///D:\RAN4%23110\Docs\R4-2402273.zip)**).**

[**R4-2403815**](file:///D:\RAN4%23110\Docs\R4-2403815.zip) **(DC\_R17\_xBLTE\_2BNR\_yDL2UL)Rel18 Cat A CR for 38.101-3 Add the missing MSD exception notes for DC\_1\_n41-n77**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1170 rev Cat: A (Rel-18)  
  
 Source: Samsung, KDDI*

**Decision: Agreed.**

CA\_n71-n77 Harmonic MSD

[**R4-2402453**](file:///D:\RAN4%23110\Docs\R4-2402453.zip) **[NR\_CADC\_R17\_2BDL\_xBUL] CR for 38.101-1: Correct missing CA\_n71-n77 Harmonic**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2166 rev Cat: F (Rel-17)  
  
 Source: T-Mobile USA*

**Decision: Agreed.**

[**R4-2402454**](file:///D:\RAN4%23110\Docs\R4-2402454.zip) **[NR\_CADC\_R17\_2BDL\_xBUL] CR for 38.101-1: Correct missing CA\_n71-n77 Harmonic**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2167 rev Cat: A (Rel-18)  
  
 Source: T-Mobile USA*

**Decision: Agreed.**

**Withdrawn**

[**R4-2400271**](file:///D:\RAN4%23110\Docs\R4-2400271.zip) **CR on bug correction for Rel-17 NS\_07**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-1996 rev Cat: F (Rel-17)  
  
 Source: Apple*

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

[**R4-2400272**](file:///D:\RAN4%23110\Docs\R4-2400272.zip) **CR on bug correction for Rel-18 NS\_07**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1997 rev Cat: A (Rel-18)  
  
 Source: Apple*

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

#### 5.1.3 Others

**Topic#2 Inter-band EN-DC with multiple intra-band EN-DC components**

[**R4-2402313**](file:///D:\RAN4%23110\Docs\R4-2402313.zip) **Discussion on IE supportedBandwidthCombinationSetIntraENDC**

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

**Decision: Noted.**

[**R4-2402318**](file:///D:\RAN4%23110\Docs\R4-2402318.zip) **Discussion on IE intraBandENDC-Support**

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

**Decision: Noted.**

LS out

[**R4-2402316**](file:///D:\RAN4%23110\Docs\R4-2402316.zip) **[Draft] LS on IE supportedBandwidthCombinationSetIntraENDC**

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

**Decision: Revised to** [**R4-2403809**](file:///D:\RAN4%23110\Docs\R4-2403809.zip) **(from** [**R4-2402316**](file:///D:\RAN4%23110\Docs\R4-2402316.zip)**).**

[**R4-2403809**](file:///D:\RAN4%23110\Docs\R4-2403809.zip) **[Draft] LS on IE supportedBandwidthCombinationSetIntraENDC and IE intraBandENDC-Support**

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

**Decision: Approved.**

[**R4-2402364**](file:///D:\RAN4%23110\Docs\R4-2402364.zip) **[Draft] LS on IE intraBandENDC-Support**

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

**Decision: Noted.**

**Topic#0 CRs for directly discussinos**

38.307 release independency for 1Tx-2Tx switching

[**R4-2400939**](file:///D:\RAN4%23110\Docs\R4-2400939.zip) **CR to R17 38.307 Release independent requirements for 2CC 1Tx-2Tx switching**

*Type: CR For: Agreement  
 38.307 v17.11.0 CR-0153 rev Cat: F (Rel-17)  
  
 Source: China Telecom*

**Abstract:**

Introduce release independent requirements for R16 2CC 1Tx-2Tx switching into R17 TS38.307

**Decision: Agreed.**

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

#### 5.2.1 UE RF requirements

**Topic#3 Requirements for single carrier operation for FR1**

UL config for asymmetric ULDL

[**R4-2400363**](file:///D:\RAN4%23110\Docs\R4-2400363.zip) **On UL configurations for asymmetric ULDL CBW**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc., Nokia, T-Mobile USA, Keysight*

**Decision: Noted.**

CR

[**R4-2400358**](file:///D:\RAN4%23110\Docs\R4-2400358.zip) **CR to TS 38.101-1 Rel-17 Corrections to UL configuration for asymmetric ULDL**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2003 rev Cat: F (Rel-17)  
  
 Source: Skyworks Solutions, Inc., Nokia, T-Mobile USA, Keysight Technologies*

**Decision: Agreed.**

[**R4-2403810**](file:///D:\RAN4%23110\Docs\R4-2403810.zip) **CR to TS 38.101-1 Rel-17 Corrections to UL configuration for asymmetric ULDL**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2003 rev Cat: F (Rel-17)  
  
 Source: Skyworks Solutions, Inc., Nokia, T-Mobile USA, Keysight Technologies*

**Decision: Withdrawn.**

[**R4-2400357**](file:///D:\RAN4%23110\Docs\R4-2400357.zip) **CR to TS 38.101-1 Rel-18 Corrections to UL configuration for asymmetric ULDL**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2002 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions, Inc., Nokia, T-Mobile USA, Keysight Technologies*

**Decision: Agreed.**

[**R4-2403811**](file:///D:\RAN4%23110\Docs\R4-2403811.zip) **CR to TS 38.101-1 Rel-18 Corrections to UL configuration for asymmetric ULDL**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2002 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions, Inc., Nokia, T-Mobile USA, Keysight Technologies*

**Decision: Withdrawn.**

NR-U PSD limits

[**R4-2400520**](file:///D:\RAN4%23110\Docs\R4-2400520.zip) **CR to TS38.101-1 Rel-17 CAT-F: On corrections for NR-U R17 A-MPR requirements**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2012 rev Cat: F (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400521**](file:///D:\RAN4%23110\Docs\R4-2400521.zip) **CR to TS38.101-1 Rel-18 CAT-A: On corrections for NR-U R17 A-MPR requirements**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2013 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

Channel arrangement for RedCap

[**R4-2401838**](file:///D:\RAN4%23110\Docs\R4-2401838.zip) **(NR\_redcap-Core) Correction of the channel raster for RedCap by added entries**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2127 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the a channel raster for RedCap by adding intermediary 10 kHz entries (consistent with the enhanced raster for Rel-18) to make sure all RedCap UEs are compliant with minimum requirements for any UE specific channel bandwidth and location con

**Decision: Revised to** [**R4-2403812**](file:///D:\RAN4%23110\Docs\R4-2403812.zip) **(from** [**R4-2401838**](file:///D:\RAN4%23110\Docs\R4-2401838.zip)**).**

[**R4-2403812**](file:///D:\RAN4%23110\Docs\R4-2403812.zip) **(NR\_redcap-Core) Correction of the channel raster for RedCap by added entries**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2127 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the a channel raster for RedCap by adding intermediary 10 kHz entries (consistent with the enhanced raster for Rel-18) to make sure all RedCap UEs are compliant with minimum requirements for any UE specific channel bandwidth and location con

Nokia: there is redundance.

Qualcomm: It is work for Rel-17. We cannot agree the CR.

Ericsson: to Nokia, there is not redundance. This is only applicable to RedCap device.

**Decision: Not pursued.**

[**R4-2401839**](file:///D:\RAN4%23110\Docs\R4-2401839.zip) **(NR\_redcap-Core) Correction of the channel raster for RedCap by added entries**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2128 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the a channel raster for RedCap by adding intermediary 10 kHz entries (consistent with the enhanced raster for Rel-18) to make sure all RedCap UEs are compliant with minimum requirements for any UE specific channel bandwidth and location con

**Decision: Withdrawn.**

TxD applicability on NR PUCCH channel

[**R4-2402519**](file:///D:\RAN4%23110\Docs\R4-2402519.zip) **Discussion on TxD applicability on NR PUCCH channel**

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

**Decision: Noted.**

**Topic#4 2CC-2CC Uplink Tx switching**

[**R4-2401054**](file:///D:\RAN4%23110\Docs\R4-2401054.zip) **[NR\_RF\_FR1\_enh-Core] Support of UL Tx switching for CA with two contiguous aggregated carriers in each band**

*Type: discussion For: Decision  
 Source: CMCC, CBN*

**Decision: Noted.**

CR

[**R4-2401055**](file:///D:\RAN4%23110\Docs\R4-2401055.zip) **[NR\_RF\_FR1\_enh-Core] CR to support uplink Tx switching for CA with two contiguous aggregated carriers in each band**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2066 rev Cat: F (Rel-17)  
  
 Source: CMCC, CBN*

*Agreement: RAN4 will continue discuss this topic under maintenance.*

**Decision: Postponed.**

[**R4-2401056**](file:///D:\RAN4%23110\Docs\R4-2401056.zip) **[NR\_RF\_FR1\_enh-Core] CR to support uplink Tx switching for CA with two contiguous aggregated carriers in each band**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2067 rev Cat: A (Rel-18)  
  
 Source: CMCC, CBN*

**Decision: Withdrawn.**

**Topic#5 Requirements for band combinations**

Intra-band UL CA with UL-MIMO

[**R4-2401390**](file:///D:\RAN4%23110\Docs\R4-2401390.zip) **(NR\_RF\_FR1\_enh-Core) CR to add clarification regarding the configurations of the UL CCs for suffix H - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2101 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

**Decision: Revised to R4-2403872 (from R4-2401390).**

[**R4-2403872**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403872.zip) **(NR\_RF\_FR1\_enh-Core) CR to add clarification regarding the configurations of the UL CCs for suffix H - TS38.101-1, Rel-17, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2101 rev Cat: F (Rel-17)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

[**R4-2401391**](file:///D:\RAN4%23110\Docs\R4-2401391.zip) **(NR\_RF\_FR1\_enh-Core, 4Rx\_low\_NR\_band\_handheld\_3Tx\_NR\_CA\_ENDC-Core) CR to add clarification regarding the configurations of the UL CCs for suffix H - TS38.101-1, Rel-18, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2102 rev Cat: F (Rel-18)  
  
 Source: Anritsu Limited*

**Decision: Revised to R4-2403873 (from R4-2401391).**

[**R4-2403873**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403873.zip) **(NR\_RF\_FR1\_enh-Core, 4Rx\_low\_NR\_band\_handheld\_3Tx\_NR\_CA\_ENDC-Core) CR to add clarification regarding the configurations of the UL CCs for suffix H - TS38.101-1, Rel-18, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2102 rev Cat: F (Rel-18)  
  
 Source: Anritsu Limited*

**Decision: Agreed.**

Pcmax tolerance for intra-band CA with UL-MIMO

[**R4-2401180**](file:///D:\RAN4%23110\Docs\R4-2401180.zip) **(NR\_RF\_FR1\_enh-Core) Discussion on PCMAX tolerance for intra-band UL contiguous CA with UL MIMO**

*Type: discussion For: Endorsement  
 38.101-1 v CR- rev Cat: ()  
  
 Source: xiaomi*

**Decision: Noted.**

CR

[**R4-2401181**](file:///D:\RAN4%23110\Docs\R4-2401181.zip) **Corrections on Pcmax tolerance for intra-band contiguous CA with UL MIMO**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2070 rev Cat: F (Rel-17)  
  
 Source: Xiaomi*

**Decision: Postponed.**

[**R4-2401182**](file:///D:\RAN4%23110\Docs\R4-2401182.zip) **(NR\_RF\_FR1\_enh-Core) CR to 38.101-1 R18 corrections on Pcmax tolerance for intra-band contiguous CA with UL MIMO**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2071 rev Cat: A (Rel-18)  
  
 Source: xiaomi*

**Decision: Withdrawn.**

REFSENS testing for 30KHz SCS for operation bands above 2.2GHz

[**R4-2401775**](file:///D:\RAN4%23110\Docs\R4-2401775.zip) **(NR\_CADC\_R17\_2BDL\_xBUL-Core) CR for TS 38.101-1 to clarify the applicable SCS when UE testing (R17)**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2120 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2401776**](file:///D:\RAN4%23110\Docs\R4-2401776.zip) **(NR\_CADC\_R17\_2BDL\_xBUL-Core) CR for TS 38.101-1 to clarify the applicable SCS when UE testing (R18)**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2121 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2401777**](file:///D:\RAN4%23110\Docs\R4-2401777.zip) **(DC\_R17\_1BLTE\_1BNR\_2DL2UL-Core) CR for TS 38.101-3 to clarify the applicable SCS when UE testing (R17)**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1157 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2401778**](file:///D:\RAN4%23110\Docs\R4-2401778.zip) **(DC\_R17\_1BLTE\_1BNR\_2DL2UL-Core) CR for TS 38.101-3 to clarify the applicable SCS when UE testing (R18)**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1158 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

**Topic#0 CRs for directly discussions**

Missing MSD requirements

[**R4-2400165**](file:///D:\RAN4%23110\Docs\R4-2400165.zip) **CR for TS 38.101-3 Rel-17 CAT-F: Introducing missing Rel-17 MSD requirements**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1105 rev Cat: F (Rel-17)  
  
 Source: Apple*

**Decision: Revised to R4-2403851 (from R4-2400165).**

[**R4-2403851**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403851.zip) **CR for TS 38.101-3 Rel-17 CAT-F: Introducing missing Rel-17 MSD requirements**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1105 rev Cat: F (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400166**](file:///D:\RAN4%23110\Docs\R4-2400166.zip) **CR for TS 38.101-3 Rel-18 CAT-A: Introducing missing Rel-17 MSD requirements**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1106 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

UL configurations

[**R4-2400186**](file:///D:\RAN4%23110\Docs\R4-2400186.zip) **CR to 38.101-1 on correction of CA\_n2A-n78A UL configuration**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-1990 rev Cat: F (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400187**](file:///D:\RAN4%23110\Docs\R4-2400187.zip) **CR to 38.101-1 on correction of CA\_n2A-n78A UL configuration**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1991 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400188**](file:///D:\RAN4%23110\Docs\R4-2400188.zip) **CR to 38.101-3 on correction of DC\_48A-48A-66A\_n77A UL configuration**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1114 rev Cat: F (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400189**](file:///D:\RAN4%23110\Docs\R4-2400189.zip) **CR to 38.101-3 on correction of DC\_48A-48A-66A\_n77A UL configuration**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1115 rev Cat: A (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

Increasing highpower limit

[**R4-2400264**](file:///D:\RAN4%23110\Docs\R4-2400264.zip) **CR 38101-3-hc0\_s06-XX Bug correction for higherPowerLimitMRDC-r17**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1122 rev Cat: F (Rel-17)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400265**](file:///D:\RAN4%23110\Docs\R4-2400265.zip) **CR 38101-3-i40\_s06-XX Bug correction for higherPowerLimitMRDC-r17**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1123 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

TxD signalling

[**R4-2400342**](file:///D:\RAN4%23110\Docs\R4-2400342.zip) **(NR\_RF\_TxD-Core) Clarification of relation between R16 and R18 TxD signaling**

*Type: CR For: Agreement  
 38.837 v17.2.0 CR-0008 rev Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

To clarify relation between Re-16 and Rel-18 TxD capability.

**Decision: Agreed.**

RedCap

[**R4-2400524**](file:///D:\RAN4%23110\Docs\R4-2400524.zip) **CR to TS 38.101-2 Correction on beam correspondence for RedCap Rel-17**

*Type: CR For: Agreement  
 38.101-2 v17.12.0 CR-0700 rev Cat: F (Rel-17)  
  
 Source: Sony, Ericsson*

**Decision: Revised to** [**R4-2403816**](file:///D:\RAN4%23110\Docs\R4-2403816.zip) **(from** [**R4-2400524**](file:///D:\RAN4%23110\Docs\R4-2400524.zip)**).**

[**R4-2403816**](file:///D:\RAN4%23110\Docs\R4-2403816.zip) **CR to TS 38.101-2 Correction on beam correspondence for RedCap Rel-17**

*Type: CR For: Agreement  
 38.101-2 v17.12.0 CR-0700 rev Cat: F (Rel-17)  
  
 Source: Sony, Ericsson*

**Decision: Agreed.**

[**R4-2400525**](file:///D:\RAN4%23110\Docs\R4-2400525.zip) **CR to TS 38.101-2 Correction on beam correspondence for RedCap Rel-18**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0701 rev Cat: A (Rel-18)  
  
 Source: Sony, Ericsson*

**Decision: Agreed.**

NTN spurious emission and REFENS

[**R4-2400911**](file:///D:\RAN4%23110\Docs\R4-2400911.zip) **(NR\_NTN\_solutions-Core) CR for TS 38.101-5 on NTN spurious emission and reference sensitivity power level (R17)**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0058 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2403817**](file:///D:\RAN4%23110\Docs\R4-2403817.zip) **(from** [**R4-2400911**](file:///D:\RAN4%23110\Docs\R4-2400911.zip)**).**

[**R4-2403817**](file:///D:\RAN4%23110\Docs\R4-2403817.zip) **(NR\_NTN\_solutions-Core) CR for TS 38.101-5 on NTN spurious emission and reference sensitivity power level (R17)**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0058 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2400912**](file:///D:\RAN4%23110\Docs\R4-2400912.zip) **(NR\_NTN\_solutions-Core) CR for TS 38.101-5 on NTN spurious emission and reference sensitivity power level (R18\_CAT\_A)**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0059 rev Cat: A (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

NTN (N)GEO, (N)GSO

[**R4-2401169**](file:///D:\RAN4%23110\Docs\R4-2401169.zip) **(NR\_NTN\_solutions-Core) CR to 38.101-5 for aligning the GEO understanding with other technical specification documents(R17)**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0061 rev Cat: F (Rel-17)  
  
 Source: Mediatek India Technology Pvt.*

**Decision: Return to.**

HST\_FR2

[**R4-2402408**](file:///D:\RAN4%23110\Docs\R4-2402408.zip) **(NR\_HST\_FR2) Clarification of highSpeedMeasFlag-r17 in PC6 spherical coverage requirement**

*Type: CR For: Agreement  
 38.101-2 v17.12.0 CR-0730 rev Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Parsing Failure: Change request category wrong on CR cover for TDoc [R4-2402408](file:///D:\RAN4%23110\Docs\R4-2402408.zip). Database value : F. CR cover value : Cat F. A revision will be required.

**Decision:** The document was **revised to** [**R4-2402936**](file:///D:\RAN4%23110\Docs\R4-2402936.zip).

[**R4-2402936**](file:///D:\RAN4%23110\Docs\R4-2402936.zip) **Clarification of highSpeedMeasFlag-r17 in PC6 spherical coverage requirement**

*Type: CR For: Agreement  
 38.101-2 v17.12.0 CR-0730 rev 1 Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces [R4-2402408](file:///D:\RAN4%23110\Docs\R4-2402408.zip))

**Decision: Agreed.**

[**R4-2402409**](file:///D:\RAN4%23110\Docs\R4-2402409.zip) **(NR\_HST\_FR2) Clarification of highSpeedMeasFlag-r17 in PC6 spherical coverage requirement**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0731 rev Cat: A (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

NR-U AMPR

[**R4-2402494**](file:///D:\RAN4%23110\Docs\R4-2402494.zip) **[NR\_unlic-Core] Correction CR for NS\_59 in TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2171 rev Cat: F (Rel-17)  
  
 Source: LG Electronics*

**Decision: Revised to** [**R4-2403818**](file:///D:\RAN4%23110\Docs\R4-2403818.zip) **(from** [**R4-2402494**](file:///D:\RAN4%23110\Docs\R4-2402494.zip)**).**

**[R4-2403818](D:\\RAN4#110\\Docs\\R4-2403818.zip) (NR\_unlic-Core) Correction CR for NS\_59 in TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2171 rev Cat: F (Rel-17)  
  
 Source: LG Electronics*

**Decision: Agreed.**

[**R4-2402544**](file:///D:\RAN4%23110\Docs\R4-2402544.zip) **[NR\_unlic-Core] Correction CR for NS\_59 in TS38.101-1\_V2**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2172 rev Cat: A (Rel-18)  
  
 Source: LG Electronics UK*

**Decision: Revised to R4-2403841 (from R4-2402544).**

[**R4-2403841**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403841.zip) **(NR\_unlic-Core) Correction CR for NS\_59 in TS38.101-1\_V2**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2172 rev Cat: A (Rel-18)  
  
 Source: LG Electronics UK*

**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 #1 requirements for NTN bands**

DSS support between LTE and NR NTN

[**R4-2402820**](file:///D:\RAN4%23110\Docs\R4-2402820.zip) **Correction on DSS support for the NTN bands from Rel-17**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0073 rev Cat: F (Rel-17)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales, Apple*

**Abstract:**

Parsing Failure: Change request category wrong on CR cover for TDoc [R4-2402820](file:///D:\RAN4%23110\Docs\R4-2402820.zip). Database value : F. CR cover value : <F>. A revision will be required.

**Decision:** The document was **revised to** [**R4-2402948**](file:///D:\RAN4%23110\Docs\R4-2402948.zip).

[**R4-2402948**](file:///D:\RAN4%23110\Docs\R4-2402948.zip) **Correction on DSS support for the NTN bands from Rel-17**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0073 rev 1 Cat: F (Rel-17)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales, Apple*

**Decision: Revised to R4-2403875 (from R4-2402948).**

[**R4-2403875**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403875.zip) **Correction on DSS support for the NTN bands from Rel-17**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0073 rev 1 Cat: F (Rel-17)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales, Apple*

**Decision: Revised to R4-2403882 (from R4-2403875).**

[**R4-2403882**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403882.zip) **Correction on DSS support for the NTN bands from Rel-17**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0073 rev 1 Cat: F (Rel-17)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales, Apple*

**Decision: Return to.**

[**R4-2402821**](file:///D:\RAN4%23110\Docs\R4-2402821.zip) **Correction on DSS support for the NTN bands from Rel-18**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0074 rev Cat: A (Rel-18)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales, Apple*

**Decision: Revised to R4-2403876 (from R4-2402821).**

[**R4-2403876**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403876.zip) **Correction on DSS support for the NTN bands from Rel-18**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0074 rev Cat: A (Rel-18)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales, Apple*

**Decision: Revised to R4-2403883 (from R4-2403876).**

[**R4-2403883**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403883.zip) **Correction on DSS support for the NTN bands from Rel-18**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0074 rev Cat: A (Rel-18)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales, Apple*

**Decision: Revised to R4-2403887 (from R4-2403883).**

[**R4-2403887**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403887.zip) **Correction on DSS support for the NTN bands from Rel-18**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0074 rev Cat: F (Rel-18)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales, Apple*

**Decision: Return to.**

Flexible Tx-Rx separation

[**R4-2402929**](file:///D:\RAN4%23110\Docs\R4-2402929.zip) **Flexible TX-RX Separation for NR NTN FR1 bands**

*Type: discussion For: Decision  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales*

**Decision: Noted.**

[**R4-2402818**](file:///D:\RAN4%23110\Docs\R4-2402818.zip) **Flexible TX-RX Separation for NR NTN Bands from Rel-17**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0071 rev Cat: F (Rel-17)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales*

**Abstract:**

Parsing Failure: • Change request number wrong on CR cover for TDoc [R4-2402818](file:///D:\RAN4%23110\Docs\R4-2402818.zip). Database value : 0071. CR cover value : . A revision will be required.

**Decision:** The document was **revised to** [**R4-2402947**](file:///D:\RAN4%23110\Docs\R4-2402947.zip).

[**R4-2402947**](file:///D:\RAN4%23110\Docs\R4-2402947.zip) **Flexible TX-RX Separation for NR NTN Bands from Rel-17**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0071 rev 1 Cat: F (Rel-17)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales*

**Decision: Not pursued.**

[**R4-2403820**](file:///D:\RAN4%23110\Docs\R4-2403820.zip) **Flexible TX-RX Separation for NR NTN Bands from Rel-17**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0071 rev 1 Cat: F (Rel-17)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales*

**Decision: Withdrawn.**

[**R4-2402819**](file:///D:\RAN4%23110\Docs\R4-2402819.zip) **Flexible TX-RX separation for NR NTN bands from Rel-18**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0072 rev Cat: A (Rel-18)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales*

**Decision: Withdrawn.**

[**R4-2402816**](file:///D:\RAN4%23110\Docs\R4-2402816.zip) **Correction on TX-RX separation for IoT NTN bands**

*Type: CR For: Agreement  
 36.102 v18.4.0 CR-0033 rev Cat: F (Rel-18)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales, Apple*

**Abstract:**

Chair: This should be treated under email thread [102].

**Decision: Revised to R4-2403874 (from R4-2402816).**

[**R4-2403874**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403874.zip) **Correction on TX-RX separation for IoT NTN bands**

*Type: CR For: Agreement  
 36.102 v18.4.0 CR-0033 rev Cat: F (Rel-18)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales, Apple*

**Abstract:**

Chair: This should be treated under email thread [102].

**Decision: Agreed.**

Phase continuity

[**R4-2401784**](file:///D:\RAN4%23110\Docs\R4-2401784.zip) **(NR\_NTN\_solutions-Core) CR for 38.101-5 to exclude phase continuity requirements for NTN UE (R17)**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0065 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2403819**](file:///D:\RAN4%23110\Docs\R4-2403819.zip) **(from** [**R4-2401784**](file:///D:\RAN4%23110\Docs\R4-2401784.zip)**).**

[**R4-2403819**](file:///D:\RAN4%23110\Docs\R4-2403819.zip) **(NR\_NTN\_solutions-Core) CR for 38.101-5 to exclude phase continuity requirements for NTN UE (R17)**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0065 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

*Ericsson: we cannot remove the requiremetns from Rel-17. If you want to preclude some, it can be treated in the CA capability.*

*Huawei: based on the discussions, we all agreed that Rel-17 requirements cannot be applied to NGSO scenario, where no doppler shift and delay are considered.*

*ZTE: in last RAN4 meeting, we agree that for NGSO we only enable the capability but no requirements.*

*Ericsson: RAN1 also agreed to keep DMRS bundling feature.*

**Decision: Return to.**

[**R4-2401785**](file:///D:\RAN4%23110\Docs\R4-2401785.zip) **(NR\_NTN\_solutions-Core) CR for 38.101-5 to exclude phase continuity requirements for NTN UE (R18)**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0066 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Return to.**

UL RMCs for NR-NTN

[**R4-2402908**](file:///D:\RAN4%23110\Docs\R4-2402908.zip) **UL RMCs updates for NR NTN (Rel-17)**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0075 rev Cat: F (Rel-17)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Agreed.**

[**R4-2402909**](file:///D:\RAN4%23110\Docs\R4-2402909.zip) **UL RMCs updates for NR NTN (Rel-18)**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0076 rev Cat: A (Rel-18)  
  
 Source: Keysight Technologies UK Ltd*

**Decision: Agreed.**

NTN frequency range

[**R4-2401783**](file:///D:\RAN4%23110\Docs\R4-2401783.zip) **(NR\_NTN\_solutions-Core) Discussion on whether R17 NTN UE spec should support phase continuity requirements**

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

**Decision: Noted.**

[**R4-2401779**](file:///D:\RAN4%23110\Docs\R4-2401779.zip) **(NR\_NTN\_solutions-Core) CR for TS 38.101-5 to update NTN frequency range (R17)**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0063 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2403821**](file:///D:\RAN4%23110\Docs\R4-2403821.zip) **(from** [**R4-2401779**](file:///D:\RAN4%23110\Docs\R4-2401779.zip)**).**

[**R4-2403821**](file:///D:\RAN4%23110\Docs\R4-2403821.zip) **(NR\_NTN\_solutions-Core) CR for TS 38.101-5 to update NTN frequency range (R17)**

*Type: CR For: Agreement  
 38.101-5 v17.6.0 CR-0063 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2401780**](file:///D:\RAN4%23110\Docs\R4-2401780.zip) **(NR\_NTN\_solutions-Core) CR for TS 38.101-5 to update NTN frequency range (R18)**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0064 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2401781**](file:///D:\RAN4%23110\Docs\R4-2401781.zip) **(NR\_NTN\_solutions-Core) CR for TS 38.108 to update NTN frequency range (R17)**

*Type: CR For: Agreement  
 38.108 v17.6.0 CR-0052 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2403822**](file:///D:\RAN4%23110\Docs\R4-2403822.zip) **(from** [**R4-2401781**](file:///D:\RAN4%23110\Docs\R4-2401781.zip)**).**

[**R4-2403822**](file:///D:\RAN4%23110\Docs\R4-2403822.zip) **(NR\_NTN\_solutions-Core) CR for TS 38.108 to update NTN frequency range (R17)**

*Type: CR For: Agreement  
 38.108 v17.6.0 CR-0052 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2401782**](file:///D:\RAN4%23110\Docs\R4-2401782.zip) **(NR\_NTN\_solutions-Core) CR for TS 38.108 to update NTN frequency range (R18)**

*Type: CR For: Agreement  
 38.108 v18.1.0 CR-0053 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

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

[**R4-2401061**](file:///D:\RAN4%23110\Docs\R4-2401061.zip) **Topic summary for [110][102] R17\_UERF\_maintenance**

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

**Abstract:**

[110][102] R17\_UERF\_maintenance AI 5.1, 5.2.1, 5.3

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403651**](file:///D:\RAN4%23110\Docs\R4-2403651.zip) **WF on TEI proposals for NR-NTN**

*Type: other For: Approval  
 Source: Inmarsat*

**Decision: Revised to R4-2403881 (from R4-2403651).**

[**R4-2403881**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403881.zip) **WF on TEI proposals for NR-NTN**

*Type: other For: Approval  
 Source: Inmarsat*

**Decision: Approved.**

**Minutes and agreements after the first round when treating the NTN topic (Topic#1)**

Refer to the hyperlinks below for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/02.Tuesday/07.%5B102%5D_R4-2401061%20Topic%20Summary%20for%20%5B110%5D%5B102%5D%20R17_UERF_maintenance%20-%20v01_Topic%231.docx>

**Minutes and agreements after the first round when treating the NTN topic (other topics expect for Topic#1)**

Refer tot the hyperlinks below for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/04.Thursday/06.%5B102%5D_draftR4-2401061%20Topic%20Summary%20for%20%5B110%5D%5B102%5D%20R17_UERF_maintenance%20-%20v01_Moderator%20(1).docx>

**Issue 2-1-1: Whether or not to confirm the ambiguity issue on BCS reporting for an inter-band ENDC band combination with multiple intra-band ENDC components?**

**Agreement:**

* confirm the ambiguity issue on BCS reporting for an inter-band ENDC band combination with multiple intra-band ENDC components

**Issue 2-2-1: Whether or not to confirm the ambiguity issue on intra-band contiguity reporting for an inter-band ENDC band combination with multiple intra-band ENDC components?**

**Agreement:**

* confirm the ambiguity issue on intra-band contiguity reporting for an inter-band ENDC band combination with multiple intra-band ENDC components

**Issue 3-1: Which alternative to clarify Tx-Rx separation for testing REFSENS for asymmetric UL/DL operation**

**Agreement:**

* Keep RAN4 agreements on REFSENS for asymmetric UL/DL operation, and agree what is proposed in R4-2400363. Furthermore, RAN5 specs requires correction as well.

**Issue 3-2: Should the requirements be explicitly referenced together with all the other emission requirements to all other NR-U network signalling labels than NS\_59 which have PSD limits (i.e., NS\_58/60/61)?**

**Agreement:**

* the requirements should be explicitly referenced together with all the other emission requirements to all other NR-U network signalling labels than NS\_59 which have PSD limits (i.e., NS\_58/60/61)

**Issue 5-1: For intra-band UL CA with UL-MIMO, does the current H suffix clause assume that all of intra-band CCs shall be in UL-MIMO mode?**

**Agreement:**

* For intra-band UL CA with UL-MIMO, the current H suffix clause assume that all of intra-band CCs shall be in UL-MIMO mode

## 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 6.1.15/AI 6.2.8, 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.

- The contributions corresponding to incoming LS for Rel-17 and Rel-18 are expected to be submitted in AI 12, if there is a dedicated agenda in AI 12.

### 6.1 Rel-18 spectrum related WI maintenance

[**R4-2402791**](file:///D:\RAN4%23110\Docs\R4-2402791.zip) **CR to R18 38101-1 to correct Note on PC2 CA\_n71-n77 IMD5 MSD**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2182 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Correction of incorrect channel bandwidths and RB allocations in MSD test points

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

#### 6.1.1 Rel-18 band combinations for concurrent operation of NR/LTE Uu bands/band combinations and one NR/LTE V2X PC5 band

#### 6.1.2 High power UE (power class 1.5) for NR TDD bands

**Sub-topic 1-1: CR for n39**

[**R4-2400229**](file:///D:\RAN4%23110\Docs\R4-2400229.zip) **CR for 38101-1 to add PC1.5 for band n39 and annex L for band n39**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1994 rev Cat: B (Rel-18)  
  
 Source: China Mobile International Ltd*

**Decision: Agreed.**

[**R4-2403832**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403832.zip) **CR for 38101-1 to add PC1.5 for band n39 and annex L for band n39**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1994 rev Cat: B (Rel-18)  
  
 Source: China Mobile International Ltd*

**Decision: Withdrawn.**

[**R4-2401458**](file:///D:\RAN4%23110\Docs\R4-2401458.zip) **(HPUE\_NR\_FR1\_TDD\_R18) CR for TS 38.101-1 to add n39 power class and mpr behavior modified**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2107 rev Cat: B (Rel-18)  
  
 Source: Spreadtrum Communications*

**Decision: Merged (with R4-24xxxxx).**

**Withdrawn**

[**R4-2400728**](file:///D:\RAN4%23110\Docs\R4-2400728.zip) **N39 power class and mpr behavior modified in TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Spreadtrum Communications*

**Abstract:**

MCC: This contribution have not been made available by the submission deadline.

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

#### 6.1.3 Rel-18 downlink interruption for NR and EN-DC band combinations at dynamic Tx switching

#### 6.1.4 Adding new NR FDD bands for RedCap in Rel-18

#### 6.1.5 Enhancement for 700/800/900MHz band combinations

**Sub-topic 1-2: enhancement for low band combinations**

[**R4-2400368**](file:///D:\RAN4%23110\Docs\R4-2400368.zip) **CA\_n26(2A) A-MPR CA\_NC\_NS\_12-15**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

[**R4-2400372**](file:///D:\RAN4%23110\Docs\R4-2400372.zip) **On CA\_NC\_NS\_100**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

[**R4-2402058**](file:///D:\RAN4%23110\Docs\R4-2402058.zip) **Discussion on RF requirements for CA\_n26(2A)**

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

**Decision: Noted.**

CR

[**R4-2400053**](file:///D:\RAN4%23110\Docs\R4-2400053.zip) **(NR\_700800900\_combo\_enh) Maintenance CR for 700800900: TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1986 rev Cat: F (Rel-18)  
  
 Source: CATT*

**Decision: Endorsed.**

[**R4-2400362**](file:///D:\RAN4%23110\Docs\R4-2400362.zip) **CR to TS 38.101-1 Rel-18 CA\_NC\_NS\_12-15**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2007 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions, Inc*

**Abstract:**

Chair: The WI code "NR\_CA\_R18\_Intra-Core" for this CR needs be checked.

**Decision: Endorsed.**

[**R4-2402059**](file:///D:\RAN4%23110\Docs\R4-2402059.zip) **CR for TS 38.101-1 to maintain low band combos**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2137 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2403823**](file:///D:\RAN4%23110\Docs\R4-2403823.zip) **(from** [**R4-2402059**](file:///D:\RAN4%23110\Docs\R4-2402059.zip)**).**

**[R4-2403823](D:\\RAN4#110\\Docs\\R4-2403823.zip) CR for TS 38.101-1 to maintain low band combos**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2137 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon, CATT, Skyworks Solutions. Inc*

**Decision: Agreed.**

#### 6.1.6 Additional LTE bands for UE categories M1/M2/NB1/NB2 in Rel-18

##### 6.1.6.1 UE RF requirements

##### 6.1.6.2 BS RF and MSR requirements

#### 6.1.7 Introduction of evolved shared spectrum bands

**Sub-topic 1-3: Evolved shared spectrum bands**

[**R4-2400173**](file:///D:\RAN4%23110\Docs\R4-2400173.zip) **Adding support for the VLP mode in US**

*Type: other For: Approval  
 Source: Apple, Charter Communications Inc.*

**Decision: Noted.**

CR for evolved shared spectrum bands

[**R4-2400174**](file:///D:\RAN4%23110\Docs\R4-2400174.zip) **Adding support for the VLP mode in US**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1988 rev Cat: F (Rel-18)  
  
 Source: Apple, Charter Communications Inc.*

**Decision: Revised to R4-2403833 (from R4-2400174).**

[**R4-2403833**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403833.zip) **Adding support for the VLP mode in US**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1988 rev Cat: F (Rel-18)  
  
 Source: Apple, Charter Communications Inc.*

**Decision: Agreed.**

[**R4-2400175**](file:///D:\RAN4%23110\Docs\R4-2400175.zip) **Adding support for the VLP mode in US**

*Type: CR For: Agreement  
 38.849 v18.2.0 CR-0008 rev Cat: F (Rel-18)  
  
 Source: Apple, Charter Communications Inc.*

**Decision: Revised to R4-2403834 (from R4-2400175).**

[**R4-2403834**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403834.zip) **Adding support for the VLP mode in US**

*Type: CR For: Agreement  
 38.849 v18.2.0 CR-0008 rev Cat: F (Rel-18)  
  
 Source: Apple, Charter Communications Inc.*

**Decision: Agreed.**

[**R4-2400522**](file:///D:\RAN4%23110\Docs\R4-2400522.zip) **CR to TS38.101-1 Rel-18 CAT-F: On corrections for NR-U R18 A-MPR requirements**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2014 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

#### 6.1.8 New bands and BW allocation for 5G terrestrial broadcast - part 2

**Sub-topic 1-4: New band and CBW for 5G terrestrial broadcast**

[**R4-2400147**](file:///D:\RAN4%23110\Docs\R4-2400147.zip) **Further considerations on ACS for 5G terrestrial broadcast**

*Type: discussion For: Decision  
 Source: Apple*

**Decision: Noted.**

[**R4-2400715**](file:///D:\RAN4%23110\Docs\R4-2400715.zip) **Test results and discussion on ACS for 5G terrestrial broadcast**

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

**Decision: Noted.**

[**R4-2401883**](file:///D:\RAN4%23110\Docs\R4-2401883.zip) **Discussion on 5G broadcast UE RF limits**

*Type: discussion For: Discussion  
 Source: ROHDE & SCHWARZ*

**Decision: Noted.**

CR

[**R4-2400148**](file:///D:\RAN4%23110\Docs\R4-2400148.zip) **Corrections for the LTE based 5G terrestrial broadcast**

*Type: CR For: Agreement  
 36.101 v18.4.0 CR-6030 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Not pursued.**

[**R4-2400282**](file:///D:\RAN4%23110\Docs\R4-2400282.zip) **CR for 36101 Bracket removal 5G Broadcast**

*Type: CR For: Agreement  
 36.101 v18.4.0 CR-6031 rev Cat: F (Rel-18)  
  
 Source: Qualcomm Incorporated, SWR, EBU, Rohde & Schwarz*

**Abstract:**

CR to remove brackets from ACS and REFSENS for 5G terrerstrial broadcast. Also typo in spurious response corrected

**Decision: Revised to R4-2403850 (from R4-2400282).**

[**R4-2403850**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403850.zip) **CR for 36101 Bracket removal 5G Broadcast**

*Type: CR For: Agreement  
 36.101 v18.4.0 CR-6031 rev Cat: F (Rel-18)  
  
 Source: Qualcomm Incorporated, SWR, EBU, Rohde & Schwarz*

**Abstract:**

CR to remove brackets from ACS and REFSENS for 5G terrerstrial broadcast. Also typo in spurious response corrected

**Decision: Agreed.**

[**R4-2401561**](file:///D:\RAN4%23110\Docs\R4-2401561.zip) **(LTE\_terr\_bcast\_bands\_part2-Core) CR to 36.101: Correction of EARFCN for bands 107 and 108**

*Type: CR For: Agreement  
 36.101 v18.4.0 CR-6039 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

The EARFCN for bands 107 and 108 are corrected to account for the range already allocated to band 106.

**Decision: Agreed.**

[**R4-2401562**](file:///D:\RAN4%23110\Docs\R4-2401562.zip) **(LTE\_terr\_bcast\_bands\_part2-Core) CR to 36.104: Correction of EARFCN for bands 107 and 108**

*Type: CR For: Agreement  
 36.104 v18.4.0 CR-4990 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

The EARFCN for bands 107 and 108 are corrected to account for the range already allocated to band 106.

**Decision: Agreed.**

#### 6.1.9 New FDD Bands using the uplink from n28 and the downlink of n75 and n76

##### 6.1.9.1 UE RF requirements

##### 6.1.9.2 BS RF requirements

##### 6.1.9.3 RRM requirements

#### 6.1.10 Introduction of 900 MHz NR Band in the US

##### 6.1.10.1 UE RF requirements

##### 6.1.10.2 BS RF requirements (resubmitted CR)

**Sub-topic 1-5: CR for missing band n106**

[**R4-2402231**](file:///D:\RAN4%23110\Docs\R4-2402231.zip) **CR to TS37.145-1: Addition of missing band n106**

*Type: CR For: Agreement  
 37.145-1 v18.4.0 CR-0337 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

##### 6.1.10.3 RRM requirements

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

#### 6.1.12 Introduction of the satellite L-/S-band

##### 6.1.12.1 UE RF requirements

**Sub-topic 1-6: Satellite L/S band**

CR for A-MPR

[**R4-2400149**](file:///D:\RAN4%23110\Docs\R4-2400149.zip) **Correction of the A-MPR values for the satellite band n254**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0055 rev Cat: F (Rel-18)  
  
 Source: Apple Inc., Globalstar Inc.*

**Decision: Revised to R4-2403827 (from R4-2400149).**

[**R4-2403827**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403827.zip) **Correction of the A-MPR values for the satellite band n254**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0055 rev Cat: F (Rel-18)  
  
 Source: Apple Inc., Globalstar Inc.*

**Decision: Agreed.**

[**R4-2400150**](file:///D:\RAN4%23110\Docs\R4-2400150.zip) **Correction of the A-MPR values for the satellite band n254**

*Type: CR For: Agreement  
 38.741 v18.0.0 CR-0001 rev Cat: F (Rel-18)  
  
 Source: Apple Inc., Globalstar Inc.*

**Decision: Revised to R4-2403828 (from R4-2400150).**

[**R4-2403828**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403828.zip) **Correction of the A-MPR values for the satellite band n254**

*Type: CR For: Agreement  
 38.741 v18.0.0 CR-0001 rev Cat: F (Rel-18)  
  
 Source: Apple Inc., Globalstar Inc.*

**Decision: Agreed.**

CR in UE spurious emissions

[**R4-2402223**](file:///D:\RAN4%23110\Docs\R4-2402223.zip) **CR to TS38.101-5: Addition of some missing bands in UE spurious emissions coexistence clause**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0070 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

##### 6.1.12.2 SAN RF requirements

##### 6.1.12.3 RRM requirements

#### 6.1.13 Introduction of a new FDD band (L+S band) for IoT NTN operation

##### 6.1.13.1 UE RF requirements

**Sub-topic 1-7: FDD band (L+S band) for IoT NTN**

Measurement bandwidth

[**R4-2402393**](file:///D:\RAN4%23110\Docs\R4-2402393.zip) **Measurement bandwidth for NB-IoT in IoT NTN band b254**

*Type: other For: Approval  
 Source: Sony*

**Decision: Noted.**

CR for spurious emission

[**R4-2402614**](file:///D:\RAN4%23110\Docs\R4-2402614.zip) **(IoT\_NTN\_FDD\_LS\_band-Core) CR to TS 36.102 for additional spurious emission for band 254**

*Type: CR For: Agreement  
 36.102 v18.4.0 CR-0030 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Revised to R4-2403829 (from R4-2402614).**

**[R4-2403829](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403829.zip) (IoT\_NTN\_FDD\_LS\_band-Core) CR to TS 36.102 for additional spurious emission for band 254**

*Type: CR For: Agreement  
 36.102 v18.4.0 CR-0030 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Agreed.**

##### 6.1.13.2 SAN RF requirements

CR for SAN

[**R4-2402226**](file:///D:\RAN4%23110\Docs\R4-2402226.zip) **CR to TS36.181 Introduction of a new FDD band (L+S band) for IoT NTN operation**

*Type: CR For: Agreement  
 36.181 v18.2.0 CR-0013 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation, MediaTek*

**Decision: Agreed.**

[**R4-2402613**](file:///D:\RAN4%23110\Docs\R4-2402613.zip) **(IoT\_NTN\_FDD\_LS\_band-Perf) CR to TS 36.181 on introduction of a new FDD band (L+S band) for IoT NTN operation**

*Type: CR For: Agreement  
 36.181 v18.2.0 CR-0015 rev Cat: B (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Merged (with R4-24xxxxx).**

##### 6.1.13.3 RRM core requirements (resubmitted CR)

#### 6.1.14 Introduction of NR bands n31 and n72

##### 6.1.14.1 UE RF requirements (resubmitted CR)

##### 6.1.14.2 BS RF requirements and conformance testing (resubmitted CR)

##### 6.1.14.3 RRM core and performance requirements

#### 6.1.15 Other WIs related to bands introduced in Rel-18

**Sub-topic 1-8: CRs for directly discussinos**

Adding missing CA\_n12A-n265G

[**R4-2400205**](file:///D:\RAN4%23110\Docs\R4-2400205.zip) **Rel18 Cat F CR for 38.101-3 Add the missing combination CA\_n12A-n260G**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1119 rev Cat: F (Rel-18)  
  
 Source: Samsung, AT&T*

**Abstract:**

This combination was introduced in Rel-17 while inadvertently removed in Rel-18, hence this Rel-18 correction CR is submitted to Rel-17 maintenance CRs agenda item.

**Chair: This should be treated in email thread [103].**

**Decision: Not pursued.**

### 6.2 Rel-18 non-spectrum related WI maintenance

#### 6.2.1 NR Channel raster enhancement

##### 6.2.1.1 UE and BS channel raster

###### 6.2.1.1.1 Channel raster for TN

**Sub-topic 2-1: NR channel raster enhancement for TN**

[**R4-2400151**](file:///D:\RAN4%23110\Docs\R4-2400151.zip) **Remaining issues for enhanced channel raster**

*Type: discussion For: Decision  
 Source: Apple*

**Decision: Noted.**

[**R4-2400647**](file:///D:\RAN4%23110\Docs\R4-2400647.zip) **Frequency bands with mandatory support of the new channel raster**

*Type: discussion For: Discussion  
 Source: Orange UK*

**Decision: Noted.**

[**R4-2400723**](file:///D:\RAN4%23110\Docs\R4-2400723.zip) **Mandatory enhanced raster for NR bands n2, n5, and n66**

*Type: other For: Approval  
 Source: AT&T*

**Decision: Noted.**

[**R4-2401840**](file:///D:\RAN4%23110\Docs\R4-2401840.zip) **(NR\_channel\_raster\_enh-Core) Definition of the enhanced raster and support for RedCap from Rel-17**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we propose to clarify the definition of the enhanced channel raster and that this raster is supported by all RedCap UEs from Rel-17

**Decision: Noted.**

[**R4-2402472**](file:///D:\RAN4%23110\Docs\R4-2402472.zip) **Request for mandatory enhanced raster for n25, n66, n71 and n85**

*Type: discussion For: Approval  
 Source: T-Mobile USA*

**Decision: Noted.**

CR for channel raster for TN

[**R4-2400218**](file:///D:\RAN4%23110\Docs\R4-2400218.zip) **Clarification for the mandatory support of enhanced channel raster**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1993 rev Cat: F (Rel-18)  
  
 Source: Apple*

*Nokia: how to capture redcap UE differently? We need capture both UE types.*

*CMCC: As Nokia commented, we have different UE types. It is pre-mature.*

**Decision: Postponed.**

[**R4-2401841**](file:///D:\RAN4%23110\Docs\R4-2401841.zip) **(NR\_channel\_raster\_enh-Core) Correction to the definition of the enhanced channel raster**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2129 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to make clear to developers of UEs the objective of the enhanced raster and why this must be supported.

**Decision: Not pursued.**

[**R4-2402611**](file:///D:\RAN4%23110\Docs\R4-2402611.zip) **(NR\_channel\_raster\_enh-Core) CR to TS 38.101-1 for enhanced channel raster**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2175 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Abstract:**

Parsing Failure: Change request number wrong on CR cover for TDoc [R4-2402611](file:///D:\RAN4%23110\Docs\R4-2402611.zip). Database value : 2175. CR cover value : 2715. A revision will be required.

**Decision:** The document was **revised to** [**R4-2402636**](file:///D:\RAN4%23110\Docs\R4-2402636.zip).

[**R4-2402636**](file:///D:\RAN4%23110\Docs\R4-2402636.zip) **(NR\_channel\_raster\_enh-Core) CR to TS 38.101-1 for enhanced channel raster**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2175 rev 1 Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

(Replaces [R4-2402611](file:///D:\RAN4%23110\Docs\R4-2402611.zip))

Chair: Encourage companies to consider whether and how to capture the agreements into spec.

**Decision: Not pursued.**

[**R4-2402106**](file:///D:\RAN4%23110\Docs\R4-2402106.zip) **CR to TS 38.101-1: correction on enhanced channel raster**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2140 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to R4-2403835 (from R4-2402106).**

[**R4-2403835**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403835.zip) **CR to TS 38.101-1: correction on enhanced channel raster**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2140 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2402612**](file:///D:\RAN4%23110\Docs\R4-2402612.zip) **CR to TS 38.104 for enhanced channel raster**

*Type: CR For: Agreement  
 38.104 v18.4.0 CR-0597 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision:** The document was **revised to** [**R4-2402637**](file:///D:\RAN4%23110\Docs\R4-2402637.zip).

[**R4-2402637**](file:///D:\RAN4%23110\Docs\R4-2402637.zip) **(NR\_channel\_raster\_enh-Core) CR to TS 38.104 for enhanced channel raster**

*Type: CR For: Agreement  
 38.104 v18.4.0 CR-0597 rev 1 Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

(Replaces [R4-2402612](file:///D:\RAN4%23110\Docs\R4-2402612.zip))

**Decision: Not pursued.**

[**R4-2402107**](file:///D:\RAN4%23110\Docs\R4-2402107.zip) **CR to TS 38.104: correction on enhanced channel raster**

*Type: CR For: Agreement  
 38.104 v18.4.0 CR-0569 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Not pursued.**

**[R4-2403836](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403836.zip) CR to TS 38.104: correction on enhanced channel raster**

*Type: CR For: Agreement  
 38.104 v18.4.0 CR-0569 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

###### 6.2.1.1.2 Channel raster for NTN

**Sub-topic 2-2: NR channel raster enhancement for NTN**

[**R4-2400152**](file:///D:\RAN4%23110\Docs\R4-2400152.zip) **Enhanced channel raster for NTN FR1 bands**

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

Proposal: Enable the 10kHz raster as a mandatory feature for the NTN bands n254, n255 and n256.

ZTE: the bands are defined in Rel-17.

Apple: we have parameters which we have early implementation approach.

**Agreement:**

* Enable the 10kHz raster as a mandatory feature for the NTN bands n254, n255 and n256 from Rel-18.

**Decision: Noted.**

CR

[**R4-2400153**](file:///D:\RAN4%23110\Docs\R4-2400153.zip) **Mandating enhanced channel raster for the NTN FR1 bands**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0056 rev Cat: F (Rel-18)  
  
 Source: Apple, Ligado Networks, Inmarsat, Viasat, Globalstar, Thales, Hughes/Echostar*

**Decision: Postponed.**

[**R4-2400154**](file:///D:\RAN4%23110\Docs\R4-2400154.zip) **Adding satellite band n254 to the list of bands with enhanced channel raster**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0057 rev Cat: F (Rel-18)  
  
 Source: Apple Inc., Globalstar Inc.*

**Decision: Agreed.**

[**R4-2401842**](file:///D:\RAN4%23110\Docs\R4-2401842.zip) **(NR\_channel\_raster\_enh-Core) Correction to the definition of the enhanced channel raster**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0067 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to make clear to developers of UEs the objective of the enhanced raster and why this must be supported.

**Decision: Not pursued.**

[**R4-2402108**](file:///D:\RAN4%23110\Docs\R4-2402108.zip) **CR to TS 38.101-5: correction on enhanced channel raster**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0069 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Not pursued.**

[**R4-2403837**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403837.zip) **CR to TS 38.101-5: correction on enhanced channel raster**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0069 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

[**R4-2402109**](file:///D:\RAN4%23110\Docs\R4-2402109.zip) **CR to TS 38.108: correction on enhanced channel raster**

*Type: CR For: Agreement  
 38.108 v18.1.0 CR-0054 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Not pursued.**

**[R4-2403838](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403838.zip) CR to TS 38.108: correction on enhanced channel raster**

*Type: CR For: Agreement  
 38.108 v18.1.0 CR-0054 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

##### 6.2.1.2 UE capability

**Sub-topic 2-3: NR channel raster for RedCap**

[**R4-2400979**](file:///D:\RAN4%23110\Docs\R4-2400979.zip) **[NR\_channel\_raster\_enh-Core] Discussion on mandatory of enhanced channel raster**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

LS out

[**R4-2401843**](file:///D:\RAN4%23110\Docs\R4-2401843.zip) **Draft LS on mandated support of the enhanced channel raster by RedCap UEs from Rel-17**

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

**Abstract:**

LS to RAN2 on the need for support of the enhanced channel raster by RedCap UE from Rel-17 and required changes to RAN4 Rel-17 specifications to this end

**Decision: Noted.**

#### 6.2.2 NB-IoT/eMTC core & perf. requirements for NTN

##### 6.2.2.1 SAN RF requirement and conformance testing

##### 6.2.2.2 UE RF requirement

**Sub-topic 2-4: NB-IoT/eMTC for NTN UE**

[**R4-2402744**](file:///D:\RAN4%23110\Docs\R4-2402744.zip) **NTN UE maximum input power and blocking**

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

**Decision: Noted.**

[**R4-2402931**](file:///D:\RAN4%23110\Docs\R4-2402931.zip) **Motivation for In-band and guard-band NB-IoT NTN with NR**

*Type: discussion For: Decision  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales*

**Decision: Noted.**

CR

[**R4-2400554**](file:///D:\RAN4%23110\Docs\R4-2400554.zip) **(LTE\_NBIOT\_eMTC\_NTN\_req-Core) CR to 36.102 for IoT NTN UE RF requirements**

*Type: CR For: Agreement  
 36.102 v18.4.0 CR-0027 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc*

**Decision: Revised to** [**R4-2403674**](file:///D:\RAN4%23110\Docs\R4-2403674.zip) **(from** [**R4-2400554**](file:///D:\RAN4%23110\Docs\R4-2400554.zip)**).**

[**R4-2403674**](file:///D:\RAN4%23110\Docs\R4-2403674.zip) **(LTE\_NBIOT\_eMTC\_NTN\_req-Core) CR to 36.102 for IoT NTN UE RF requirements**

*Type: CR For: Agreement  
 36.102 v18.4.0 CR-0027 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc*

**Decision: Agreed.**

[**R4-2402792**](file:///D:\RAN4%23110\Docs\R4-2402792.zip) **[LTE\_NBIOT\_eMTC\_NTN\_req-Core] CR to TS 36.102 ACS, blocking and maximum input power**

*Type: CR For: Agreement  
 36.102 v18.4.0 CR-0032 rev Cat: F (Rel-18)  
  
 Source: Qualcomm Inc.*

**Decision: Not pursued.**

[**R4-2403831**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403831.zip) **[LTE\_NBIOT\_eMTC\_NTN\_req-Core] CR to TS 36.102 ACS, blocking and maximum input power**

*Type: CR For: Agreement  
 36.102 v18.4.0 CR-0032 rev Cat: F (Rel-18)  
  
 Source: Qualcomm Inc.*

**Decision: Withdrawn.**

[**R4-2402822**](file:///D:\RAN4%23110\Docs\R4-2402822.zip) **Clarification on in-band and guard-band NB-IoT and eMTC NTN with NR NTN**

*Type: CR For: Agreement  
 36.102 v18.4.0 CR-0034 rev Cat: F (Rel-18)  
  
 Source: Inmarsat, Viasat, Omnispace, Terrestar Solutions, Thuraya, Ligado Networks, Hughes/Echostar, Thales*

*CHTTL: there is no guard band operation for NB-IoT on NR band. Regarding inband, we have inband TN operation for NR. I also wonder what the exact scenario is.*

*Inmarsat: for scenario in this case with both IoT-NTN and NR NTN, it should be inband and standalone operation.*

**Decision: Not pursued.**

**Withdrawn**

[**R4-2402745**](file:///D:\RAN4%23110\Docs\R4-2402745.zip) **[LTE\_NBIOT\_eMTC\_NTN\_req-Core] CR to TS 36.102 ACS, blocking and maximum input power**

*Type: CR For: Agreement  
 36.102 v18.4.0 CR-0031 rev Cat: F (Rel-18)  
  
 Source: Qualcomm Inc.*

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

##### 6.2.2.3 RRM requirement

##### 6.2.2.4 Demodulation requirements

#### 6.2.3 In-Device Co-existence (IDC) enhancements for NR and MR-DC

#### 6.2.4 Low NR band 4Rx for handheld UE and 3Tx for inter-band UL CA and EN-DC

##### 6.2.4.1 Enhancements for 4Rx at low frequency band (<1GHz)

##### 6.2.4.2 Enhancements of 3Tx for band combinations with two bands

[**R4-2401793**](file:///D:\RAN4%23110\Docs\R4-2401793.zip) **Discussion on TxD capability for 3Tx**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

**CR/Draft CR**

[**R4-2400206**](file:///D:\RAN4%23110\Docs\R4-2400206.zip) **Rel18 Cat F CR for 38.101-1 Add the missing configurations for ULCA and TxD scenario with 3Tx**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1992 rev Cat: F (Rel-18)  
  
 Source: Samsung, TELUS, Bell Mobility, Verizon, AT&T*

**Decision: Endorsed.**

[**R4-2400600**](file:///D:\RAN4%23110\Docs\R4-2400600.zip) **[NR\_RF\_FR1\_enh-Core, 4Rx\_low\_NR\_band\_handheld\_3Tx\_NR\_CA\_ENDC-Core] CR to add clarification regarding the configurations of the UL CCs for suffix H - TS38.101-1, Rel-18, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2030 rev Cat: F (Rel-18)  
  
 Source: Anritsu Limited*

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

[**R4-2401263**](file:///D:\RAN4%23110\Docs\R4-2401263.zip) **(4Rx\_low\_NR\_band\_handheld\_3Tx\_NR\_CA\_ENDC-Core) Restructure the clauses sequence related to 3Tx inter-band ENDC band combination**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1149 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2401790**](file:///D:\RAN4%23110\Docs\R4-2401790.zip) **Big CR for Low band 4Rx for handheld UE and 3Tx for inter-band UL CA and EN-DC (38.101-1)**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2123 rev Cat: F (Rel-18)  
  
 Source: OPPO*

**Decision:** The document was **for email approval**.

[**R4-2401791**](file:///D:\RAN4%23110\Docs\R4-2401791.zip) **Big CR for Low band 4Rx for handheld UE and 3Tx for inter-band UL CA and EN-DC (38.101-3)**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1160 rev Cat: F (Rel-18)  
  
 Source: OPPO*

**Decision:** The document was **for email approval**.

[**R4-2401797**](file:///D:\RAN4%23110\Docs\R4-2401797.zip) **Draft CR of resubmit agreed band combinations for 3Tx inter-band EN-DC**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: OPPO*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2401997**](file:///D:\RAN4%23110\Docs\R4-2401997.zip) **CR for TS 38.101-3: correction on inter-band EN-DC 3Tx with UL MIMO and inter-band EN-DC 3Tx with Tx Diversity**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1165 rev Cat: F (Rel-18)  
  
 Source: CHTTL, Samsung*

**Decision: Endorsed.**

[**R4-2402423**](file:///D:\RAN4%23110\Docs\R4-2402423.zip) **R18 Cat-F CR 38.101-1 correction CR for 3Tx requirements**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2162 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon, OPPO*

**Decision: Endorsed.**

[**R4-2402424**](file:///D:\RAN4%23110\Docs\R4-2402424.zip) **R18 Cat-F CR 38.101-3 correction CR for 3Tx requirements**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1172 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon, OPPO*

**Decision: Endorsed.**

[**R4-2402451**](file:///D:\RAN4%23110\Docs\R4-2402451.zip) **[4Rx\_low\_NR\_band\_handheld\_3Tx\_NR\_CA\_ENDC] CR for 38.101-1 Add the missing CA\_n41A-n77A configuration for ULCA and TxD scenario with 3Tx**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2165 rev Cat: F (Rel-18)  
  
 Source: T-Mobile USA*

*CHTTL: Note 4 is not correct.*

**Decision: Revised to** [**R4-2403640**](file:///D:\RAN4%23110\Docs\R4-2403640.zip) **(from** [**R4-2402451**](file:///D:\RAN4%23110\Docs\R4-2402451.zip)**).**

[**R4-2403640**](file:///D:\RAN4%23110\Docs\R4-2403640.zip) **[4Rx\_low\_NR\_band\_handheld\_3Tx\_NR\_CA\_ENDC] CR for 38.101-1 Add the missing CA\_n41A-n77A configuration for ULCA and TxD scenario with 3Tx**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2165 rev Cat: F (Rel-18)  
  
 Source: T-Mobile USA*

**Decision: Endorsed.**

**LS out**

[**R4-2401794**](file:///D:\RAN4%23110\Docs\R4-2401794.zip) **draft LS on applicable release of per FS TxD capability**

*Type: LS out For: Approval  
 to R2  
 Source: OPPO*

**Decision: Revised to R4-2403857 (from R4-2401794).**

**[R4-2403857](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403857.zip) draft LS on applicable release of per FS TxD capability**

*Type: LS out For: Approval  
 to R2  
 Source: OPPO*

**Decision: Approved.**

#### 6.2.5 BS and UE EMC enhancements maintenance

#### 6.2.6 NR Support for UAV

**Sub-topic 2-5: NR UAV**

[**R4-2402079**](file:///D:\RAN4%23110\Docs\R4-2402079.zip) **On corrections for aerial NR UEs**

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

**Decision: Noted.**

[**R4-2402080**](file:///D:\RAN4%23110\Docs\R4-2402080.zip) **(NR\_UAV) BigCR to 38.101-1 Corrections for aerial NR UEs**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2138 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

CR

[**R4-2400824**](file:///D:\RAN4%23110\Docs\R4-2400824.zip) **(NR\_UAV) CR for TS 38.101-1 to correct requirements NR UAV NS**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2052 rev Cat: F (Rel-18)  
  
 Source: CMCC*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2401205**](file:///D:\RAN4%23110\Docs\R4-2401205.zip) **CR for Rel-18 38.101-1 is to modify the definition for Aerial UE in clause 3.1**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2072 rev Cat: F (Rel-18)  
  
 Source: Xiaomi*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2402081**](file:///D:\RAN4%23110\Docs\R4-2402081.zip) **(NR\_UAV) draftCR to 38.101-1 Corrections for aerial NR UEs**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Merged (with R4-24xxxxx).**

LS out

[**R4-2402326**](file:///D:\RAN4%23110\Docs\R4-2402326.zip) **LS Reply to RAN2 on UAV**

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

**Abstract:**

This contribution is a reply to RAN2 LS requesting RAN4's view on additionalPmax-r18

**Decision: Noted.**

[**R4-2402518**](file:///D:\RAN4%23110\Docs\R4-2402518.zip) **Reply LS on UAV UE capabilities and NS values**

*Type: LS out For: Approval  
 to RAN2  
 Source: ZTE Corporation*

**Decision: Noted.**

[**R4-2402702**](file:///D:\RAN4%23110\Docs\R4-2402702.zip) **Draft LS Reply on Aerial Pmax values**

*Type: LS out For: Approval  
 to RAN2  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Revised to R4-2403830 (from R4-2402702).**

[**R4-2403830**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403830.zip) **Draft LS Reply on Aerial Pmax values**

*Type: LS out For: Approval  
 to RAN2  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Approved.**

**Withdrawn**

[**R4-2400714**](file:///D:\RAN4%23110\Docs\R4-2400714.zip) **Use of Max(0, … with LCRB**

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

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

#### 6.2.7 Enhanced LTE Support for UAV

**Sub-topic 2-6: LTE UAV**

[**R4-2402082**](file:///D:\RAN4%23110\Docs\R4-2402082.zip) **On corrections for aerial LTE UEs**

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

**Decision: Noted.**

[**R4-2402083**](file:///D:\RAN4%23110\Docs\R4-2402083.zip) **(LTE\_UAV\_enh) BigCR to 36.101 Corrections for aerial LTE UEs**

*Type: CR For: Agreement  
 36.101 v18.4.0 CR-6040 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Agreed.**

CR

[**R4-2400825**](file:///D:\RAN4%23110\Docs\R4-2400825.zip) **(LTE\_UAV\_enh) CR for TS 36.101 to correct requirements LTE UAV NS**

*Type: CR For: Agreement  
 36.101 v18.4.0 CR-6036 rev Cat: F (Rel-18)  
  
 Source: CMCC*

**Decision: Endorsed.**

[**R4-2402084**](file:///D:\RAN4%23110\Docs\R4-2402084.zip) **(LTE\_UAV\_enh) draftCR to 36.101 Corrections for aerial LTE UEs**

*Type: draftCR For: Endorsement  
 36.101 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Endorsed.**

#### 6.2.8 Other dedicated Rel-18 WIs

##### 6.2.8.1 UE RF requirements

**Sub-topic 2-7: other dedicated Rel-18 WIs**

CR on UE RF SBFD feature

[**R4-2400426**](file:///D:\RAN4%23110\Docs\R4-2400426.zip) **Draft CR on correcting UE RF requirement conclusion inconsistency for SBFD**

*Type: draftCR For: Endorsement  
 38.858 v18.0.0 CR- rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Endorsed.**

[**R4-2401536**](file:///D:\RAN4%23110\Docs\R4-2401536.zip) **(FS\_NR\_duplex\_evo) Editorial CR to TR 38.858 on UE aspects for Full Duplex operation**

*Type: draftCR For: Endorsement  
 38.858 v18.0.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Revised to R4-2403839 (from R4-2401536).**

[**R4-2403839**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403839.zip) **(FS\_NR\_duplex\_evo) Editorial CR to TR 38.858 on UE aspects for Full Duplex operation**

*Type: draftCR For: Endorsement  
 38.858 v18.0.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Endorsed.**

Add missing CA band combinations

[**R4-2402460**](file:///D:\RAN4%23110\Docs\R4-2402460.zip) **[NR\_CADC\_R18\_2BDL\_xBUL] CR for 38.101-3: Missing changes from** [**R4-2312482**](file:///D:\RAN4%23110\Docs\R4-2312482.zip)

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1175 rev Cat: F (Rel-18)  
  
 Source: T-Mobile USA*

**Decision: Agreed.**

NR-U

[**R4-2402545**](file:///D:\RAN4%23110\Docs\R4-2402545.zip) **[NR\_unlic\_enh-Core] Correction CR for NS\_63, NS\_64 in TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2173 rev Cat: F (Rel-18)  
  
 Source: LG Electronics*

**Decision: Revised to R4-2403840 (from R4-2402545).**

[**R4-2403840**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403840.zip) **(NR\_unlic\_enh-Core) Correction CR for NS\_63, NS\_64 in TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2173 rev Cat: F (Rel-18)  
  
 Source: LG Electronics*

**Decision: Agreed.**

Feature agonistic approach

[**R4-2402577**](file:///D:\RAN4%23110\Docs\R4-2402577.zip) **(LTE\_CA-Core, LTE\_UAV\_enh-Core) CR to TS 36.101: feature-agnostic approach implementation, Rel-18**

*Type: CR For: Agreement  
 36.101 v18.4.0 CR-6044 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

In order to reduce unnecessary feature-specific wording modifications in future, in this CR we introduce feature-agnostic approach in TS 36.101 section 4.3A.

**Decision: Agreed.**

##### 6.2.8.2 BS RF requirements

##### 6.2.8.3 RRM requirements

##### 6.2.8.4 OTA aspects

### 6.3 Rel-18 TEI

#### 6.3.1 2Rx non-REDCAP XR devices

**Sub-topic 1-1/1-2 Definition of 2Rx XR devices**

[**R4-2400157**](file:///D:\RAN4%23110\Docs\R4-2400157.zip) **On 2Rx for XR**

*Type: discussion For: Decision  
 Source: Apple*

**Decision: Noted.**

**Sub-topic 1-3 Conducted receiver requirements**

[**R4-2400552**](file:///D:\RAN4%23110\Docs\R4-2400552.zip) **Discussion on REFSENS Performance of 2Rx non-RedCap XR Device**

*Type: discussion For: Approval  
 Source: Meta Ireland*

**Abstract:**

In this paper, we propose the feasibility of the tightened REFSENS requirements for 2Rx non-Redcap XR devices compared to legacy smartphone type devices.

**Decision: Noted.**

[**R4-2400707**](file:///D:\RAN4%23110\Docs\R4-2400707.zip) **2Rx XR devices indication and REFSENS**

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

**Decision: Noted.**

[**R4-2400822**](file:///D:\RAN4%23110\Docs\R4-2400822.zip) **(TEI18) Discussion on receiver requirements for 2Rx non-REDCAP XR devices v1**

*Type: discussion For: Decision  
 Source: CMCC*

**Decision: Noted.**

[**R4-2401526**](file:///D:\RAN4%23110\Docs\R4-2401526.zip) **Discussion on 2Rx requirements for non-Redcap XR**

*Type: other For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2401796**](file:///D:\RAN4%23110\Docs\R4-2401796.zip) **Requirements for 2Rx XR**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2402421**](file:///D:\RAN4%23110\Docs\R4-2402421.zip) **Discussion on requirements for 2Rx non-RedCap XR UE**

*Type: other For: Approval  
 Source: Huawei, HiSilicon, Telecom Italia, Telia Company, T-Mobile USA, Telefonica, BT plc, CMCC, Orange, Spark (NZ)*

**Decision: Noted.**

[**R4-2402452**](file:///D:\RAN4%23110\Docs\R4-2402452.zip) **2 Rx REFSENS requirements for XR**

*Type: discussion For: Approval  
 Source: T-Mobile USA, Deutsche Telekom, Vodafone, AT&T, Orange, Spark, Telstra, TELUS*

**Decision: Revised to** [**R4-2403676**](file:///D:\RAN4%23110\Docs\R4-2403676.zip) **(from** [**R4-2402452**](file:///D:\RAN4%23110\Docs\R4-2402452.zip)**).**

[**R4-2403676**](file:///D:\RAN4%23110\Docs\R4-2403676.zip) **2 Rx REFSENS requirements for XR**

*Type: discussion For: Approval  
 Source: T-Mobile USA, Deutsche Telekom, Vodafone, AT&T, Orange, Spark, Telstra, TELUS*

**Decision: Noted.**

[**R4-2402609**](file:///D:\RAN4%23110\Docs\R4-2402609.zip) **Discussion on improved REFSENS for 2Rx non-REDCAP XR devices**

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

**Decision: Noted.**

**Sub-topic 1-4 OTA aspects**

[**R4-2400553**](file:///D:\RAN4%23110\Docs\R4-2400553.zip) **Discussion on OTA evaluation Methodology of 2Rx non-RedCap XR Device**

*Type: discussion For: Approval  
 Source: Meta Ireland*

**Abstract:**

n this paper, we provide OTA performance considerations factors of 2Rx non-RedCap XR devices

**Decision: Noted.**

**CR/Draft CR**

[**R4-2400555**](file:///D:\RAN4%23110\Docs\R4-2400555.zip) **CR TS38.101-1 on XR device definition and REFSENS requirements for 2Rx non-Redcap XR device [2Rx\_XR\_UE]**

*Type: CR For: Endorsement  
 38.101-1 v18.4.0 CR-2015 rev Cat: B (Rel-18)  
  
 Source: Meta Ireland*

**Abstract:**

Based on the endorsed Tdoc(RP-234015), RAN4 needs to specify definition of 2Rx non-RedCap XR device in TS38.101-1 and allow the 2RX relaxation of REFSENS for non-Redcap XR device.

**Decision: Not pursued.**

[**R4-2400620**](file:///D:\RAN4%23110\Docs\R4-2400620.zip) **CR 38.101-1 addition of 2Rx XR exception for REFSENS**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2036 rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Revised to R4-2403879 (from R4-2400620).**

[**R4-2403879**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403879.zip) **CR 38.101-1 addition of 2Rx XR exception for REFSENS [2Rx\_XR\_UE]**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2036 rev Cat: B (Rel-18)  
  
 Source: Nokia*

**Decision: Return to.**

[**R4-2401527**](file:///D:\RAN4%23110\Docs\R4-2401527.zip) **draft CR to 38.101-1 on Addition of requirements for non-Redcap XR**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: vivo*

**Decision: Not pursued.**

[**R4-2402422**](file:///D:\RAN4%23110\Docs\R4-2402422.zip) **Introduction of 2Rx relaxation for XR devices**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2161 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Telecom Italia, Telia Company, T-Mobile USA, Telefonica, BT plc, CMCC, Orange, Spark (NZ)*

**Decision: Not pursued.**

[**R4-2402610**](file:///D:\RAN4%23110\Docs\R4-2402610.zip) **(TEI-18) CR to TS 38.101-1 for 2Rx non-REDCAP XR devices**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2174 rev Cat: B (Rel-18)  
  
 Source: MediaTek Inc.*

**Abstract:**

Parsing Failure: Change request category wrong on CR cover for TDoc [R4-2402610](file:///D:\RAN4%23110\Docs\R4-2402610.zip). Database value : B. CR cover value : F. A revision will be required.

**Decision:** The document was **revised to** [**R4-2402635**](file:///D:\RAN4%23110\Docs\R4-2402635.zip).

[**R4-2402635**](file:///D:\RAN4%23110\Docs\R4-2402635.zip) **(TEI-18) CR to TS 38.101-1 for 2Rx non-REDCAP XR devices**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2174 rev 1 Cat: B (Rel-18)  
  
 Source: MediaTek Inc.*

(Replaces [R4-2402610](file:///D:\RAN4%23110\Docs\R4-2402610.zip))

**Decision: Merged (with R4-24xxxxx).**

#### 6.3.2 Others

**[110][103] R18 TEI**

**CA architecture for UL CA\_n5-n8**

[**R4-2402308**](file:///D:\RAN4%23110\Docs\R4-2402308.zip) **CR for FE architecture correction for ULCA n5-n8**

*Type: CR For: Agreement  
 38.872 v18.3.0 CR-0005 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Agreed.**

### 6.4 Moderator summary and conclusions (for Agenda 6)

[**R4-2401062**](file:///D:\RAN4%23110\Docs\R4-2401062.zip) **Topic summary for [110][103] R18\_UERF\_maintenance**

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

**Abstract:**

[110][103] R18\_UERF\_maintenance AI 6.1, 6.2, 6.2.1, 6.2.2.2, 6.2.6, 6.2.7, 6.2.8.1, 6.3.2

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403824**](file:///D:\RAN4%23110\Docs\R4-2403824.zip) **WF on CA NC NS\_100**

*Type: other For: Approval  
 Source: Skyworks*

**Decision: Approved.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/04.Thursday/07.%5B103%5D_Topic_summary_%5B110%5D%5B103%5D%20R18_UERF_maintenance_after%20nwm%20flagging_r2.docx>

**Issue 2-1-1: New channel raster table format to distinguish mandatory or optional feature in TS38.101-1**

**Agreement:**

* Based on discussion papers from interested operators, RAN4 can support the enhanced channel raster as mandatory feature in NR Band n1, n2, n3, n5, n25, n28, n66, n71 and n85 from Rel-18.

[**R4-2401063**](file:///D:\RAN4%23110\Docs\R4-2401063.zip) **Topic summary for [110][104] NR\_2Rx\_XR**

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

**Abstract:**

[110][104] NR\_2Rx\_XR AI 6.3.1

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403713**](file:///D:\RAN4%23110\Docs\R4-2403713.zip) **Ad hoc minutes on NR 2Rx XR UE**

*Type: other For: Approval  
 Source: Apple*

**Decision: Revised to R4-2403877 (from R4-2403713).**

[**R4-2403877**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403877.zip) **Ad hoc minutes on NR 2Rx XR UE**

*Type: other For: Approval  
 Source: Apple*

**Agreement:**

* Two Rx antenna port XR UE: A non-(e)RedCap XR UE that is equipped with only two Rx antenna ports in frequency band(s) where 4 Rx antenna ports are required. The UE is intended to be worn on human head. When in use, is intended to be supported only by/behind the ears and by a nose-bridge resulting in a constrained form factor with limited volume available for Rx chains.

**Agreement:**

* XR eXtended Reality

**Agreement:**

* On conducted receiver sensitivity, consider two options
  + 0.5dB tightening compared to the existing 2Rx UE conducted REFSENS, which is considered feasible by some UE vendors
  + 2Rx XR UE meets the 4Rx handheld UE conducted REFSENS
* On OTA performance:
  + It is agreed to specify OTA TRS requirements per band for both 4Rx XR and 2Rx XR for the NR bands which are mandatorily to support 4Rx based on measurement campaign of 4Rx XR, considering the performance degradation value for 2Rx based on 4Rx measurement campaign.

AT&T: With this agreement, RAN4 will come up with two CRs as WF?

Nokia: Only one CR is on the table.

Meta: Suggest Nokia paper that REFSENS as TBD and treat it in the RAN4 group. In the upcoming RAN, companies’ CR can be treated.

Apple: We are tasked to have one CR.

**Decision: Noted.**

[**R4-2403878**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403878.zip) **WF on 2Rx XR UE requirements**

*Type: other For: Approval  
 Source: Apple*

**Decision: Return to.**

[**R4-2403880**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403880.zip) **LS on 2Rx XR UE requirements**

*Type: other For: Approval  
 Source: Apple*

**Decision: Return to.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/03.Wednesday/11.%5B141%5D_R4-2403713%20NR_2Rx_XR%20Ad%20Hoc%20minutes.docx>

## 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

#### 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

**Topic #1: Band combination with intra-band UL CA**

[**R4-2400367**](file:///D:\RAN4%23110\Docs\R4-2400367.zip) **PC3 CA\_n3B BCS4-5 MSD**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

[**R4-2400642**](file:///D:\RAN4%23110\Docs\R4-2400642.zip) **MSD for UL CA\_n3B**

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

**Abstract:**

MSD for UL CA\_n3B

**Decision: Noted.**

[**R4-2400902**](file:///D:\RAN4%23110\Docs\R4-2400902.zip) **MSD analysis for DL band combinations with ULCA\_n77C configuration**

*Type: discussion For: Approval  
 Source: Verizon, Samsung, Ericsson*

**Decision: Noted.**

TP

[**R4-2401272**](file:///D:\RAN4%23110\Docs\R4-2401272.zip) **TP for TR38.718-02-01\_CA\_n40A-n41C**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Not pursued.**

[**R4-2401274**](file:///D:\RAN4%23110\Docs\R4-2401274.zip) **TP for TR38.718-02-01\_CA\_n41A-n79C and CA\_n41C-n79A**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation, Mediatek*

**Decision: Noted.**

CR/Draft CR

[**R4-2400672**](file:///D:\RAN4%23110\Docs\R4-2400672.zip) **DraftCR 38.101-1 Addition of CA\_n5B\_n12A CA\_n5B\_n14A CA\_n5B\_n29A Combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: AT&T, Skyworks, Qualcomm, Apple, Murata*

**Decision: Endorsed.**

**Topic #4: CRs requiring expert review**

CR/Draft CR

[**R4-2402073**](file:///D:\RAN4%23110\Docs\R4-2402073.zip) **draftCR to 38.101-1 - Correcting MSD value of CA\_n1-n77-n79 CA\_n3-n7-n28 CA\_n3-n78-n105**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

[**R4-2402074**](file:///D:\RAN4%23110\Docs\R4-2402074.zip) **draftCR to 38.101-1 - Correction to CA\_n48-n96 harmonic mixing**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Revised to** [**R4-2403715**](file:///D:\RAN4%23110\Docs\R4-2403715.zip) **(from** [**R4-2402074**](file:///D:\RAN4%23110\Docs\R4-2402074.zip)**).**

[**R4-2403715**](file:///D:\RAN4%23110\Docs\R4-2403715.zip) **draftCR to 38.101-1 - Correction to CA\_n48-n96 harmonic mixing**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

[**R4-2402075**](file:///D:\RAN4%23110\Docs\R4-2402075.zip) **draftCR to 38.101-1 - Correction to IMD2 IMD3 notation for CA\_n3-n7-n8**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

[**R4-2402076**](file:///D:\RAN4%23110\Docs\R4-2402076.zip) **draftCR to 38.101-1 - Updates to CA\_n25-n66-n78 and other editorials**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

[**R4-2402077**](file:///D:\RAN4%23110\Docs\R4-2402077.zip) **draftCR to 38.101-3 - Updates to DC\_2A-66A-n77An78A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

[**R4-2403718**](file:///D:\RAN4%23110\Docs\R4-2403718.zip) **draftCR to 38.101-3 - Updates to DC\_2A-66A-n77An78A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Withdrawn.**

[**R4-2402078**](file:///D:\RAN4%23110\Docs\R4-2402078.zip) **draftCR to 38.101-3 - Updates to DC\_2A-n66A-n77An78A DC\_66A\_n2A-n77An78A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

##### 7.1.1.2 Others

**Topic #2: Band combination with close proximity issues**

[**R4-2400373**](file:///D:\RAN4%23110\Docs\R4-2400373.zip) **CA\_n1-n3 BCS4-5 2UL cross-band MSD**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

[**R4-2400641**](file:///D:\RAN4%23110\Docs\R4-2400641.zip) **UL CA\_n5A-n13A**

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

**Abstract:**

Analysis for UL CA\_n5A-n13A

**Decision: Noted.**

**Topic #3: Band combination within 3.3-7.125GHz range**

[**R4-2401764**](file:///D:\RAN4%23110\Docs\R4-2401764.zip) **Discussion on MSD for CA\_n78A-n104A**

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

**Decision: Noted.**

[**R4-2400724**](file:///D:\RAN4%23110\Docs\R4-2400724.zip) **CA\_n78-n104 and associated 3.3-7.1GHz architecture and challenges**

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

**Abstract:**

In this contribution we provide our view on those specific challenges in the in a broader scope than CA\_n78-n104 as there are already other cases that are associating the 3.3-5GHz and the 5.15-7.125GHz frequency ranges.

**Decision: Noted.**

[**R4-2400716**](file:///D:\RAN4%23110\Docs\R4-2400716.zip) **CA\_n78-n104 Simultaneous RX/TX Analysis**

*Type: other For: Approval  
 Source: Murata Manufacturing Co Ltd.*

**Decision: Noted.**

**Topic #4: CRs requiring expert review**

[**R4-2400792**](file:///D:\RAN4%23110\Docs\R4-2400792.zip) **draft CR for TS38.101-1 to clarify 1 UL configuration for NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon,Skyworks Solutions, Inc.*

**Decision: Revised to** [**R4-2403714**](file:///D:\RAN4%23110\Docs\R4-2403714.zip) **(from** [**R4-2400792**](file:///D:\RAN4%23110\Docs\R4-2400792.zip)**).**

[**R4-2403714**](file:///D:\RAN4%23110\Docs\R4-2403714.zip) **draft CR for TS38.101-1 to clarify 1 UL configuration for NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon,Skyworks Solutions, Inc.*

**Decision: Endorsed.**

[**R4-2402072**](file:///D:\RAN4%23110\Docs\R4-2402072.zip) **Discussion on various correction to MSD values and definitions**

*Type: discussion For: Approval  
 Source: Nokia*

**Decision: Noted.**

**Topic**

**Topic #5: Rules and guidelines TP/TR MSD analysis (left as not treated)**

[**R4-2400645**](file:///D:\RAN4%23110\Docs\R4-2400645.zip) **RX Mixing evaluations**

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

**Abstract:**

In RAN4#109, a TP including framework for applicable RX Mixing cases was agreed. This contribution provides evaluation for the “TBD” cases.

Chair: Do not treat it since it is Rel-19

**Decision: Noted.**

[**R4-2402425**](file:///D:\RAN4%23110\Docs\R4-2402425.zip) **Handling of release independent issue for spectrum/basket WIs**

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

**Abstract:**

Chair: [R4-2402425](file:///D:\RAN4%23110\Docs\R4-2402425.zip) and [R4-2402426](file:///D:\RAN4%23110\Docs\R4-2402426.zip) are for Rel-19. Keep them "not treated" and proponents can use them for offline discussions.

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

[**R4-2402426**](file:///D:\RAN4%23110\Docs\R4-2402426.zip) **Restructure TR for basket WI with MSD analysis**

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

**Abstract:**

Chair: [R4-2402425](file:///D:\RAN4%23110\Docs\R4-2402425.zip) and [R4-2402426](file:///D:\RAN4%23110\Docs\R4-2402426.zip) are for Rel-19. Keep them "not treated" and proponents can use them for offline discussions.

**Decision: Noted.**

#### 7.1.2 Moderator summary and conclusions

[**R4-2401064**](file:///D:\RAN4%23110\Docs\R4-2401064.zip) **Topic summary for [110][105] NR\_Baskets\_Part\_1**

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

**Abstract:**

[110][105] NR\_Baskets\_Part\_1 AI 7.1

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403793**](file:///D:\RAN4%23110\Docs\R4-2403793.zip) **Ad hoc minutes on [110][105] NR\_Baskets\_Part\_1**

*Type: other For: Approval  
 Source: Skyworks*

**Decision: Noted.**

[**R4-2403716**](file:///D:\RAN4%23110\Docs\R4-2403716.zip) **WF on CA\_n40A-n41C**

*Type: other For: Approval  
 Source: ZTE, Skyworks*

**Decision: Approved.**

[**R4-2403717**](file:///D:\RAN4%23110\Docs\R4-2403717.zip) **WF on CA\_n5-n13 architecture and MSD**

*Type: other For: Approval  
 Source: Qualcomm*

**Decision: Revised to R4-2403869 (from R4-2403717).**

[**R4-2403869**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403869.zip) **WF on CA\_n5-n13 architecture and MSD**

*Type: other For: Approval  
 Source: Qualcomm*

**Decision: Approved.**

[**R4-2403719**](file:///D:\RAN4%23110\Docs\R4-2403719.zip) **WF on CA\_n3A-n39A MSD and architecture**

*Type: other For: Approval  
 Source: Huawei*

**Decision: Approved.**

[**R4-2403721**](file:///D:\RAN4%23110\Docs\R4-2403721.zip) **WF on Rel-19 band combination work**

*Type: other For: Approval  
 Source: Nokia, Skyworks, ZTE, Samsung, Ericsson, AT&T, Qualcomm, CHTTL, Murata, T-Mobile USA, Apple, MediaTek, Huawei, Verizon*

Chair: the dedicated agendas will be set in April and May meeting.

**Decision: Approved.**

[**R4-2403794**](file:///D:\RAN4%23110\Docs\R4-2403794.zip) **WF on CA\_n78-n104 architecture and MSD**

*Type: other For: Approval  
 Source: Skyworks, Huawei, Murata, Qualcomm*

**Decision: Approved.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/04.Thursday/01.%5B105%5D_R4-2401064%20Topic%20Summary%20%5B105%5D%20NR_Baskets_Part_1.docx>

### 7.2 Moderator summary and conclusions (for basket WI AI 7.3 to AI 7.25 )

[**R4-2401065**](file:///D:\RAN4%23110\Docs\R4-2401065.zip) **Topic summary for [110][106] NR\_Baskets\_Part\_2**

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

**Abstract:**

[110][106] NR\_Baskets\_Part\_2 AI 7.3~7.8

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2401066**](file:///D:\RAN4%23110\Docs\R4-2401066.zip) **Topic summary for [110][107] NR\_Baskets\_Part\_3**

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

**Abstract:**

[110][107] NR\_Baskets\_Part\_3 AI 7.9~7.13

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2401068**](file:///D:\RAN4%23110\Docs\R4-2401068.zip) **Topic summary for [110][109] LTE\_NR\_HPUE\_FWVM**

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

**Abstract:**

[110][109] LTE\_NR\_HPUE\_FWVM AI 7.15

**Decision: Noted.**

[**R4-2401069**](file:///D:\RAN4%23110\Docs\R4-2401069.zip) **Topic summary for [110][110] HPUE\_Basket\_EN-DC**

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

**Abstract:**

[110][110] HPUE\_Basket\_EN-DC AI 7.16

**Decision: Noted.**

[**R4-2401070**](file:///D:\RAN4%23110\Docs\R4-2401070.zip) **Topic summary for [110][111] HPUE\_Basket\_Intra-CA\_TDD**

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

**Abstract:**

[110][111] HPUE\_Basket\_Intra-CA\_TDD AI 7.17

**Decision: Noted.**

[**R4-2401071**](file:///D:\RAN4%23110\Docs\R4-2401071.zip) **Topic summary for [110][112] HPUE\_Basket\_inter-CA\_SUL**

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

**Abstract:**

[110][112] HPUE\_Basket\_inter-CA\_SUL AI 7.18

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403624**](file:///D:\RAN4%23110\Docs\R4-2403624.zip) **WF on PC2 and PC1.5 indications in BC configuration tables**

*Type: other For: Approval  
 Source: Apple*

**Decision: Revised to R4-2403884 (from R4-2403624).**

[**R4-2403884**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403884.zip) **WF on PC2 and PC1.5 indications in BC configuration tables**

*Type: other For: Approval  
 Source: Apple*

**Decision: Return to.**

**Minutes and agreement after the first round**

**Issue 1-1: Power class disparity among the highest order combination and its fallback combinations.**

Refer to the following hyperlinks for more details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/01.Monday/06.%5B112%5D_R4-2401071%20Topic%20Summary%20for%5B110%5D%5B112%5D%20HPUE_Basket_inter-CA_SUL.docx>

**Tentative Agreement after 1st round discussions:**

* RAN4 has the common understanding that the specifications do not prevent UE vendors to implement the higher order combinations for PC2 and PC1.5, even if they are not explicitly introduced in the RAN4 specifications
  + The 2 band and 3 band combinations should be specified for PC3, PC2 and PC1.5 first.

[**R4-2401072**](file:///D:\RAN4%23110\Docs\R4-2401072.zip) **Topic summary for [110][113] HPUE\_Basket\_FDD**

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

**Abstract:**

[110][113] HPUE\_Basket\_FDD AI 7.19, 7.20

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403628**](file:///D:\RAN4%23110\Docs\R4-2403628.zip) **WF on PC2 HPUE MSD**

*Type: other For: Approval  
 Source: Skyworks Solutions Inc., Huawei, Qualcomm Inc*

**Decision: Approved.**

[**R4-2403629**](file:///D:\RAN4%23110\Docs\R4-2403629.zip) **WF on HPUE for FDD bands**

*Type: other For: Approval  
 Source: China Unicom, Skyworks*

**Decision: Approved.**

**Minutes and agreement after the first round**

Refer to the following hyperlinks for more details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/01.Monday/07.%5B113%5D_R4-2401072%20Topic%20summary%20for%20%5B110%5D%5B113%5D%20HPUE_Basket_FDD.docx>

**Issue 2-1-5: NS\_06 (A-MPR for n13, n14, n85 PC2)**

**Agreement:**

* Introduce A-MPR for outer allocations by specifying Table 2 for NS\_06.

**Table 2:** A-MPR for NS\_06 (Power Class 2)

|  |  |  |
| --- | --- | --- |
| Modulation/Waveform | | Outer (dB) |
| DFT-s-OFDM | Pi/2 BPSK | ≤ 1.0 |
|  | QPSK | ≤ 1.5 |
|  | 16 QAM | ≤ 2.5 |
|  | 64 QAM | ≤ 3.0 |
|  | 256 QAM | ≤ 4.5 |
| CP-OFDM | QPSK | ≤ 3.5 |
|  | 16 QAM | ≤ 3.5 |
|  | 64 QAM | ≤ 4.0 |
|  | 256 QAM | ≤ 6.5 |

[**R4-2401073**](file:///D:\RAN4%23110\Docs\R4-2401073.zip) **Topic summary for [110][114] LTE\_NR\_Other\_WI**

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

**Abstract:**

[110][114] LTE\_NR\_Other\_WI AI 7.14, 7.21, 7.22, 7.23

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403605**](file:///D:\RAN4%23110\Docs\R4-2403605.zip) **WF on asymmetric bandwidths with 3MHz for n28**

*Type: other For: Approval  
 Source: Rakuten*

**Decision: Return to.**

[**R4-2403606**](file:///D:\RAN4%23110\Docs\R4-2403606.zip) **WF on simultaneous Rx-Tx issues**

*Type: other For: Approval  
 Source: Huawei*

**Decision: Approved.**

**Minutes and agreement of online discussions**

Refer to the following links for details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/01.Monday/01.%5B114%5D_R4-2401073%20Topic%20summary%20for%20%5B110%5D%5B114%5D%20LTE_NR_Other_WI.docx>

[**R4-2401074**](file:///D:\RAN4%23110\Docs\R4-2401074.zip) **Topic summary for [110][115] NR\_3Tx-4Rx\_WI**

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

**Abstract:**

[110][115] NR\_3Tx-4Rx\_WI AI 7.24, 7.25, AI 6.2.4

**Decision: Noted.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details.

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/02.Tuesday/02.%5B115%5D_R4-2401074%20Topic%20summary%20for%20%5B110%5D%5B115%5D%20NR_3Tx-4Rx_WI%20v2.docx>

### 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)

[**R4-2401973**](file:///D:\RAN4%23110\Docs\R4-2401973.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:** The document was **for email approval**.

[**R4-2401974**](file:///D:\RAN4%23110\Docs\R4-2401974.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 v18.4.0 CR-1161 rev Cat: B (Rel-18)  
  
 Source: CHTTL*

**Decision:** The document was **for email approval**.

[**R4-2401975**](file:///D:\RAN4%23110\Docs\R4-2401975.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:** The document was **for email approval**.

#### 7.3.2 UE RF requirements without FR2 band

[**R4-2400318**](file:///D:\RAN4%23110\Docs\R4-2400318.zip) **Draft CR for TS38.101-3 to add new 1BLTE1BNR combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Withdrawn.**

[**R4-2401895**](file:///D:\RAN4%23110\Docs\R4-2401895.zip) **Draft CR for 38.101-3 to correct Note number for DC\_66A-(n)66AA**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Samsung, Spark*

**Decision: Endorsed.**

[**R4-2402025**](file:///D:\RAN4%23110\Docs\R4-2402025.zip) **TP for TR 37.718-11-11: support of uplink DC\_8B\_n1A**

*Type: pCR For: Approval  
 37.718-11-11 v1.1.0 CR- rev Cat: (Rel-18)  
  
 Source: CHTTL*

**Decision: Approved.**

#### 7.3.3 UE RF requirements with FR2 band

[**R4-2400550**](file:///D:\RAN4%23110\Docs\R4-2400550.zip) **Draft CR for TS38.101-3 to add new 1BLTE1BNR combinations with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Endorsed.**

### 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)

[**R4-2402138**](file:///D:\RAN4%23110\Docs\R4-2402138.zip) **TR 37.718-21-11 V0.10.0 for DC of 2 LTE band and 1 NR band**

*Type: draft TR For: Agreement  
 37.718-21-11 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **for email approval**.

[**R4-2402139**](file:///D:\RAN4%23110\Docs\R4-2402139.zip) **CR on introduction of completed DC of 2 bands LTE and 1 band NR from RAN4#110 into TS 38.101-3**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1167 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **for email approval**.

[**R4-2402140**](file:///D:\RAN4%23110\Docs\R4-2402140.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:** The document was **for email approval**.

#### 7.4.2 UE RF requirements without FR2 band

[**R4-2400319**](file:///D:\RAN4%23110\Docs\R4-2400319.zip) **Draft CR for TS38.101-3 to add new 2BLTE1BNR combinations for FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Revised to** [**R4-2403722**](file:///D:\RAN4%23110\Docs\R4-2403722.zip) **(from** [**R4-2400319**](file:///D:\RAN4%23110\Docs\R4-2400319.zip)**).**

[**R4-2403722**](file:///D:\RAN4%23110\Docs\R4-2403722.zip) **Draft CR for TS38.101-3 to add new 2BLTE1BNR combinations for FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Endorsed.**

[**R4-2400322**](file:///D:\RAN4%23110\Docs\R4-2400322.zip) **TP for TR37.718-21-11 to include new 2BLTE1BNR combinations for FR1**

*Type: pCR For: Approval  
 37.718-21-11 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Revised to** [**R4-2403723**](file:///D:\RAN4%23110\Docs\R4-2403723.zip) **(from** [**R4-2400322**](file:///D:\RAN4%23110\Docs\R4-2400322.zip)**).**

[**R4-2403723**](file:///D:\RAN4%23110\Docs\R4-2403723.zip) **TP for TR37.718-21-11 to include new 2BLTE1BNR combinations for FR1**

*Type: pCR For: Approval  
 37.718-21-11 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Approved.**

[**R4-2400788**](file:///D:\RAN4%23110\Docs\R4-2400788.zip) **draft CR for TS38.101-3 correction on ?TIB,c and ?RIB,c of DC\_7-12\_n25**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

[**R4-2401888**](file:///D:\RAN4%23110\Docs\R4-2401888.zip) **Correction draft CR for 38.101-3 to add or delete BC configurations for inter-band EN-DC in FR1 (three bands)**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Samsung*

**Decision: Endorsed.**

[**R4-2401892**](file:///D:\RAN4%23110\Docs\R4-2401892.zip) **Draft CR for 38.101-3 to add ?TIB,c and ?RIB,c for inter-band EN-DC within FR1 (three bands)**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision: Endorsed.**

[**R4-2402026**](file:///D:\RAN4%23110\Docs\R4-2402026.zip) **draft CR for EN-DC DC\_3A-3A-8B\_n1A, DC\_7A-7A-8B\_n1A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CHTTL*

**Decision: Endorsed.**

[**R4-2402268**](file:///D:\RAN4%23110\Docs\R4-2402268.zip) **TP for TR 37.718-21-11 PC3 DC\_3A-41A\_n41A**

*Type: pCR For: Approval  
 37.718-21-11 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung,KDDI*

**Decision: Revised to** [**R4-2403724**](file:///D:\RAN4%23110\Docs\R4-2403724.zip) **(from** [**R4-2402268**](file:///D:\RAN4%23110\Docs\R4-2402268.zip)**).**

[**R4-2403724**](file:///D:\RAN4%23110\Docs\R4-2403724.zip) **TP for TR 37.718-21-11 PC3 DC\_3A-41A\_n41A**

*Type: pCR For: Approval  
 37.718-21-11 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung,KDDI*

**Decision: Approved.**

[**R4-2402495**](file:///D:\RAN4%23110\Docs\R4-2402495.zip) **TP for TR 38.718-21-11: DC\_1A-42A\_n77A**

*Type: pCR For: Approval  
 37.718-21-11 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

**Decision: Revised to R4-2403859 (from R4-2402495).**

[**R4-2403859**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403859.zip) **TP for TR 38.718-21-11: DC\_1A-42A\_n77A**

*Type: pCR For: Approval  
 37.718-21-11 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

**Decision: Noted.**

[**R4-2402576**](file:///D:\RAN4%23110\Docs\R4-2402576.zip) **draft CR for TS 38.101-3 DC\_R18\_2BLTE\_1BNR\_3DL2UL without FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Endorsed.**

#### 7.4.3 UE RF requirements with FR2 band

[**R4-2400320**](file:///D:\RAN4%23110\Docs\R4-2400320.zip) **Draft CR for TS38.101-3 to add new 2BLTE1BNR combinations with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Revised to** [**R4-2403725**](file:///D:\RAN4%23110\Docs\R4-2403725.zip) **(from** [**R4-2400320**](file:///D:\RAN4%23110\Docs\R4-2400320.zip)**).**

**[R4-2403725](D:\\RAN4#110\\Docs\\R4-2403725.zip) Draft CR for TS38.101-3 to add new 2BLTE1BNR combinations with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Endorsed.**

### 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)

[**R4-2402070**](file:///D:\RAN4%23110\Docs\R4-2402070.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#110

**Decision:** The document was **for email approval**.

[**R4-2402071**](file:///D:\RAN4%23110\Docs\R4-2402071.zip) **BigCR to introduce new combinations DC of x bands LTE inter-band CA (x345) and 1 NR band**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1166 rev Cat: B (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

To capture agreed combinations at RAN4#110

**Decision:** The document was **for email approval**.

#### 7.5.2 UE RF requirements without FR2 band

[**R4-2400775**](file:///D:\RAN4%23110\Docs\R4-2400775.zip) **draft CR for TS38.101-3 to include x LTE (x=1,2, 3, 4) and 2 NR inter-band EN-DC**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Endorsed.**

[**R4-2400913**](file:///D:\RAN4%23110\Docs\R4-2400913.zip) **Draft CR for TS 38.101-3 to add inter-band EN-DC configuration for DC\_1-3-3-20-28\_n78**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2401894**](file:///D:\RAN4%23110\Docs\R4-2401894.zip) **Draft CR for 38.101-3 to add ?TIB,c and ?RIB,c for x LTE and 1 NR inter-band EN-DC**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision: Endorsed.**

[**R4-2402027**](file:///D:\RAN4%23110\Docs\R4-2402027.zip) **draft CR for DC\_3A-7A-8B\_n1A, DC\_3A-3A-7A-8B\_n1A, DC\_3A-7A-7A-8B\_n1A, DC\_3A-3A-7A-7A-8B\_n1A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CHTTL*

**Decision: Endorsed.**

[**R4-2402099**](file:///D:\RAN4%23110\Docs\R4-2402099.zip) **draftCR to 38.101-3 Additions of DC\_2A-12A-66A\_n7A and DC\_2A-7A-66A\_n12A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, Rogers*

**Decision: Endorsed.**

#### 7.5.3 UE RF requirements with FR2 band

### 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)

[**R4-2400605**](file:///D:\RAN4%23110\Docs\R4-2400605.zip) **TR 37.718-11-21 v0.10.0 for DC\_R18\_xBLTE\_2BNR\_yDL2UL**

*Type: draft TR For: Agreement  
 37.718-11-21 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: LG Electronics Deutschland*

**Abstract:**

TR 37.718-11-21 v0.10.0 for DC\_R18\_xBLTE\_2BNR\_yDL2UL

**Decision:** The document was **for email approval**.

[**R4-2400606**](file:///D:\RAN4%23110\Docs\R4-2400606.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:** The document was **for email approval**.

[**R4-2400607**](file:///D:\RAN4%23110\Docs\R4-2400607.zip) **TS 38.101-3 big CR for DC\_R18\_xBLTE\_2BNR\_yDL2UL**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1133 rev Cat: B (Rel-18)  
  
 Source: LG Electronics Deutschland*

**Abstract:**

TS 38.101-3 big CR for DC\_R18\_xBLTE\_2BNR\_yDL2UL

**Decision:** The document was **for email approval**.

#### 7.6.2 UE RF requirements without FR2 band

[**R4-2400167**](file:///D:\RAN4%23110\Docs\R4-2400167.zip) **CR for TS 38.101-3 Rel-18 CAT-F: Introducing missing MSD Rel-18 requirements**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1107 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Not pursued.**

[**R4-2400211**](file:///D:\RAN4%23110\Docs\R4-2400211.zip) **Draft CR for TS38.101-3 Addition of inter-band ENDC Combination with 2 NR band**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision: Endorsed.**

[**R4-2400321**](file:///D:\RAN4%23110\Docs\R4-2400321.zip) **Draft CR for TS38.101-3 to add new xBLTE2BNR combinations for FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Revised to** [**R4-2403726**](file:///D:\RAN4%23110\Docs\R4-2403726.zip) **(from** [**R4-2400321**](file:///D:\RAN4%23110\Docs\R4-2400321.zip)**).**

[**R4-2403726**](file:///D:\RAN4%23110\Docs\R4-2403726.zip) **Draft CR for TS38.101-3 to add new xBLTE2BNR combinations for FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Endorsed.**

[**R4-2400774**](file:///D:\RAN4%23110\Docs\R4-2400774.zip) **draft CR for TS38.101-3 to include DC\_2A-5A-66A\_n2A-n41A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to** [**R4-2403727**](file:///D:\RAN4%23110\Docs\R4-2403727.zip) **(from** [**R4-2400774**](file:///D:\RAN4%23110\Docs\R4-2400774.zip)**).**

[**R4-2403727**](file:///D:\RAN4%23110\Docs\R4-2403727.zip) **draft CR for TS38.101-3 to include DC\_2A-5A-66A\_n2A-n41A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Endorsed.**

[**R4-2400776**](file:///D:\RAN4%23110\Docs\R4-2400776.zip) **TP to TR37.718-11-21 to include DC\_7A\_n25A-n71A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to** [**R4-2403728**](file:///D:\RAN4%23110\Docs\R4-2403728.zip) **(from** [**R4-2400776**](file:///D:\RAN4%23110\Docs\R4-2400776.zip)**).**

[**R4-2403728**](file:///D:\RAN4%23110\Docs\R4-2403728.zip) **TP to TR37.718-11-21 to include DC\_7A\_n25A-n71A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Approved.**

[**R4-2400777**](file:///D:\RAN4%23110\Docs\R4-2400777.zip) **TP to TR37.718-11-21 to include DC\_12A\_n25A-n77A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to** [**R4-2403729**](file:///D:\RAN4%23110\Docs\R4-2403729.zip) **(from** [**R4-2400777**](file:///D:\RAN4%23110\Docs\R4-2400777.zip)**).**

[**R4-2403729**](file:///D:\RAN4%23110\Docs\R4-2403729.zip) **TP to TR37.718-11-21 to include DC\_12A\_n25A-n77A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Approved.**

[**R4-2400778**](file:///D:\RAN4%23110\Docs\R4-2400778.zip) **TP to TR37.718-11-21 to include DC\_71A\_n25A-n77A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to** [**R4-2403730**](file:///D:\RAN4%23110\Docs\R4-2403730.zip) **(from** [**R4-2400778**](file:///D:\RAN4%23110\Docs\R4-2400778.zip)**).**

[**R4-2403730**](file:///D:\RAN4%23110\Docs\R4-2403730.zip) **TP to TR37.718-11-21 to include DC\_71A\_n25A-n77A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Approved.**

[**R4-2400779**](file:///D:\RAN4%23110\Docs\R4-2400779.zip) **TP to TR37.718-11-21 to include DC\_12A\_n25A-n41A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to** [**R4-2403731**](file:///D:\RAN4%23110\Docs\R4-2403731.zip) **(from** [**R4-2400779**](file:///D:\RAN4%23110\Docs\R4-2400779.zip)**).**

[**R4-2403731**](file:///D:\RAN4%23110\Docs\R4-2403731.zip) **TP to TR37.718-11-21 to include DC\_12A\_n25A-n41A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Approved.**

[**R4-2400780**](file:///D:\RAN4%23110\Docs\R4-2400780.zip) **TP to TR37.718-11-21 to include DC\_71A\_n25A-n41A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to** [**R4-2403732**](file:///D:\RAN4%23110\Docs\R4-2403732.zip) **(from** [**R4-2400780**](file:///D:\RAN4%23110\Docs\R4-2400780.zip)**).**

[**R4-2403732**](file:///D:\RAN4%23110\Docs\R4-2403732.zip) **TP to TR37.718-11-21 to include DC\_71A\_n25A-n41A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Approved.**

[**R4-2400781**](file:///D:\RAN4%23110\Docs\R4-2400781.zip) **TP to TR37.718-11-21 to include DC\_12A\_n25A-n66A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to** [**R4-2403733**](file:///D:\RAN4%23110\Docs\R4-2403733.zip) **(from** [**R4-2400781**](file:///D:\RAN4%23110\Docs\R4-2400781.zip)**).**

[**R4-2403733**](file:///D:\RAN4%23110\Docs\R4-2403733.zip) **TP to TR37.718-11-21 to include DC\_12A\_n25A-n66A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Approved.**

[**R4-2400782**](file:///D:\RAN4%23110\Docs\R4-2400782.zip) **TP to TR37.718-11-21 to include DC\_71A\_n25A-n66A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to** [**R4-2403734**](file:///D:\RAN4%23110\Docs\R4-2403734.zip) **(from** [**R4-2400782**](file:///D:\RAN4%23110\Docs\R4-2400782.zip)**).**

[**R4-2403734**](file:///D:\RAN4%23110\Docs\R4-2403734.zip) **TP to TR37.718-11-21 to include DC\_71A\_n25A-n66A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Approved.**

[**R4-2400787**](file:///D:\RAN4%23110\Docs\R4-2400787.zip) **draft CR for TS38.101-3 to add missing ?RIB,c of DC\_2-7-12\_n2-n78**

*Type: draftCR For: Endorsement  
 38.718-03-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

[**R4-2400790**](file:///D:\RAN4%23110\Docs\R4-2400790.zip) **TP to TR37.718-11-21 correction on bandwidth of Band 12**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

[**R4-2400791**](file:///D:\RAN4%23110\Docs\R4-2400791.zip) **draft CR for TS38.101-3 correction on test point of DC\_7A\_n2A-n71A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

[**R4-2401893**](file:///D:\RAN4%23110\Docs\R4-2401893.zip) **Draft CR for 38.101-3 to add ?TIB,c and ?RIB,c for inter-band EN-DC, x bands LTE inter-band CA (x=1,2,3,4) and 2 NR bands in FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision: Revised to** [**R4-2403735**](file:///D:\RAN4%23110\Docs\R4-2403735.zip) **(from** [**R4-2401893**](file:///D:\RAN4%23110\Docs\R4-2401893.zip)**).**

[**R4-2403735**](file:///D:\RAN4%23110\Docs\R4-2403735.zip) **Draft CR for 38.101-3 to add ?TIB,c and ?RIB,c for inter-band EN-DC, x bands LTE inter-band CA (x=1,2,3,4) and 2 NR bands in FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision: Endorsed.**

[**R4-2402053**](file:///D:\RAN4%23110\Docs\R4-2402053.zip) **draft CR for DC\_3A-3A-7A-7A-8B\_n1A\_n78A related combos**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CHTTL*

**Decision: Endorsed.**

[**R4-2402068**](file:///D:\RAN4%23110\Docs\R4-2402068.zip) **draft CR for TS 38.101-3: correction for DC\_3-3-7-7\_n78-n79 delta T values**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: CHTTL*

**Decision: Endorsed.**

[**R4-2402105**](file:///D:\RAN4%23110\Docs\R4-2402105.zip) **draftCR to 38.101-3 - Add DC\_2A\_n71A-n77(2A)**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, US Cellular*

**Decision: Revised to** [**R4-2403736**](file:///D:\RAN4%23110\Docs\R4-2403736.zip) **(from** [**R4-2402105**](file:///D:\RAN4%23110\Docs\R4-2402105.zip)**).**

[**R4-2403736**](file:///D:\RAN4%23110\Docs\R4-2403736.zip) **draftCR to 38.101-3 - Add DC\_2A\_n71A-n77(2A)**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, US Cellular*

**Decision: Endorsed.**

[**R4-2402267**](file:///D:\RAN4%23110\Docs\R4-2402267.zip) **TP for TR 37.718-11-21 PC3 DC\_28A\_n41A-n77A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung,KDDI*

**Decision: Noted.**

[**R4-2402271**](file:///D:\RAN4%23110\Docs\R4-2402271.zip) **Draft CR 38.101-3 Rel-18 Introducing PC3 DC\_3A-28A\_n41A-n77A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung, KDDI*

**Decision: Revised to** [**R4-2403737**](file:///D:\RAN4%23110\Docs\R4-2403737.zip) **(from** [**R4-2402271**](file:///D:\RAN4%23110\Docs\R4-2402271.zip)**).**

[**R4-2403737**](file:///D:\RAN4%23110\Docs\R4-2403737.zip) **Draft CR 38.101-3 Rel-18 Introducing PC3 DC\_3A-28A\_n41A-n77A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung, KDDI*

**Decision: Endorsed.**

[**R4-2402375**](file:///D:\RAN4%23110\Docs\R4-2402375.zip) **draft CR 38.101-3 to add new DC combinations for 4DL, 5DL and 6DL with 2 NR bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Rogers*

**Abstract:**

draft CR 38.101-3 to add new DC combinations for 4DL, 5DL and 6DL with 2 NR bands

**Decision: Revised to** [**R4-2403738**](file:///D:\RAN4%23110\Docs\R4-2403738.zip) **(from** [**R4-2402375**](file:///D:\RAN4%23110\Docs\R4-2402375.zip)**).**

[**R4-2403738**](file:///D:\RAN4%23110\Docs\R4-2403738.zip) **draft CR 38.101-3 to add new DC combinations for 4DL, 5DL and 6DL with 2 NR bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Rogers*

**Abstract:**

draft CR 38.101-3 to add new DC combinations for 4DL, 5DL and 6DL with 2 NR bands

**Decision: Endorsed.**

[**R4-2402376**](file:///D:\RAN4%23110\Docs\R4-2402376.zip) **draft CR 38.101-3 to add DC\_1A-3A-5A-7A\_n28A-n78A and fallbacks**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-3 to add DC\_1A-3A-5A-7A\_n28A-n78A and fallbacks

**Decision: Revised to** [**R4-2403739**](file:///D:\RAN4%23110\Docs\R4-2403739.zip) **(from** [**R4-2402376**](file:///D:\RAN4%23110\Docs\R4-2402376.zip)**).**

[**R4-2403739**](file:///D:\RAN4%23110\Docs\R4-2403739.zip) **draft CR 38.101-3 to add DC\_1A-3A-5A-7A\_n28A-n78A and fallbacks**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-3 to add DC\_1A-3A-5A-7A\_n28A-n78A and fallbacks

**Decision: Endorsed.**

[**R4-2402604**](file:///D:\RAN4%23110\Docs\R4-2402604.zip) **draft CR for TS 38.101-3 DC\_R18\_xBLTE\_2BNR\_yDL2UL without FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Revised to** [**R4-2403740**](file:///D:\RAN4%23110\Docs\R4-2403740.zip) **(from** [**R4-2402604**](file:///D:\RAN4%23110\Docs\R4-2402604.zip)**).**

[**R4-2403740**](file:///D:\RAN4%23110\Docs\R4-2403740.zip) **draft CR for TS 38.101-3 DC\_R18\_xBLTE\_2BNR\_yDL2UL without FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Endorsed.**

[**R4-2402607**](file:///D:\RAN4%23110\Docs\R4-2402607.zip) **TP for TR 37.718-11-21 DC\_3(n)AA\_n77A and DC\_3(n)AA\_n77(2A)**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Revised to** [**R4-2403741**](file:///D:\RAN4%23110\Docs\R4-2403741.zip) **(from** [**R4-2402607**](file:///D:\RAN4%23110\Docs\R4-2402607.zip)**).**

[**R4-2403741**](file:///D:\RAN4%23110\Docs\R4-2403741.zip) **TP for TR 37.718-11-21 DC\_3(n)AA\_n77A and DC\_3(n)AA\_n77(2A)**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Approved.**

[**R4-2402608**](file:///D:\RAN4%23110\Docs\R4-2402608.zip) **TP for TR 37.718-11-21 DC\_3(n)AA\_n8A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Revised to** [**R4-2403742**](file:///D:\RAN4%23110\Docs\R4-2403742.zip) **(from** [**R4-2402608**](file:///D:\RAN4%23110\Docs\R4-2402608.zip)**).**

**[R4-2403742](D:\\RAN4#110\\Docs\\R4-2403742.zip) TP for TR 37.718-11-21 DC\_3(n)AA\_n8A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Approved.**

#### 7.6.3 UE RF requirements with FR2 band

[**R4-2402602**](file:///D:\RAN4%23110\Docs\R4-2402602.zip) **draft CR for TS 38.101-3 DC\_R18\_xBLTE\_2BNR\_yDL2UL with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Revised to** [**R4-2403743**](file:///D:\RAN4%23110\Docs\R4-2403743.zip) **(from** [**R4-2402602**](file:///D:\RAN4%23110\Docs\R4-2402602.zip)**).**

**[R4-2403743](D:\\RAN4#110\\Docs\\R4-2403743.zip) draft CR for TS 38.101-3 DC\_R18\_xBLTE\_2BNR\_yDL2UL with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei Technologies France*

**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)

[**R4-2401285**](file:///D:\RAN4%23110\Docs\R4-2401285.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:** The document was **for email approval**.

[**R4-2401286**](file:///D:\RAN4%23110\Docs\R4-2401286.zip) **TS 38.101-3 big CR for DC\_R18\_xBLTE\_yBNR\_zDL2UL**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1151 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision:** The document was **for email approval**.

#### 7.7.2 UE RF requirements without FR2 band

[**R4-2400212**](file:///D:\RAN4%23110\Docs\R4-2400212.zip) **Draft CR for TS38.101-3 Addition of inter-band ENDC Combinations with 3 NR band**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung, Spark*

**Decision: Endorsed.**

[**R4-2402553**](file:///D:\RAN4%23110\Docs\R4-2402553.zip) **TP for TR 37.718-11-21: DC\_1A\_n28A-n77A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

**Decision: Revised to R4-2403860 (from R4-2402553).**

**[R4-2403860](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403860.zip) TP for TR 37.718-11-21: DC\_1A\_n28A-n77A**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

**Decision: Approved.**

#### 7.7.3 UE RF requirements with FR2 band

[**R4-2402606**](file:///D:\RAN4%23110\Docs\R4-2402606.zip) **draft CR for TS 38.101-3 DC\_R18\_xBLTE\_yBNR\_zDL2UL with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision: Revised to** [**R4-2403744**](file:///D:\RAN4%23110\Docs\R4-2403744.zip) **(from** [**R4-2402606**](file:///D:\RAN4%23110\Docs\R4-2402606.zip)**).**

**[R4-2403744](D:\\RAN4#110\\Docs\\R4-2403744.zip) draft CR for TS 38.101-3 DC\_R18\_xBLTE\_yBNR\_zDL2UL with FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei Technologies France*

**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)

[**R4-2400215**](file:///D:\RAN4%23110\Docs\R4-2400215.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 v18.4.0 CR-1120 rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Abstract:**

Big CR reserved for post meeting

**Decision:** The document was **for email approval**.

#### 7.8.2 UE RF requirements without FR2 band

#### 7.8.3 UE RF requirements with FR2 band

[**R4-2400210**](file:///D:\RAN4%23110\Docs\R4-2400210.zip) **Draft CR to TS 38.101-3 Addition of FR1 and FR2 ENDC band combinations with 3UL**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision: Not pursued.**

[**R4-2401275**](file:///D:\RAN4%23110\Docs\R4-2401275.zip) **draft CR to TS38.101-3[R18]\_Introduction of 3UL&3DL DC\_8A\_n34A-n258A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

### 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)

[**R4-2401466**](file:///D:\RAN4%23110\Docs\R4-2401466.zip) **Revised WID NR Intra-band Rel-18**

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

**Abstract:**

Revised WID NR Intra-band Rel-18

**Decision:** The document was **for email approval**.

[**R4-2401467**](file:///D:\RAN4%23110\Docs\R4-2401467.zip) **big CR 38.101-1 new combinations Rel-18 NR Intra-band**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2108 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

big CR 38.101-1 new combinations Rel-18 NR Intra-band

**Decision:** The document was **for email approval**.

[**R4-2401468**](file:///D:\RAN4%23110\Docs\R4-2401468.zip) **big CR 38.101-2 new combinations Rel-18 NR Intra-band**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0717 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

big CR 38.101-2 new combinations Rel-18 NR Intra-band

**Decision:** The document was **for email approval**.

[**R4-2401469**](file:///D:\RAN4%23110\Docs\R4-2401469.zip) **TR 38.718-01-01 v0.8.0 Rel-18 NR Intra-band**

*Type: draft TR For: Agreement  
 38.718-01-01 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TR 38.718-01-01 v0.8.0 Rel-18 NR Intra-band

**Decision:** The document was **for email approval**.

#### 7.9.2 UE RF requirements for FR1 (resubmitted CR)

[**R4-2400629**](file:///D:\RAN4%23110\Docs\R4-2400629.zip) **draftCR to 38.101-1 removal non-existent of UL CA\_n66(2A)**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2040 rev Cat: F (Rel-18)  
  
 Source: Nokia*

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

[**R4-2400834**](file:///D:\RAN4%23110\Docs\R4-2400834.zip) **(NR\_CA\_R18\_intra-Core) Draft CR for 38.101-1 to introduce new configurations for NR intra-band CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

**Decision: Revised to** [**R4-2403789**](file:///D:\RAN4%23110\Docs\R4-2403789.zip) **(from** [**R4-2400834**](file:///D:\RAN4%23110\Docs\R4-2400834.zip)**).**

[**R4-2403789**](file:///D:\RAN4%23110\Docs\R4-2403789.zip) **(NR\_CA\_R18\_intra-Core) Draft CR for 38.101-1 to introduce new configurations for NR intra-band CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

**Decision: Endorsed.**

[**R4-2401490**](file:///D:\RAN4%23110\Docs\R4-2401490.zip) **draft CR 38.101-1 correcting intra-band configuration tables**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-1 correcting intra-band configuration tables

**Decision: Endorsed.**

[**R4-2401563**](file:///D:\RAN4%23110\Docs\R4-2401563.zip) **draftCR to 38.101-1 removal non-existent of UL CA\_n66(2A)**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Revised to** [**R4-2403790**](file:///D:\RAN4%23110\Docs\R4-2403790.zip) **(from** [**R4-2401563**](file:///D:\RAN4%23110\Docs\R4-2401563.zip)**).**

[**R4-2403790**](file:///D:\RAN4%23110\Docs\R4-2403790.zip) **draftCR to 38.101-1 removal non-existent of UL CA\_n66(2A)**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

[**R4-2402088**](file:///D:\RAN4%23110\Docs\R4-2402088.zip) **TP to TR 38.718.01-01 addition of CA\_n102B and CA\_n102C uplink**

*Type: pCR For: Approval  
 38.718-01-01 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Abstract:**

At RAN4#109 [R4-2320035](file:///D:\RAN4%23110\Docs\R4-2320035.zip) was noted but it included a TP to 37.717.01-01 which should have been agreed. This is therefor resubmitted at this meeting.

**Decision: Approved.**

#### 7.9.3 UE RF requirements for FR2

[**R4-2400914**](file:///D:\RAN4%23110\Docs\R4-2400914.zip) **Draft CR for TS 38.101-2 to add intra-band non-contiguous CA configurations for CA\_n257 and CA\_n258**

*Type: draftCR For: Endorsement  
 38.101-2 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2403791**](file:///D:\RAN4%23110\Docs\R4-2403791.zip) **(from** [**R4-2400914**](file:///D:\RAN4%23110\Docs\R4-2400914.zip)**).**

**[R4-2403791](D:\\RAN4#110\\Docs\\R4-2403791.zip) Draft CR for TS 38.101-2 to add intra-band non-contiguous CA configurations for CA\_n257 and CA\_n258**

*Type: draftCR For: Endorsement  
 38.101-2 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

### 7.10 Rel-18 NR Inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1,2)

[**R4-2400640**](file:///D:\RAN4%23110\Docs\R4-2400640.zip) **(NR\_CADC\_R18\_2BDL\_xBUL-Core) Correction for MSD IMD test points R18**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2045 rev Cat: F (Rel-18)  
  
 Source: Qualcomm France*

**Abstract:**

Chair: This CR is moved to agenda item 7.10 since the Rel-18 NR\_CADC\_R18\_2BDL\_xBUL-Core WI is not closed.

**Decision: Agreed.**

[**R4-2402634**](file:///D:\RAN4%23110\Docs\R4-2402634.zip) **CR to R18 38101-1 to correct Note on PC2 CA\_n71-n77 IMD5 MSD**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2179 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

correction of the wrong note 7 to note 13 associated with PC2 CA\_n71-n77 IMD5. Chair: This CR is moved to agenda item 7.10 since the Rel-18 NR\_CADC\_R18\_2BDL\_xBUL-Core WI is not closed.

**Decision: Revised to** [**R4-2403754**](file:///D:\RAN4%23110\Docs\R4-2403754.zip) **(from** [**R4-2402634**](file:///D:\RAN4%23110\Docs\R4-2402634.zip)**).**

[**R4-2403754**](file:///D:\RAN4%23110\Docs\R4-2403754.zip) **CR to R18 38101-1 to correct Note on PC2 CA\_n71-n77 IMD5 MSD**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2179 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

correction of the wrong note 7 to note 13 associated with PC2 CA\_n71-n77 IMD5. Chair: This CR is moved to agenda item 7.10 since the Rel-18 NR\_CADC\_R18\_2BDL\_xBUL-Core WI is not closed.

**Decision: Agreed.**

[**R4-2402815**](file:///D:\RAN4%23110\Docs\R4-2402815.zip) **(NR\_CADC\_R18\_2BDL\_xBUL) CR to R18 38101-1 to correct channel bandwidths in MSD test points**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2183 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Band n46 and n96 have wrong channel bandwidth and RB allocation in some MSD test points (<20MHz)

Some RB allocation are not compatible with DFT-s-OFDM. Chair: This CR is moved to agenda item 7.10 since the Rel-18 NR\_CADC\_R18\_2BDL\_xBUL-Core WI is not close

**Decision: Revised to** [**R4-2403755**](file:///D:\RAN4%23110\Docs\R4-2403755.zip) **(from** [**R4-2402815**](file:///D:\RAN4%23110\Docs\R4-2402815.zip)**).**

**[R4-2403755](D:\\RAN4#110\\Docs\\R4-2403755.zip) (NR\_CADC\_R18\_2BDL\_xBUL) CR to R18 38101-1 to correct channel bandwidths in MSD test points**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2183 rev Cat: F (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

Band n46 and n96 have wrong channel bandwidth and RB allocation in some MSD test points (<20MHz)

Some RB allocation are not compatible with DFT-s-OFDM. Chair: This CR is moved to agenda item 7.10 since the Rel-18 NR\_CADC\_R18\_2BDL\_xBUL-Core WI is not close

**Decision: Agreed.**

#### 7.10.1 Rapporteur input (WID/TR/big CR)

[**R4-2401280**](file:///D:\RAN4%23110\Docs\R4-2401280.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:** The document was **for email approval**.

[**R4-2401281**](file:///D:\RAN4%23110\Docs\R4-2401281.zip) **TR38.718-02-01 v0.10.0: 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 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision:** The document was **for email approval**.

[**R4-2401282**](file:///D:\RAN4%23110\Docs\R4-2401282.zip) **TS 38.101-1 big CR for NR\_CADC\_R18\_2BDL\_xBUL**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2089 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision:** The document was **for email approval**.

[**R4-2401283**](file:///D:\RAN4%23110\Docs\R4-2401283.zip) **TS 38.101-2 big CR for NR\_CADC\_R18\_2BDL\_xBUL**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0716 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision:** The document was **for email approval**.

[**R4-2401284**](file:///D:\RAN4%23110\Docs\R4-2401284.zip) **TS 38.101-3 big CR for NR\_CADC\_R18\_2BDL\_xBUL**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1150 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision:** The document was **for email approval**.

#### 7.10.2 UE RF requirements without FR2 band

[**R4-2400176**](file:///D:\RAN4%23110\Docs\R4-2400176.zip) **CR Bug Fixes for Band Combinations in 38101-1-i40\_s00-05**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1989 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400323**](file:///D:\RAN4%23110\Docs\R4-2400323.zip) **TP for TR38.718-02-01 Support of CA\_n77-n78**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Noted.**

[110][105] Topic#3 Band combination within 3.3-7.125

[**R4-2400643**](file:///D:\RAN4%23110\Docs\R4-2400643.zip) **Requirements for CA\_n78A-n104A**

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

**Abstract:**

Analysis for CA\_n78A-n104A. Moderator: This should be treated under email thread [105].

**Decision: Noted.**

[**R4-2400915**](file:///D:\RAN4%23110\Docs\R4-2400915.zip) **Draft CR for TS 38.101-1 on sub-table for inter-band CA configurations with two bands**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2403745**](file:///D:\RAN4%23110\Docs\R4-2403745.zip) **Draft CR for TS 38.101-1 on sub-table for inter-band CA configurations with two bands**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Withdrawn.**

[110][105] Topic #1 Band combination with intra-band UL CA

[**R4-2400926**](file:///D:\RAN4%23110\Docs\R4-2400926.zip) **TS 38.101-1: DraftCR for introducing UL CA\_n77C configuration**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Verizon, Ericsson, Samsung*

**Abstract:**

Moderator: This will be treated under email thread [105].

**Decision: Endorsed.**

[**R4-2401266**](file:///D:\RAN4%23110\Docs\R4-2401266.zip) **TP for TR38.718-02-01\_CA\_n1A-n78C**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2403746**](file:///D:\RAN4%23110\Docs\R4-2403746.zip) **(from** [**R4-2401266**](file:///D:\RAN4%23110\Docs\R4-2401266.zip)**).**

[**R4-2403746**](file:///D:\RAN4%23110\Docs\R4-2403746.zip) **TP for TR38.718-02-01\_CA\_n1A-n78C**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Approved.**

[**R4-2401267**](file:///D:\RAN4%23110\Docs\R4-2401267.zip) **TP for TR38.718-02-01\_CA\_n3A-n78C**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2403747**](file:///D:\RAN4%23110\Docs\R4-2403747.zip) **(from** [**R4-2401267**](file:///D:\RAN4%23110\Docs\R4-2401267.zip)**).**

[**R4-2403747**](file:///D:\RAN4%23110\Docs\R4-2403747.zip) **TP for TR38.718-02-01\_CA\_n3A-n78C**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Approved.**

[**R4-2401268**](file:///D:\RAN4%23110\Docs\R4-2401268.zip) **TP for TR38.718-02-01\_CA\_n8A-n41C**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2403748**](file:///D:\RAN4%23110\Docs\R4-2403748.zip) **(from** [**R4-2401268**](file:///D:\RAN4%23110\Docs\R4-2401268.zip)**).**

[**R4-2403748**](file:///D:\RAN4%23110\Docs\R4-2403748.zip) **TP for TR38.718-02-01\_CA\_n8A-n41C**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Approved.**

[**R4-2401269**](file:///D:\RAN4%23110\Docs\R4-2401269.zip) **TP for TR38.718-02-01\_CA\_n8A-n78C**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2403749**](file:///D:\RAN4%23110\Docs\R4-2403749.zip) **(from** [**R4-2401269**](file:///D:\RAN4%23110\Docs\R4-2401269.zip)**).**

[**R4-2403749**](file:///D:\RAN4%23110\Docs\R4-2403749.zip) **TP for TR38.718-02-01\_CA\_n8A-n78C**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Approved.**

[**R4-2401270**](file:///D:\RAN4%23110\Docs\R4-2401270.zip) **TP for TR38.718-02-01\_CA\_n8A-n79C**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Approved.**

[**R4-2401271**](file:///D:\RAN4%23110\Docs\R4-2401271.zip) **TP for TR38.718-02-01\_CA\_n28A-n41C**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2403750**](file:///D:\RAN4%23110\Docs\R4-2403750.zip) **(from** [**R4-2401271**](file:///D:\RAN4%23110\Docs\R4-2401271.zip)**).**

[**R4-2403750**](file:///D:\RAN4%23110\Docs\R4-2403750.zip) **TP for TR38.718-02-01\_CA\_n28A-n41C**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Approved.**

[**R4-2401273**](file:///D:\RAN4%23110\Docs\R4-2401273.zip) **TP for TR38.718-02-01\_CA\_n40A-n79C**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Approved.**

[**R4-2401482**](file:///D:\RAN4%23110\Docs\R4-2401482.zip) **TP for 38718-02-01 adding UL CA\_n25A-n41C to DL CA\_n25(2A)-n41C**

*Type: pCR For: Approval  
 38.718-02-01 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for 38718-02-01 adding UL CA\_n25A-n41C to DL CA\_n25(2A)-n41C

**Decision: Noted.**

[**R4-2403751**](file:///D:\RAN4%23110\Docs\R4-2403751.zip) **Draft CR for adding UL CA\_n25A-n41C to DL CA\_n25(2A)-n41C**

*Type: draftCR For: Endorsement  
 38.1xx-0y v18.x.0 CR- rev Cat: B (Rel-1x)  
  
 Source: Ericsson, T-Mobile US*

**Decision: Endorsed.**

[**R4-2401483**](file:///D:\RAN4%23110\Docs\R4-2401483.zip) **TP for 38718-02-01 adding UL CA\_n41C-n66A to DL CA\_n41C-n66(2A)**

*Type: pCR For: Approval  
 38.718-02-01 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for 38718-02-01 adding UL CA\_n41C-n66A to DL CA\_n41C-n66(2A)

**Decision: Noted.**

[**R4-2401484**](file:///D:\RAN4%23110\Docs\R4-2401484.zip) **TP for 38718-02-01 adding UL CA\_n41C-n71A to DL CA\_n41C-n71(2A) and CA\_n41C-n71B**

*Type: pCR For: Approval  
 38.718-02-01 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, T-Mobile US*

**Abstract:**

TP for 38718-02-01 adding UL CA\_n41C-n71A to DL CA\_n41C-n71(2A) and CA\_n41C-n71B

**Decision: Noted.**

[**R4-2401486**](file:///D:\RAN4%23110\Docs\R4-2401486.zip) **draft CR 38.101-1 removing UL CA\_n3B from 2 bands combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson, Nokia*

**Abstract:**

draft CR 38.101-1 removing UL CA\_n3B from 2 bands combinations

**Decision: Endorsed.**

[**R4-2401491**](file:///D:\RAN4%23110\Docs\R4-2401491.zip) **CR 38.101-1 correcting 2 bands configuration tables**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2110 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR 38.101-1 correcting 2 bands configuration tables

**Decision: Agreed.**

[**R4-2401496**](file:///D:\RAN4%23110\Docs\R4-2401496.zip) **draft CR 38.101-1 adding missing harmonic mixing MSD for CA\_n3-n5**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson, Apple*

**Abstract:**

draft CR 38.101-1 adding missing harmonic mixing MSD for CA\_n3-n5

**Decision: Endorsed.**

[**R4-2401763**](file:///D:\RAN4%23110\Docs\R4-2401763.zip) **TP for TR 38.718-02-01 to introduce CA\_n3A-n39A**

*Type: pCR For: Approval  
 38.718-02-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, CMCC*

**Decision: Noted.**

[**R4-2401766**](file:///D:\RAN4%23110\Docs\R4-2401766.zip) **Draft CR for TS 38.101-1 to introduce FR1 inter-band BCS 4 and 5 with two bands CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, CATT*

**Decision: Endorsed.**

[**R4-2401889**](file:///D:\RAN4%23110\Docs\R4-2401889.zip) **Draft CR for 38.101-1 to add bandwidth combination set 4 and 5 for CA\_n7A-n71A**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision: Revised to** [**R4-2403752**](file:///D:\RAN4%23110\Docs\R4-2403752.zip) **(from** [**R4-2401889**](file:///D:\RAN4%23110\Docs\R4-2401889.zip)**).**

[**R4-2403752**](file:///D:\RAN4%23110\Docs\R4-2403752.zip) **Draft CR for 38.101-1 to add bandwidth combination set 4 and 5 for CA\_n7A-n71A**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision: Endorsed.**

[**R4-2402218**](file:///D:\RAN4%23110\Docs\R4-2402218.zip) **Draft CR Addition of UL Intra-band CA to NR CA band combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, BT plc*

**Decision: Not pursued.**

[**R4-2403753**](file:///D:\RAN4%23110\Docs\R4-2403753.zip) **TP for addition of UL Intra-band CA to NR CA band combinations**

*Type: pCR For: Approval  
 38.xxx-0y-0y vx.y.z CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, BT plc, Skyworks inc*

**Decision: Approved.**

[**R4-2402311**](file:///D:\RAN4%23110\Docs\R4-2402311.zip) **Draft CR for 38.101-1 correction for CA\_n71-n78**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

[**R4-2402354**](file:///D:\RAN4%23110\Docs\R4-2402354.zip) **Draft CR for TS 38.101-1 to add CA\_n71A-n77(2A) as PC3 missing fallback of CA\_n71A-n77(3A)**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung, TELUS, Bell Mobility*

**Decision: Endorsed.**

[**R4-2402455**](file:///D:\RAN4%23110\Docs\R4-2402455.zip) **[NR\_CADC\_R18\_2BDL\_xBUL] CR for 38.101-1: Correct n25 instead of n41 for CA\_n41(3A)-n85A**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2168 rev Cat: F (Rel-18)  
  
 Source: T-Mobile USA*

**Decision: Agreed.**

[**R4-2402605**](file:///D:\RAN4%23110\Docs\R4-2402605.zip) **On PC3 MSD values for DC\_18\_n77A and CA\_n18-n77A in Release 18**

*Type: discussion For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

**Decision: Noted.**

#### 7.10.3 UE RF requirements with FR2 band

[**R4-2400177**](file:///D:\RAN4%23110\Docs\R4-2400177.zip) **CR Bug Fixes for Band Combinations in 38101-3-i40\_s00-05**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1109 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400231**](file:///D:\RAN4%23110\Docs\R4-2400231.zip) **Correction draft CR to add previously completed NR CA FR2 configurations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Rogers, Ericsson*

**Abstract:**

Adding band combination configurations that were endorsed at RAN4#109 (see [R4-2321830](file:///D:\RAN4%23110\Docs\R4-2321830.zip)), but are missing in current version of 38.101-3.

**Decision: Endorsed.**

[**R4-2400281**](file:///D:\RAN4%23110\Docs\R4-2400281.zip) **draft CR to add NR CA and DC configurations including n25 and FR2 bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Rogers, Ericsson*

**Abstract:**

Adding new band combination configurations.

**Decision: Endorsed.**

[**R4-2400916**](file:///D:\RAN4%23110\Docs\R4-2400916.zip) **Draft CR for TS 38.101-3 on subclause for inter-band CA configurations with two bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2403756**](file:///D:\RAN4%23110\Docs\R4-2403756.zip) **Draft CR for TS 38.101-3 on subclause for inter-band CA configurations with two bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Withdrawn.**

[**R4-2400917**](file:///D:\RAN4%23110\Docs\R4-2400917.zip) **Draft CR for TS 38.101-3 to add inter-band CA configurations for CA\_n3-n257, CA\_n3-n258, CA\_n78-n257 and CA\_n78-n258**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2401487**](file:///D:\RAN4%23110\Docs\R4-2401487.zip) **draft CR 38.101-3 removing UL CA\_n3B from 2 bands combinations**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson, Nokia*

**Abstract:**

draft CR 38.101-3 removing UL CA\_n3B from 2 bands combinations

**Decision: Endorsed.**

[**R4-2401891**](file:///D:\RAN4%23110\Docs\R4-2401891.zip) **Draft CR for 38.101-3 to add new bandwidth combinations sets 4 and 5 for CA\_n71A-n260A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision: Revised to** [**R4-2403757**](file:///D:\RAN4%23110\Docs\R4-2403757.zip) **(from** [**R4-2401891**](file:///D:\RAN4%23110\Docs\R4-2401891.zip)**).**

[**R4-2403757**](file:///D:\RAN4%23110\Docs\R4-2403757.zip) **Draft CR for 38.101-3 to add new bandwidth combinations sets 4 and 5 for CA\_n71A-n260A**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision: Endorsed.**

[**R4-2402091**](file:///D:\RAN4%23110\Docs\R4-2402091.zip) **Draft CR 38.101-3 to add missed approved 2CA of n71 and n260**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia, Telus, Bell Mobility*

**Decision: Endorsed.**

[**R4-2402104**](file:///D:\RAN4%23110\Docs\R4-2402104.zip) **draftCR to 38.101-3 - Add CA\_n48-n258**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, US Cellular*

**Decision: Revised to** [**R4-2403758**](file:///D:\RAN4%23110\Docs\R4-2403758.zip) **(from** [**R4-2402104**](file:///D:\RAN4%23110\Docs\R4-2402104.zip)**).**

**[R4-2403758](D:\\RAN4#110\\Docs\\R4-2403758.zip) draftCR to 38.101-3 - Add CA\_n48-n258**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, US Cellular*

**Decision: Endorsed.**

### 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)

[**R4-2400903**](file:///D:\RAN4%23110\Docs\R4-2400903.zip) **TR 38.718-03-01 v0.10.0 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 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision:** The document was **for email approval**.

[**R4-2400904**](file:///D:\RAN4%23110\Docs\R4-2400904.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 v18.4.0 CR-2058 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision:** The document was **for email approval**.

[**R4-2400905**](file:///D:\RAN4%23110\Docs\R4-2400905.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 v18.4.0 CR-1142 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision:** The document was **for email approval**.

[**R4-2400906**](file:///D:\RAN4%23110\Docs\R4-2400906.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:** The document was **for email approval**.

#### 7.11.2 UE RF requirements without FR2 band

[**R4-2400214**](file:///D:\RAN4%23110\Docs\R4-2400214.zip) **TP for TR 38.718-03-01 to include CA\_n1-n5-n40**

*Type: pCR For: Approval  
 38.718-03-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, Spark*

**Decision: Revised to** [**R4-2403759**](file:///D:\RAN4%23110\Docs\R4-2403759.zip) **(from** [**R4-2400214**](file:///D:\RAN4%23110\Docs\R4-2400214.zip)**).**

[**R4-2403759**](file:///D:\RAN4%23110\Docs\R4-2403759.zip) **TP for TR 38.718-03-01 to include CA\_n1-n5-n40**

*Type: pCR For: Approval  
 38.718-03-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, Spark*

**Decision: Approved.**

[**R4-2400783**](file:///D:\RAN4%23110\Docs\R4-2400783.zip) **TP for TR 38.718-03-01 to include CA\_n5A-n7A-n25A and CA\_n5A-n7A-n25(2A)**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to** [**R4-2403760**](file:///D:\RAN4%23110\Docs\R4-2403760.zip) **(from** [**R4-2400783**](file:///D:\RAN4%23110\Docs\R4-2400783.zip)**).**

[**R4-2403760**](file:///D:\RAN4%23110\Docs\R4-2403760.zip) **TP for TR 38.718-03-01 to include CA\_n5A-n7A-n25A and CA\_n5A-n7A-n25(2A)**

*Type: pCR For: Approval  
 37.718-11-21 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Approved.**

[**R4-2400784**](file:///D:\RAN4%23110\Docs\R4-2400784.zip) **TP for TR 38.718-03-01 to include CA\_n5-n7-n66**

*Type: pCR For: Approval  
 38.718-03-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to** [**R4-2403761**](file:///D:\RAN4%23110\Docs\R4-2403761.zip) **(from** [**R4-2400784**](file:///D:\RAN4%23110\Docs\R4-2400784.zip)**).**

[**R4-2403761**](file:///D:\RAN4%23110\Docs\R4-2403761.zip) **TP for TR 38.718-03-01 to include CA\_n5-n7-n66**

*Type: pCR For: Approval  
 38.718-03-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Approved.**

[**R4-2400785**](file:///D:\RAN4%23110\Docs\R4-2400785.zip) **TP for TR 38.718-03-01 to include CA\_n5-n25-n41**

*Type: pCR For: Approval  
 38.718-03-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to** [**R4-2403762**](file:///D:\RAN4%23110\Docs\R4-2403762.zip) **(from** [**R4-2400785**](file:///D:\RAN4%23110\Docs\R4-2400785.zip)**).**

[**R4-2403762**](file:///D:\RAN4%23110\Docs\R4-2403762.zip) **TP for TR 38.718-03-01 to include CA\_n5-n25-n41**

*Type: pCR For: Approval  
 38.718-03-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Approved.**

[**R4-2400786**](file:///D:\RAN4%23110\Docs\R4-2400786.zip) **TP for TR 38.718-03-01 to include CA\_n5-n41-n77**

*Type: pCR For: Approval  
 38.718-03-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Revised to** [**R4-2403763**](file:///D:\RAN4%23110\Docs\R4-2403763.zip) **(from** [**R4-2400786**](file:///D:\RAN4%23110\Docs\R4-2400786.zip)**).**

[**R4-2403763**](file:///D:\RAN4%23110\Docs\R4-2403763.zip) **TP for TR 38.718-03-01 to include CA\_n5-n41-n77**

*Type: pCR For: Approval  
 38.718-03-01 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, Rogers*

**Decision: Approved.**

[**R4-2400789**](file:///D:\RAN4%23110\Docs\R4-2400789.zip) **draft CR for TS38.101-1 correction on ?TIB,c and ?RIB,c of CA\_n7-n25-n66**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Not pursued.**

[**R4-2400833**](file:///D:\RAN4%23110\Docs\R4-2400833.zip) **(NR\_CADC\_R18\_3BDL\_xBUL-Core)Draft CR for 38.101-1 to introduce new configurations for NR inter-band CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

**Decision: Revised to** [**R4-2403764**](file:///D:\RAN4%23110\Docs\R4-2403764.zip) **(from** [**R4-2400833**](file:///D:\RAN4%23110\Docs\R4-2400833.zip)**).**

[**R4-2403764**](file:///D:\RAN4%23110\Docs\R4-2403764.zip) **(NR\_CADC\_R18\_3BDL\_xBUL-Core)Draft CR for 38.101-1 to introduce new configurations for NR inter-band CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

**Decision: Endorsed.**

[**R4-2400899**](file:///D:\RAN4%23110\Docs\R4-2400899.zip) **DraftCR for inter band DC combinations to TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Verizon, Samsung, Ericsson*

**Decision: Endorsed.**

[**R4-2400918**](file:///D:\RAN4%23110\Docs\R4-2400918.zip) **Draft CR for TS 38.101-1 on inter-band DC for n46-n48-n96**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation, Charter Communications*

**Decision: Revised to** [**R4-2403765**](file:///D:\RAN4%23110\Docs\R4-2403765.zip) **(from** [**R4-2400918**](file:///D:\RAN4%23110\Docs\R4-2400918.zip)**).**

[**R4-2403765**](file:///D:\RAN4%23110\Docs\R4-2403765.zip) **Draft CR for TS 38.101-1 on inter-band DC for n46-n48-n96**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation, Charter Communications*

**Decision: Endorsed.**

[**R4-2400919**](file:///D:\RAN4%23110\Docs\R4-2400919.zip) **Draft CR for TS 38.101-1 on sub-table for inter-band CA configurations with three bands**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2403766**](file:///D:\RAN4%23110\Docs\R4-2403766.zip) **(from** [**R4-2400919**](file:///D:\RAN4%23110\Docs\R4-2400919.zip)**).**

[**R4-2403766**](file:///D:\RAN4%23110\Docs\R4-2403766.zip) **Draft CR for TS 38.101-1 on sub-table for inter-band CA configurations with three bands**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2401492**](file:///D:\RAN4%23110\Docs\R4-2401492.zip) **CR 38.101-1 correcting 3 bands configuration tables**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2111 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR 38.101-1 correcting 3 bands configuration tables

**Decision: Agreed.**

[**R4-2401765**](file:///D:\RAN4%23110\Docs\R4-2401765.zip) **Draft CR for TS 38.101-1 to introduce CA\_n1A-n5A-n78C and CA\_n1A-n8A-n78C**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, ZTE, China Unicom, China Telecom*

**Decision: Endorsed.**

[**R4-2401767**](file:///D:\RAN4%23110\Docs\R4-2401767.zip) **Draft CR for TS 38.101-1 to introduce FR1 inter-band BCS 4 and 5 with three bands CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, CATT*

**Decision: Revised to** [**R4-2403767**](file:///D:\RAN4%23110\Docs\R4-2403767.zip) **(from** [**R4-2401767**](file:///D:\RAN4%23110\Docs\R4-2401767.zip)**).**

[**R4-2403767**](file:///D:\RAN4%23110\Docs\R4-2403767.zip) **Draft CR for TS 38.101-1 to introduce FR1 inter-band BCS 4 and 5 with three bands CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, CATT*

**Decision: Endorsed.**

[**R4-2401879**](file:///D:\RAN4%23110\Docs\R4-2401879.zip) **TP for TR 38.718-03-01 to add CA\_n3-n28-n34**

*Type: discussion For: Decision  
 Source: CMCC*

**Decision: Noted.**

[**R4-2401880**](file:///D:\RAN4%23110\Docs\R4-2401880.zip) **TP for TR 38.718-03-01 to add CA\_n3-n34-n40**

*Type: discussion For: Decision  
 Source: CMCC*

**Decision: Noted.**

[**R4-2401881**](file:///D:\RAN4%23110\Docs\R4-2401881.zip) **TP for TR 38.718-03-01 to add CA\_n3-n34-n41**

*Type: discussion For: Decision  
 Source: CMCC*

**Decision: Noted.**

[**R4-2401882**](file:///D:\RAN4%23110\Docs\R4-2401882.zip) **TP for TR 38.718-03-01 to add CA\_n3-n34-n79**

*Type: discussion For: Decision  
 Source: CMCC*

**Decision: Noted.**

[**R4-2402093**](file:///D:\RAN4%23110\Docs\R4-2402093.zip) **TP to TR 38.718-03-01 Addition of CA\_n1-n28-n102 variants**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Revised to** [**R4-2403768**](file:///D:\RAN4%23110\Docs\R4-2403768.zip) **(from** [**R4-2402093**](file:///D:\RAN4%23110\Docs\R4-2402093.zip)**).**

[**R4-2403768**](file:///D:\RAN4%23110\Docs\R4-2403768.zip) **TP to TR 38.718-03-01 Addition of CA\_n1-n28-n102 variants**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Approved.**

[**R4-2402094**](file:///D:\RAN4%23110\Docs\R4-2402094.zip) **TP to TR 38.718-03-01 Addition of CA\_n1-n78-n102 variants**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Revised to** [**R4-2403769**](file:///D:\RAN4%23110\Docs\R4-2403769.zip) **(from** [**R4-2402094**](file:///D:\RAN4%23110\Docs\R4-2402094.zip)**).**

[**R4-2403769**](file:///D:\RAN4%23110\Docs\R4-2403769.zip) **TP to TR 38.718-03-01 Addition of CA\_n1-n78-n102 variants**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Approved.**

[**R4-2402095**](file:///D:\RAN4%23110\Docs\R4-2402095.zip) **TP to TR 38.718-03-01 Addition of CA\_n7-n78-n102 variants**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Revised to** [**R4-2403770**](file:///D:\RAN4%23110\Docs\R4-2403770.zip) **(from** [**R4-2402095**](file:///D:\RAN4%23110\Docs\R4-2402095.zip)**).**

[**R4-2403770**](file:///D:\RAN4%23110\Docs\R4-2403770.zip) **TP to TR 38.718-03-01 Addition of CA\_n7-n78-n102 variants**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Approved.**

[**R4-2402096**](file:///D:\RAN4%23110\Docs\R4-2402096.zip) **TP to TR 38.718-03-01 Addition of CA\_n28-n78-n102 variants**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Revised to** [**R4-2403771**](file:///D:\RAN4%23110\Docs\R4-2403771.zip) **(from** [**R4-2402096**](file:///D:\RAN4%23110\Docs\R4-2402096.zip)**).**

[**R4-2403771**](file:///D:\RAN4%23110\Docs\R4-2403771.zip) **TP to TR 38.718-03-01 Addition of CA\_n28-n78-n102 variants**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Approved.**

[**R4-2402097**](file:///D:\RAN4%23110\Docs\R4-2402097.zip) **TP to TR 38.718-03-01 Addition of CA\_n46-n78-n102 variants**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Revised to** [**R4-2403772**](file:///D:\RAN4%23110\Docs\R4-2403772.zip) **(from** [**R4-2402097**](file:///D:\RAN4%23110\Docs\R4-2402097.zip)**).**

[**R4-2403772**](file:///D:\RAN4%23110\Docs\R4-2403772.zip) **TP to TR 38.718-03-01 Addition of CA\_n46-n78-n102 variants**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, BT*

**Decision: Approved.**

[**R4-2402101**](file:///D:\RAN4%23110\Docs\R4-2402101.zip) **draftCR to 38.101-1 Additions of UL configurations to combinations with n25, n41, n66, n71, n77 and n85**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, T-Mobile US*

**Decision: Endorsed.**

[**R4-2402102**](file:///D:\RAN4%23110\Docs\R4-2402102.zip) **TP to TR 38.718-03-01 Addition of CA\_n25A-n41C-n66A w. ULCA**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, T-Mobile US*

**Decision: Revised to** [**R4-2403773**](file:///D:\RAN4%23110\Docs\R4-2403773.zip) **(from** [**R4-2402102**](file:///D:\RAN4%23110\Docs\R4-2402102.zip)**).**

[**R4-2403773**](file:///D:\RAN4%23110\Docs\R4-2403773.zip) **TP to TR 38.718-03-01 Addition of CA\_n25A-n41C-n66A w. ULCA**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, T-Mobile US*

**Decision: Approved.**

[**R4-2402103**](file:///D:\RAN4%23110\Docs\R4-2402103.zip) **TP to TR 38.718-03-01 Addition of CA\_n25A-n41C-n71A w. ULCA**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, T-Mobile US*

**Decision: Revised to** [**R4-2403774**](file:///D:\RAN4%23110\Docs\R4-2403774.zip) **(from** [**R4-2402103**](file:///D:\RAN4%23110\Docs\R4-2402103.zip)**).**

[**R4-2403774**](file:///D:\RAN4%23110\Docs\R4-2403774.zip) **TP to TR 38.718-03-01 Addition of CA\_n25A-n41C-n71A w. ULCA**

*Type: pCR For: Approval  
 38.718-03-01 v0.10.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia, T-Mobile US*

**Decision: Approved.**

[**R4-2402355**](file:///D:\RAN4%23110\Docs\R4-2402355.zip) **Draft CR for TS 38.101-1 to add PC3 missing fallbacks**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung, TELUS, Bell Mobility*

**Decision: Endorsed.**

[**R4-2402365**](file:///D:\RAN4%23110\Docs\R4-2402365.zip) **draftCR for 38.101-1 correction for CA\_n3A-n20A-n78(2A)**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia*

**Decision: Endorsed.**

#### 7.11.3 UE RF requirements with FR2 band

[**R4-2400920**](file:///D:\RAN4%23110\Docs\R4-2400920.zip) **Draft CR for TS 38.101-3 on subclause for inter-band CA configurations with three bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2403775**](file:///D:\RAN4%23110\Docs\R4-2403775.zip) **(from** [**R4-2400920**](file:///D:\RAN4%23110\Docs\R4-2400920.zip)**).**

[**R4-2403775**](file:///D:\RAN4%23110\Docs\R4-2403775.zip) **Draft CR for TS 38.101-3 on subclause for inter-band CA configurations with three bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2401245**](file:///D:\RAN4%23110\Docs\R4-2401245.zip) **(NR\_CADC\_R18\_3BDL\_xBUL-Core) draft CR for TS38.101-3: Move 3-band NR-DC configurations from 2-band table to 3-band table**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2401480**](file:///D:\RAN4%23110\Docs\R4-2401480.zip) **draft CR 38.101-3 adding 3 bands CA and DC combinations including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Telstra*

**Abstract:**

draft CR 38.101-3 adding 3 bands CA and DC combinations including FR2

**Decision: Revised to** [**R4-2403776**](file:///D:\RAN4%23110\Docs\R4-2403776.zip) **(from** [**R4-2401480**](file:///D:\RAN4%23110\Docs\R4-2401480.zip)**).**

[**R4-2403776**](file:///D:\RAN4%23110\Docs\R4-2403776.zip) **draft CR 38.101-3 adding 3 bands CA and DC combinations including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Telstra*

**Abstract:**

draft CR 38.101-3 adding 3 bands CA and DC combinations including FR2

**Decision: Endorsed.**

[**R4-2401890**](file:///D:\RAN4%23110\Docs\R4-2401890.zip) **Draft CR for 38.101-3 to add band configurations for the inter-band NR-CA combinations between FR1 and FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision: Revised to** [**R4-2403777**](file:///D:\RAN4%23110\Docs\R4-2403777.zip) **(from** [**R4-2401890**](file:///D:\RAN4%23110\Docs\R4-2401890.zip)**).**

**[R4-2403777](D:\\RAN4#110\\Docs\\R4-2403777.zip) Draft CR for 38.101-3 to add band configurations for the inter-band NR-CA combinations between FR1 and FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**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)

[**R4-2402372**](file:///D:\RAN4%23110\Docs\R4-2402372.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:** The document was **for email approval**.

[**R4-2402373**](file:///D:\RAN4%23110\Docs\R4-2402373.zip) **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)**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2156 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:** The document was **for email approval**.

[**R4-2402374**](file:///D:\RAN4%23110\Docs\R4-2402374.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 v18.4.0 CR-1171 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:** The document was **for email approval**.

#### 7.12.2 UE RF requirements without FR2 band

[**R4-2400213**](file:///D:\RAN4%23110\Docs\R4-2400213.zip) **Draft CR for TS38.101-1 Addition of inter-band NRCA Combination with 4 band**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung, Spark*

**Abstract:**

Chair: This should be treated under email thread [107].

**Decision: Endorsed.**

[**R4-2400921**](file:///D:\RAN4%23110\Docs\R4-2400921.zip) **Draft CR for TS 38.101-1 on sub-table for inter-band CA configurations with more than three bands**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2403778**](file:///D:\RAN4%23110\Docs\R4-2403778.zip) **(from** [**R4-2400921**](file:///D:\RAN4%23110\Docs\R4-2400921.zip)**).**

[**R4-2403778**](file:///D:\RAN4%23110\Docs\R4-2403778.zip) **Draft CR for TS 38.101-1 on sub-table for inter-band CA configurations with more than three bands**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2401485**](file:///D:\RAN4%23110\Docs\R4-2401485.zip) **draft CR 38.101-1 adding 4 bands CA combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft CR 38.101-1 adding 4 bands CA combinations

**Decision: Revised to** [**R4-2403779**](file:///D:\RAN4%23110\Docs\R4-2403779.zip) **(from** [**R4-2401485**](file:///D:\RAN4%23110\Docs\R4-2401485.zip)**).**

[**R4-2403779**](file:///D:\RAN4%23110\Docs\R4-2403779.zip) **draft CR 38.101-1 adding 4 bands CA combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, T-Mobile US*

**Abstract:**

draft CR 38.101-1 adding 4 bands CA combinations

**Decision: Endorsed.**

[**R4-2401488**](file:///D:\RAN4%23110\Docs\R4-2401488.zip) **draft CR 38.101-1 removing UL CA\_n3B from 4 and 5 bands combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson, Nokia*

**Abstract:**

draft CR 38.101-1 removing UL CA\_n3B from 4 and 5 bands combinations

**Decision: Endorsed.**

[**R4-2401493**](file:///D:\RAN4%23110\Docs\R4-2401493.zip) **CR 38.101-1 correcting 4 and 5 bands configuration tables**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2112 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR 38.101-1 correcting 4 and 5 bands configuration tables

**Decision: Agreed.**

[**R4-2402100**](file:///D:\RAN4%23110\Docs\R4-2402100.zip) **draftCR to 38.101-1 Additions of UL configurations to combinations with n1, n3, n7, n40, n78 and n105**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, Spark NZ Ltd*

**Decision: Revised to** [**R4-2403780**](file:///D:\RAN4%23110\Docs\R4-2403780.zip) **(from** [**R4-2402100**](file:///D:\RAN4%23110\Docs\R4-2402100.zip)**).**

[**R4-2403780**](file:///D:\RAN4%23110\Docs\R4-2403780.zip) **draftCR to 38.101-1 Additions of UL configurations to combinations with n1, n3, n7, n40, n78 and n105**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, Spark NZ Ltd*

**Decision: Endorsed.**

[**R4-2402807**](file:///D:\RAN4%23110\Docs\R4-2402807.zip) **draftCR for 38.101-1 to add PC3 inter-band (4 bands DL with 2 band UL) NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Dish Network, Samsung, Fujitsu*

**Decision: Revised to** [**R4-2403781**](file:///D:\RAN4%23110\Docs\R4-2403781.zip) **(from** [**R4-2402807**](file:///D:\RAN4%23110\Docs\R4-2402807.zip)**).**

**[R4-2403781](D:\\RAN4#110\\Docs\\R4-2403781.zip) draftCR for 38.101-1 to add PC3 inter-band (4 bands DL with 2 band UL) NR CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Dish Network, Samsung, Fujitsu*

**Decision: Endorsed.**

#### 7.12.3 UE RF requirements with FR2 band

[**R4-2400922**](file:///D:\RAN4%23110\Docs\R4-2400922.zip) **Draft CR for TS 38.101-3 on subclause for inter-band CA configurations with more than three bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2403782**](file:///D:\RAN4%23110\Docs\R4-2403782.zip) **(from** [**R4-2400922**](file:///D:\RAN4%23110\Docs\R4-2400922.zip)**).**

[**R4-2403782**](file:///D:\RAN4%23110\Docs\R4-2403782.zip) **Draft CR for TS 38.101-3 on subclause for inter-band CA configurations with more than three bands**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2401481**](file:///D:\RAN4%23110\Docs\R4-2401481.zip) **draft CR 38.101-3 adding 4 bands CA and DC combinations including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Telstra*

**Abstract:**

draft CR 38.101-3 adding 4 bands CA and DC combinations including FR2

**Decision: Revised to** [**R4-2403783**](file:///D:\RAN4%23110\Docs\R4-2403783.zip) **(from** [**R4-2401481**](file:///D:\RAN4%23110\Docs\R4-2401481.zip)**).**

**[R4-2403783](D:\\RAN4#110\\Docs\\R4-2403783.zip) draft CR 38.101-3 adding 4 bands CA and DC combinations including FR2**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Telstra*

**Abstract:**

draft CR 38.101-3 adding 4 bands CA and DC combinations including 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)

[**R4-2401760**](file:///D:\RAN4%23110\Docs\R4-2401760.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:** The document was **for email approval**.

[**R4-2401761**](file:///D:\RAN4%23110\Docs\R4-2401761.zip) **Draft TR 37.718-00-00 v0.8.0**

*Type: draft TR For: Agreement  
 37.718-00-00 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **for email approval**.

[**R4-2401762**](file:///D:\RAN4%23110\Docs\R4-2401762.zip) **Big CR on Introduction of completed SUL band combinations into TS 38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2113 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **for email approval**.

#### 7.13.2 UE RF requirements

[**R4-2400857**](file:///D:\RAN4%23110\Docs\R4-2400857.zip) **TP to TR 37.718-00-00: SUL\_n5A-n84A**

*Type: other For: Approval  
 37.718-00-00 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

[**R4-2400858**](file:///D:\RAN4%23110\Docs\R4-2400858.zip) **TP to TR 37.718-00-00: SUL\_n8A-n84A**

*Type: other For: Approval  
 37.718-00-00 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2403784**](file:///D:\RAN4%23110\Docs\R4-2403784.zip) **(from** [**R4-2400858**](file:///D:\RAN4%23110\Docs\R4-2400858.zip)**).**

[**R4-2403784**](file:///D:\RAN4%23110\Docs\R4-2403784.zip) **TP to TR 37.718-00-00: SUL\_n8A-n84A**

*Type: other For: Approval  
 37.718-00-00 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

[**R4-2400859**](file:///D:\RAN4%23110\Docs\R4-2400859.zip) **TP to TR 37.718-00-00 CA\_n5A\_n78A-n84A, CA\_n78A\_n5A-n84A and CA\_n1A\_n78A-n89A**

*Type: other For: Approval  
 37.718-00-00 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2403785**](file:///D:\RAN4%23110\Docs\R4-2403785.zip) **(from** [**R4-2400859**](file:///D:\RAN4%23110\Docs\R4-2400859.zip)**).**

[**R4-2403785**](file:///D:\RAN4%23110\Docs\R4-2403785.zip) **TP to TR 37.718-00-00 CA\_n5A\_n78A-n84A, CA\_n78A\_n5A-n84A and CA\_n1A\_n78A-n89A**

*Type: other For: Approval  
 37.718-00-00 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

[**R4-2400860**](file:///D:\RAN4%23110\Docs\R4-2400860.zip) **TP to TR 37.718-00-00 CA\_n3A\_n78A-n84A and CA\_n3A\_n78C-n84A**

*Type: other For: Approval  
 37.718-00-00 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2403795**](file:///D:\RAN4%23110\Docs\R4-2403795.zip) **(from** [**R4-2400860**](file:///D:\RAN4%23110\Docs\R4-2400860.zip)**).**

[**R4-2403795**](file:///D:\RAN4%23110\Docs\R4-2403795.zip) **TP to TR 37.718-00-00 CA\_n3A\_n78A-n84A and CA\_n3A\_n78C-n84A**

*Type: other For: Approval  
 37.718-00-00 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

[**R4-2400861**](file:///D:\RAN4%23110\Docs\R4-2400861.zip) **TP to TR 37.718-00-00 CA\_n8A\_n78A-n84A and CA\_n78A\_n8A-n84A**

*Type: other For: Approval  
 37.718-00-00 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2403786**](file:///D:\RAN4%23110\Docs\R4-2403786.zip) **(from** [**R4-2400861**](file:///D:\RAN4%23110\Docs\R4-2400861.zip)**).**

[**R4-2403786**](file:///D:\RAN4%23110\Docs\R4-2403786.zip) **TP to TR 37.718-00-00 CA\_n8A\_n78A-n84A and CA\_n78A\_n8A-n84A**

*Type: other For: Approval  
 37.718-00-00 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

[**R4-2400862**](file:///D:\RAN4%23110\Docs\R4-2400862.zip) **draftCR to 38.101-1 SUL band combinations with 78C**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2403787**](file:///D:\RAN4%23110\Docs\R4-2403787.zip) **(from** [**R4-2400862**](file:///D:\RAN4%23110\Docs\R4-2400862.zip)**).**

[**R4-2403787**](file:///D:\RAN4%23110\Docs\R4-2403787.zip) **draftCR to 38.101-1 SUL band combinations with 78C**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

[**R4-2401768**](file:///D:\RAN4%23110\Docs\R4-2401768.zip) **TP for TR 37.718-00-00 to clarify the new rules for SUL combos' notation**

*Type: pCR For: Approval  
 37.718-00-00 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2403788**](file:///D:\RAN4%23110\Docs\R4-2403788.zip) **(from** [**R4-2401768**](file:///D:\RAN4%23110\Docs\R4-2401768.zip)**).**

**[R4-2403788](D:\\RAN4#110\\Docs\\R4-2403788.zip) TP for TR 37.718-00-00 to clarify the new rules for SUL combos' notation**

*Type: pCR For: Approval  
 37.718-00-00 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Approved.**

### 7.14 NR CA band combinations with two SUL cells in Rel-18

#### 7.14.1 Rapporteur input (WID/TR/big CR)

#### 7.14.2 UE RF requirements

[**R4-2400863**](file:///D:\RAN4%23110\Docs\R4-2400863.zip) **draftCR to 38.101-1 Correction on delta\_Rib for two SUL cells**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

CHTTL: seems different approaches? We wonder note 3 is O.

Nokia: CR needs a note to describe. NOTE 3 should be captured in SimBC work.

Qualcomm: we should make sure which number will be applied to which band in the table.

**Decision: Revised to** [**R4-2403603**](file:///D:\RAN4%23110\Docs\R4-2403603.zip) **(from** [**R4-2400863**](file:///D:\RAN4%23110\Docs\R4-2400863.zip)**).**

**[R4-2403603](D:\\RAN4#110\\Docs\\R4-2403603.zip) draftCR to 38.101-1 Correction on delta\_Rib for two SUL cells**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

### 7.15 High-power UE operation for fixed-wireless/vehicle-mounted use cases in LTE bands and NR bands

#### 7.15.1 Rapporteur input (WID/TR/big CR)

[**R4-2400614**](file:///D:\RAN4%23110\Docs\R4-2400614.zip) **FWA TR**

*Type: draft TR For: Agreement  
 37.829 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Nokia*

**Decision: Withdrawn.**

[**R4-2400615**](file:///D:\RAN4%23110\Docs\R4-2400615.zip) **FWA WID**

*Type: WID revised For: Endorsement  
 Source: Nokia*

**Decision:** The document was **for email approval**.

[**R4-2400616**](file:///D:\RAN4%23110\Docs\R4-2400616.zip) **FWA Big CR**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2035 rev Cat: B (Rel-18)  
  
 Source: Nokia*

**Decision:** The document was **for email approval**.

#### 7.15.2 UE RF requirements

[**R4-2401832**](file:///D:\RAN4%23110\Docs\R4-2401832.zip) **FWA PC1 n7 NS\_46 A-MPR proposal**

*Type: discussion For: Approval  
 Source: Nokia Corporation*

*Qualcomm: need check the value compared to PC3.*

**Decision: Noted.**

**Draft CR**

[**R4-2400617**](file:///D:\RAN4%23110\Docs\R4-2400617.zip) **draftCR for 38.101-1 addition of PC1 operation for n7**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, Bell Mobility, Telus*

**Decision: Revised to R4-2403843 (from R4-2400617).**

[**R4-2403843**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403843.zip) **draftCR for 38.101-1 addition of PC1 operation for n7**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, Bell Mobility, Telus*

**Decision: Endorsed.**

[**R4-2400618**](file:///D:\RAN4%23110\Docs\R4-2400618.zip) **draftCR for 38.101-1 addition of PC1 operation for n41**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, T-Mobile US*

*Qualcomm: need some information note that PC1 is not enabled with NS\_47.*

**Decision: Revised to R4-2403844 (from R4-2400618).**

[**R4-2403844**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403844.zip) **draftCR for 38.101-1 addition of PC1 operation for n41**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, T-Mobile US*

*Qualcomm: need some information note that PC1 is not enabled with NS\_47.*

**Decision: Endorsed.**

[**R4-2400619**](file:///D:\RAN4%23110\Docs\R4-2400619.zip) **draftCR for 38.101-1 addition of PC1 operation for n78**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, Telstra*

**Decision: Endorsed.**

### 7.16 High power for FR1 for DC\_R18\_xBLTE\_yBNR\_zDLnUL with power class PC2 and PC1.5

#### 7.16.1 Rapporteur input (WID/TR/big CR)

[**R4-2401470**](file:///D:\RAN4%23110\Docs\R4-2401470.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:** The document was **for email approval**.

[**R4-2401471**](file:///D:\RAN4%23110\Docs\R4-2401471.zip) **big CR 38.101-3 new combinations Rel-18 EN-DC HPUE**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1152 rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

big CR 38.101-3 new combinations Rel-18 EN-DC HPUE

**Decision:** The document was **for email approval**.

[**R4-2401472**](file:///D:\RAN4%23110\Docs\R4-2401472.zip) **TR 38.898 v0.8.0 Rel-18 High power UE for FR1 for DC\_R18\_xBLTE\_yBNR\_zDLnUL**

*Type: draft TR For: Agreement  
 38.898 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

TR 38.898 v0.8.0 Rel-18 High power UE for FR1 for DC\_R18\_xBLTE\_yBNR\_zDLnUL

**Decision:** The document was **for email approval**.

#### 7.16.2 UE RF requirements

**CR/Draft CR**

[**R4-2400190**](file:///D:\RAN4%23110\Docs\R4-2400190.zip) **CR to 38.101-3 on correction of PC2 support indication for DC\_3A\_n78A**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1116 rev Cat: F (Rel-18)  
  
 Source: Apple*

CHTTL: DC\_3A\_n78A note 23 should be applied.

Apple: some clarification was already there.

**Decision: Revised to** [**R4-2403608**](file:///D:\RAN4%23110\Docs\R4-2403608.zip) **(from** [**R4-2400190**](file:///D:\RAN4%23110\Docs\R4-2400190.zip)**).**

[**R4-2403608**](file:///D:\RAN4%23110\Docs\R4-2403608.zip) **CR to 38.101-3 on correction of PC2 support indication for DC\_3A\_n78A**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1116 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2400324**](file:///D:\RAN4%23110\Docs\R4-2400324.zip) **Draft CR for TS38.101-3 to add new HP-ENDC combinations for FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

*CHTTL/Qualcomm: some MSD needs be added.*

**Decision: Not pursued.**

[**R4-2403609**](file:///D:\RAN4%23110\Docs\R4-2403609.zip) **Draft CR for TS38.101-3 to add new HP-ENDC combinations for FR1**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

*CHTTL/Qualcomm: some MSD needs be added.*

**Decision: Withdrawn.**

[**R4-2400325**](file:///D:\RAN4%23110\Docs\R4-2400325.zip) **Draft CR for TS38.101-3: Addition of uplink configuration to DC\_1-11\_n77**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

*Qualcomm: MSD analysis is missing here.*

**Decision: Not pursued.**

[**R4-2403610**](file:///D:\RAN4%23110\Docs\R4-2403610.zip) **Draft CR for TS38.101-3: Addition of uplink configuration to DC\_1-11\_n77**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Withdrawn.**

[**R4-2400588**](file:///D:\RAN4%23110\Docs\R4-2400588.zip) **(HPUE\_FR1\_DC\_LTE\_NR\_R18-Core) CR to R18 TS 38.101-3 correct PC2 MSD for DC\_3A-19A\_n79A and some typos**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1132 rev Cat: F (Rel-18)  
  
 Source: NTT DOCOMO, INC., Qualcomm Inc., MediaTek Inc.*

**Abstract:**

R18 Cat-F CR to revise the MSD requirements for DC\_3A-19A\_n79A. Also, some editorial errors are corrected. Chair: Treat this under email thread [110].

**Decision: Agreed.**

[**R4-2401495**](file:///D:\RAN4%23110\Docs\R4-2401495.zip) **draft CR 38.101-3 correcting HPUE note in 3 bands configuration table**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-3 correcting HPUE note in 3 bands configuration table

**Decision: Endorsed.**

**TP**

[**R4-2400326**](file:///D:\RAN4%23110\Docs\R4-2400326.zip) **TP for TR38.898 HP-ENDC 8-42\_n77**

*Type: pCR For: Approval  
 38.898 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Approved.**

[**R4-2400327**](file:///D:\RAN4%23110\Docs\R4-2400327.zip) **TP for TR38.898 to include new HP-ENDC combinations for FR1**

*Type: pCR For: Approval  
 38.898 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

CHTTL: for Table 5.x.1-1, note 21 is not applicable. For DC\_3A\_11A-n79A, no PC3 combiantion is introduced. For DC\_8\_n77-n79, MSD is not needed.

Apple: Agree with CHTTL. One TP includes a lot of combination. In addition, DC\_3\_11-n79 configuration is not correct. We need start with PC3 first. For DC\_8\_n3-n79, we need strat PC3 first. The simulation Tx-Rx is not supported. For DC\_8\_n1-n79, the configuration of n1 is not corrected. For DC\_8\_n3-n79, configuration is not correct.

Softbank: Check and need offline.

**Decision: Revised to R4-2403846 (from R4-2400327).**

[**R4-2403846**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403846.zip) **TP for TR38.898 to include new HP-ENDC combinations for FR1**

*Type: pCR For: Approval  
 38.898 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Approved.**

[**R4-2402024**](file:///D:\RAN4%23110\Docs\R4-2402024.zip) **TP for TR 38.898: UL PC2 support for DC\_8B\_n78A**

*Type: pCR For: Approval  
 38.898 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: CHTTL*

**Decision: Approved.**

[**R4-2402269**](file:///D:\RAN4%23110\Docs\R4-2402269.zip) **TP for TR 38.898 HPUE DC\_1-41\_n77**

*Type: pCR For: Approval  
 38.898 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung,KDDI,Qualcomm*

Apple: do we only have DC\_1A\_n77A? Do you want to only keep PC3?

Samsung: yes.

Apple: there may be potential issue to introduce PC2. For MSD table there is mix between PC2 and PC3.

**Decision: Approved.**

[**R4-2402270**](file:///D:\RAN4%23110\Docs\R4-2402270.zip) **TP for TR 38.898 HPUE DC\_1A\_n41A-n77A**

*Type: pCR For: Approval  
 38.898 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung,KDDI,Qualcomm,LGE*

**Decision: Approved.**

[**R4-2402535**](file:///D:\RAN4%23110\Docs\R4-2402535.zip) **TP for TR 38.898: DC\_1A-42A\_n77A**

*Type: pCR For: Approval  
 38.898 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

Apple: DC\_1A\_42A is not valid configuration for uplink.

KDDI: need correction.

**Decision: Revised to** [**R4-2403611**](file:///D:\RAN4%23110\Docs\R4-2403611.zip) **(from** [**R4-2402535**](file:///D:\RAN4%23110\Docs\R4-2402535.zip)**).**

[**R4-2403611**](file:///D:\RAN4%23110\Docs\R4-2403611.zip) **TP for TR 38.898: DC\_1A-42A\_n77A**

*Type: pCR For: Approval  
 38.898 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

Apple: DC\_1A\_42A is not valid configuration for uplink.

KDDI: need correction.

**Decision: Noted.**

[**R4-2402543**](file:///D:\RAN4%23110\Docs\R4-2402543.zip) **TP for TR 38.898:DC\_1A\_n28A-n77A**

*Type: pCR For: Approval  
 38.898 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

Qualcomm: for MSD, better to align PC2 and PC3.

CHTTL: For IMD, we do not need it for PC2.

Apple: MSD table mixes PC2 and PC3. Another way is to put note that PC3 is not defined.

Skyworks: in the spec, there are separate tables for PC2 and PC3. We should have two separate documents for PC3 and PC2.

CHTTL: there are two different uplink configuration. One is proposed not for PC2. In MSD table, the first three rows are not needed.

**Decision: Revised to** [**R4-2403612**](file:///D:\RAN4%23110\Docs\R4-2403612.zip) **(from** [**R4-2402543**](file:///D:\RAN4%23110\Docs\R4-2402543.zip)**).**

**[R4-2403612](D:\\RAN4#110\\Docs\\R4-2403612.zip) TP for TR 38.898:DC\_1A\_n28A-n77A**

*Type: pCR For: Approval  
 38.898 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

**Decision: Approved.**

### 7.17 High power UE for FR1 for NR\_CA\_R18\_intra with power class 2 and 1.5 on TDD band(s)

#### 7.17.1 Rapporteur input (WID/TR/big CR)

[**R4-2402319**](file:///D:\RAN4%23110\Docs\R4-2402319.zip) **Big CR on TS38.101-1 Addition of intra-band CA Combinations**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2155 rev Cat: B (Rel-18)  
  
 Source: Huawei,HiSilicon*

**Abstract:**

Capture draftCR in RAN4#110

**Decision:** The document was **for email approval**.

#### 7.17.2 UE RF requirements with PC2 and PC1.5

**Draft CR**

[**R4-2400832**](file:///D:\RAN4%23110\Docs\R4-2400832.zip) **(HPUE\_NR\_FR1\_TDD\_intra\_CA\_R18) Draft CR for TS 38.101-1 to update NR intra-band CA HPUE requirement on TDD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

**Decision: Endorsed.**

### 7.18 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

#### 7.18.1 Rapporteur input (WID/TR/big CR)

[**R4-2401145**](file:///D:\RAN4%23110\Docs\R4-2401145.zip) **Revised WID for HPUE\_NR\_CADC\_SUL\_R18 RAN4#110**

*Type: WID revised For: Endorsement  
 Source: China Telecom*

**Abstract:**

for email approval

**Decision:** The document was **for email approval**.

[**R4-2401146**](file:///D:\RAN4%23110\Docs\R4-2401146.zip) **Big CR to 38.101-1 new combinations for Rel-18 NR HPUE Inter-band**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2069 rev Cat: B (Rel-18)  
  
 Source: China Telecom*

**Abstract:**

for email approval

**Decision:** The document was **for email approval**.

[**R4-2402217**](file:///D:\RAN4%23110\Docs\R4-2402217.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 v0.8.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon, China Telecom*

**Decision:** The document was **for email approval**.

#### 7.18.2 UE RF requirements with PC2 and PC1.5

**Sub-topic 1: PC2 and PC1.5 indication**

[**R4-2400191**](file:///D:\RAN4%23110\Docs\R4-2400191.zip) **On PC2 and PC1.5 indications in BC configuration tables**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

**Draft CR**

[**R4-2400207**](file:///D:\RAN4%23110\Docs\R4-2400207.zip) **Rel18 Cat F draft CR for 38.101-1 Add the missing harmonic mixing requirements for CA\_n7-n77 with PC2 and PC1.5**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Samsung, TELUS, Bell Mobility, Skyworks*

CHTTL: configuration for DL is not correct.

**Decision: Revised to** [**R4-2403613**](file:///D:\RAN4%23110\Docs\R4-2403613.zip) **(from** [**R4-2400207**](file:///D:\RAN4%23110\Docs\R4-2400207.zip)**).**

[**R4-2403613**](file:///D:\RAN4%23110\Docs\R4-2403613.zip) **Rel18 Cat F draft CR for 38.101-1 Add the missing harmonic mixing requirements for CA\_n7-n77 with PC2 and PC1.5**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Samsung, TELUS, Bell Mobility, Skyworks*

**Decision: Endorsed.**

[**R4-2400328**](file:///D:\RAN4%23110\Docs\R4-2400328.zip) **Draft CR for TS38.101-1 to add new HP-NRCA combinations for FR1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

CHTTL: MSD analysis is needed for uplink. On the CA\_n1A-n28A-n41A-n77A, Note 7 needs be changed to Note 5.

**Decision: Revised to** [**R4-2403614**](file:///D:\RAN4%23110\Docs\R4-2403614.zip) **(from** [**R4-2400328**](file:///D:\RAN4%23110\Docs\R4-2400328.zip)**).**

[**R4-2403614**](file:///D:\RAN4%23110\Docs\R4-2403614.zip) **Draft CR for TS38.101-1 to add new HP-NRCA combinations for FR1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

CHTTL: MSD analysis is needed for uplink. On the CA\_n1A-n28A-n41A-n77A, Note 7 needs be changed to Note 5.

**Decision: Endorsed.**

[**R4-2400329**](file:///D:\RAN4%23110\Docs\R4-2400329.zip) **Draft CR for TS38.101-1: Addition of uplink configurations to CA\_n28-n77**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

Apple: IMD4 issues need be specified.

**Decision: Not pursued.**

[**R4-2403615**](file:///D:\RAN4%23110\Docs\R4-2403615.zip) **Draft CR for TS38.101-1: Addition of uplink configurations to CA\_n28-n77**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Withdrawn.**

[**R4-2400330**](file:///D:\RAN4%23110\Docs\R4-2400330.zip) **Rel-18 Cat F deafr CR for TS38.101-1: Add the missing PC2 note to HP-NRCA n3-n28-n79**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: SoftBank Corp.*

Huawei: CA\_n3A-n28A note 7 should be removed.

**Decision: Revised to** [**R4-2403616**](file:///D:\RAN4%23110\Docs\R4-2403616.zip) **(from** [**R4-2400330**](file:///D:\RAN4%23110\Docs\R4-2400330.zip)**).**

[**R4-2403616**](file:///D:\RAN4%23110\Docs\R4-2403616.zip) **Rel-18 Cat F deafr CR for TS38.101-1: Add the missing PC2 note to HP-NRCA n3-n28-n79**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: SoftBank Corp.*

Huawei: CA\_n3A-n28A note 7 should be removed.

**Decision: Endorsed.**

[**R4-2400827**](file:///D:\RAN4%23110\Docs\R4-2400827.zip) **(HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18) Draft CR for TS 38.101-1 to update NR inter-band CA with 2DL HPUE requirement on TDD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

*CHTTL: there may be impact on MSD.*

*Huawei: share view as CHTTL. Many missing issues for PC2. Need TP first.*

*CMCC: Check*

**Decision: Revised to R4-2403848 (from R4-2400827).**

[**R4-2403848**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403848.zip) **(HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18) Draft CR for TS 38.101-1 to update NR inter-band CA with 2DL HPUE requirement on TDD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

**Decision: Endorsed.**

[**R4-2400828**](file:///D:\RAN4%23110\Docs\R4-2400828.zip) **(HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18) Draft CR for TS 38.101-1 to update NR inter-band CA with 3DL HPUE requirement on TDD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

*Chair: same situation as the previous one.*

**Decision: Revised to R4-2403849 (from R4-2400828).**

[**R4-2403849**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403849.zip) **(HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18) Draft CR for TS 38.101-1 to update NR inter-band CA with 3DL HPUE requirement on TDD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

*Chair: same situation as the previous one.*

**Decision: Endorsed.**

[**R4-2400829**](file:///D:\RAN4%23110\Docs\R4-2400829.zip) **(HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18) Draft CR for TS 38.101-1 to update NR SUL HPUE requirement**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

**Decision: Not pursued.**

[**R4-2401117**](file:///D:\RAN4%23110\Docs\R4-2401117.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] Draft CR for TS 38,101-1: Addition of some PC2 CA Combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: KDDI Corporation*

CHTTL: we should have PC3 first.

Huawei: Missing fallback uplink of n77(2A) for PC2.

**Decision: Revised to** [**R4-2403617**](file:///D:\RAN4%23110\Docs\R4-2403617.zip) **(from** [**R4-2401117**](file:///D:\RAN4%23110\Docs\R4-2401117.zip)**).**

[**R4-2403617**](file:///D:\RAN4%23110\Docs\R4-2403617.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] Draft CR for TS 38,101-1: Addition of some PC2 CA Combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: KDDI Corporation, Samsung*

**Decision: Endorsed.**

[**R4-2401119**](file:///D:\RAN4%23110\Docs\R4-2401119.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for adding 1cc UL to CA\_n28A-n41A-n77A for PC1.5 HPUE in TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

CHTTL: there is no impact on MSD. MSD table can be removed.

Huawei: some fallback is missing for PC1.5.

**Decision: Revised to** [**R4-2403618**](file:///D:\RAN4%23110\Docs\R4-2403618.zip) **(from** [**R4-2401119**](file:///D:\RAN4%23110\Docs\R4-2401119.zip)**).**

[**R4-2403618**](file:///D:\RAN4%23110\Docs\R4-2403618.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for adding 1cc UL to CA\_n28A-n41A-n77A for PC1.5 HPUE in TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

**Decision: Approved.**

[**R4-2401147**](file:///D:\RAN4%23110\Docs\R4-2401147.zip) **Draft CR for 38.101-1 to update note2 for NR CA configuration with 2 SUL cells**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: China Telecom*

CHTTL: after introducing for 3Tx, we may miss some note related to 3Tx. For some case, we mention that we use 2Tx. I wonder if the same change should be applied here.

**Decision: Revised to** [**R4-2403619**](file:///D:\RAN4%23110\Docs\R4-2403619.zip) **(from** [**R4-2401147**](file:///D:\RAN4%23110\Docs\R4-2401147.zip)**).**

[**R4-2403619**](file:///D:\RAN4%23110\Docs\R4-2403619.zip) **Draft CR for 38.101-1 to update note2 for NR CA configuration with 2 SUL cells**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: China Telecom*

CHTTL: after introducing for 3Tx, we may miss some note related to 3Tx. For some case, we mention that we use 2Tx. I wonder if the same change should be applied here.

**Decision: Endorsed.**

[**R4-2401477**](file:///D:\RAN4%23110\Docs\R4-2401477.zip) **draft CR 38.101-1 adding PC2 UL to 3 and 4 bands DL configurations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Bell Mobility, TELUS*

**Abstract:**

draft CR 38.101-1 adding PC2 UL to 3 and 4 bands DL configurations

**Decision: Endorsed.**

[**R4-2401479**](file:///D:\RAN4%23110\Docs\R4-2401479.zip) **draft CR 38.101-1 adding PC1.5 UL to 3 bands combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Bell Mobility, TELUS*

**Abstract:**

draft CR 38.101-1 adding PC1.5 UL to 3 bands combinations

**Decision: Endorsed.**

[**R4-2401494**](file:///D:\RAN4%23110\Docs\R4-2401494.zip) **draft CR 38.101-1 correcting NR CA 2 bands PC2 MSD table**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

draft CR 38.101-1 correcting NR CA 2 bands PC2 MSD table

**Decision: Endorsed.**

[**R4-2402092**](file:///D:\RAN4%23110\Docs\R4-2402092.zip) **draftCR to 38.101-1 Additions of PC2 UL n77(2A) to existing combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, Telus, Bell Mobility*

**Decision: Endorsed.**

[**R4-2402357**](file:///D:\RAN4%23110\Docs\R4-2402357.zip) **Draft CR for TS 38.101-1 to add new combinations for Rel-18 NR HPUE Inter-band**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung, TELUS, Bell Mobility*

**Decision: Endorsed.**

[**R4-2402437**](file:///D:\RAN4%23110\Docs\R4-2402437.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for inter-band 2UL to CA\_n18A-n41A-n77A for PC2 HPUE in TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

CHTTL: typo for n41. It should be changed from 41 to n41. There is no impact on harmonic.

Huawei: MSD tables do not need a, b., c, d. We just consider 23+23.

Qualcomm: Similar as Huawei.

**Decision: Revised to** [**R4-2403620**](file:///D:\RAN4%23110\Docs\R4-2403620.zip) **(from** [**R4-2402437**](file:///D:\RAN4%23110\Docs\R4-2402437.zip)**).**

[**R4-2403620**](file:///D:\RAN4%23110\Docs\R4-2403620.zip) **[HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18] TP for inter-band 2UL to CA\_n18A-n41A-n77A for PC2 HPUE in TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: KDDI Corporation*

**Decision: Approved.**

[**R4-2402461**](file:///D:\RAN4%23110\Docs\R4-2402461.zip) **Draft CR for 38.101-1: T-Mobile USA HPUE Combinations with no MSD analysis required**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

**Decision: Endorsed.**

[**R4-2400670**](file:///D:\RAN4%23110\Docs\R4-2400670.zip) **DraftCR 38.101-1 Addition of Single UL PC1.5 CA Combinations**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: AT&T, Bell Mobility, TELUS, Nokia, Samsung*

**Decision: Endorsed.**

**TP**

[**R4-2400331**](file:///D:\RAN4%23110\Docs\R4-2400331.zip) **TP for TR38.899 to include new HP-NRCA combinations for FR1**

*Type: pCR For: Approval  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

**Decision: Approved.**

[**R4-2400332**](file:///D:\RAN4%23110\Docs\R4-2400332.zip) **TP for TR38.899: Addition of uplink configurations to CA\_n8A-n78A**

*Type: pCR For: Approval  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

Qualcomm: should be higher MSD for PC1.5 due to harmonic mixing?

Softbank: check

**Decision: Revised to R4-2403847 (from R4-2400332).**

[**R4-2403847**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403847.zip) **TP for TR38.899: Addition of uplink configurations to CA\_n8A-n78A**

*Type: pCR For: Approval  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: SoftBank Corp.*

Qualcomm: should be higher MSD for PC1.5 due to harmonic mixing?

Softbank: check

**Decision: Approved.**

[**R4-2401473**](file:///D:\RAN4%23110\Docs\R4-2401473.zip) **TP for 38.899 adding CA\_n78(2A) PC2 UL to CA\_n7A-n78(2A)**

*Type: pCR For: Approval  
 38.899 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, Bell Mobility, TELUS*

**Abstract:**

TP for 38.899 adding CA\_n78(2A) PC2 UL to CA\_n7A-n78(2A)

Qualcomm: the frequency of test point is not aligned with PC3. Better to align them.

**Decision: Revised to** [**R4-2403621**](file:///D:\RAN4%23110\Docs\R4-2403621.zip) **(from** [**R4-2401473**](file:///D:\RAN4%23110\Docs\R4-2401473.zip)**).**

[**R4-2403621**](file:///D:\RAN4%23110\Docs\R4-2403621.zip) **TP for 38.899 adding CA\_n78(2A) PC2 UL to CA\_n7A-n78(2A)**

*Type: pCR For: Approval  
 38.899 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, Bell Mobility, TELUS*

**Abstract:**

**Decision: Approved.**

[**R4-2401474**](file:///D:\RAN4%23110\Docs\R4-2401474.zip) **TP for 38.899 adding CA\_n78(2A) PC2 UL to CA\_n66A-n78(2A)**

*Type: pCR For: Approval  
 38.899 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, Bell Mobility, TELUS*

**Abstract:**

TP for 38.899 adding CA\_n78(2A) PC2 UL to CA\_n66A-n78(2A)

**Decision: Approved.**

[**R4-2401475**](file:///D:\RAN4%23110\Docs\R4-2401475.zip) **TP for 38.899 adding CA\_n78(2A) PC2 UL to CA\_n25A-n78(2A)**

*Type: pCR For: Approval  
 38.899 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, Bell Mobility, TELUS*

**Abstract:**

TP for 38.899 adding CA\_n78(2A) PC2 UL to CA\_n25A-n78(2A)

**Decision: Approved.**

[**R4-2401476**](file:///D:\RAN4%23110\Docs\R4-2401476.zip) **TP for 38.899 adding CA\_n77(2A) PC2 UL to CA\_n25(2A)-n77(2A)**

*Type: pCR For: Approval  
 38.899 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, Bell Mobility, TELUS*

**Abstract:**

TP for 38.899 adding CA\_n77(2A) PC2 UL to CA\_n25(2A)-n77(2A)

**Decision: Approved.**

[**R4-2401478**](file:///D:\RAN4%23110\Docs\R4-2401478.zip) **TP for 38.899 adding PC2 UL to CA\_n13A-n66A-n77A**

*Type: pCR For: Approval  
 38.899 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, Bell Mobility, TELUS*

**Abstract:**

TP for 38.899 adding PC2 UL to CA\_n13A-n66A-n77A

Qualcomm: the values in the MSD are too small.

**Decision: Revised to R4-2403826 (from R4-2401478).**

[**R4-2403826**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403826.zip) **TP for 38.899 adding PC2 UL to CA\_n13A-n66A-n77A**

*Type: pCR For: Approval  
 38.899 v0.9.0 CR- rev Cat: (Rel-18)  
  
 Source: Ericsson, Bell Mobility, TELUS*

**Abstract:**

TP for 38.899 adding PC2 UL to CA\_n13A-n66A-n77A

Qualcomm: the values in the MSD are too small.

**Decision: Approved.**

[**R4-2402356**](file:///D:\RAN4%23110\Docs\R4-2402356.zip) **TP for TR 38.899 to include HPUE CA\_n71-n77 with UL CA\_n77(2A)**

*Type: pCR For: Approval  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, TELUS, Bell Mobility*

**Decision: Approved.**

[**R4-2402362**](file:///D:\RAN4%23110\Docs\R4-2402362.zip) **TP for HPUE CA\_n1-n28-n77 with 2UL for TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, KDDI Corporation, Qualcomm Incorporated, SoftBank Corp.*

**Decision: Approved.**

[**R4-2402363**](file:///D:\RAN4%23110\Docs\R4-2402363.zip) **TP for HPUE CA\_n1-n41-n77 with 2UL for TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, KDDI Corporation, Qualcomm Incorporated, LGE*

CHTTL: type of 41.

**Decision: Revised to** [**R4-2403622**](file:///D:\RAN4%23110\Docs\R4-2403622.zip) **(from** [**R4-2402363**](file:///D:\RAN4%23110\Docs\R4-2402363.zip)**).**

[**R4-2403622**](file:///D:\RAN4%23110\Docs\R4-2403622.zip) **TP for HPUE CA\_n1-n41-n77 with 2UL for TR 38.899**

*Type: pCR For: Approval  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, KDDI Corporation, Qualcomm Incorporated, LGE*

**Decision: Approved.**

[**R4-2402462**](file:///D:\RAN4%23110\Docs\R4-2402462.zip) **TP for TR38.899 for DL CA\_n77A-n85A with UL PC2 CA\_n77A-n85A and PC2 and PC1.5 UL n77**

*Type: pCR For: Approval  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

Qualcomm: harmonic mixing MSD is missing here.

**Decision: Revised to** [**R4-2403623**](file:///D:\RAN4%23110\Docs\R4-2403623.zip) **(from** [**R4-2402462**](file:///D:\RAN4%23110\Docs\R4-2402462.zip)**).**

**[R4-2403623](D:\\RAN4#110\\Docs\\R4-2403623.zip) TP for TR38.899 for DL CA\_n77A-n85A with UL PC2 CA\_n77A-n85A and PC2 and PC1.5 UL n77**

*Type: pCR For: Approval  
 38.899 v0.7.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

Qualcomm: harmonic mixing MSD is missing here.

**Decision: Approved.**

### 7.19 High power UE for FR1 for inter-band NR\_CADC\_R18\_yBDL\_xBUL with power class 2 on single carrier uplink on FDD band

#### 7.19.1 Rapporteur input (WID/TR/big CR)

[**R4-2400349**](file:///D:\RAN4%23110\Docs\R4-2400349.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:** The document was **for email approval**.

[**R4-2400350**](file:///D:\RAN4%23110\Docs\R4-2400350.zip) **BigCR for High power UE for intra-band and inter-band CA with power class 2 on single carrier uplink on FDD band**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2000 rev Cat: B (Rel-18)  
  
 Source: China Unicom*

**Decision:** The document was **for email approval**.

[**R4-2400351**](file:///D:\RAN4%23110\Docs\R4-2400351.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:** The document was **for email approval**.

#### 7.19.2 UE RF requirements

**Sub-topic 1-1 Handing of new CA combinations with single UL PC2 FDD band**

[**R4-2400192**](file:///D:\RAN4%23110\Docs\R4-2400192.zip) **On handling of new CA combinations with single UL PC2 FDD band**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

**Sub-topic 1-2 MSD Analysis**

[**R4-2400179**](file:///D:\RAN4%23110\Docs\R4-2400179.zip) **MSD Analysis for Band Combinations with FDD PC2 (CA\_n8A-n41A; CA\_25A-n77A)**

*Type: discussion For: Discussion  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Apple*

**Decision: Noted.**

TP

[**R4-2402468**](file:///D:\RAN4%23110\Docs\R4-2402468.zip) **TP for TR 38.850: DL CA\_n25A-n77A UL n25 PC2**

*Type: pCR For: Approval  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

Qualcomm: there is glitch since it mention 71. Why we separate MSD for 1Tx and 2Tx? For spec, it is really useful to have one table.

**Decision: Revised to** [**R4-2403626**](file:///D:\RAN4%23110\Docs\R4-2403626.zip) **(from** [**R4-2402468**](file:///D:\RAN4%23110\Docs\R4-2402468.zip)**).**

[**R4-2403626**](file:///D:\RAN4%23110\Docs\R4-2403626.zip) **TP for TR 38.850: DL CA\_n25A-n77A UL n25 PC2**

*Type: pCR For: Approval  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

**Decision: Approved.**

**Sub-topic 1-3 PC2 for CA\_n71(2A)**

[**R4-2402466**](file:///D:\RAN4%23110\Docs\R4-2402466.zip) **TP for TR 38.850: DL CA\_n71(2A) UL n71 PC2**

*Type: pCR For: Approval  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

*Skyworks: need more discussion on how to capture PC2 requirements.*

**Decision: Approved.**

[**R4-2400365**](file:///D:\RAN4%23110\Docs\R4-2400365.zip) **PC2 CA\_n71(2A) MSD**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

**Sub-topic 1-4 PC2 for CA\_n71B BCS4-5 MSD**

[**R4-2400366**](file:///D:\RAN4%23110\Docs\R4-2400366.zip) **PC2 CA\_n71B BCS4-5 MSD**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

**Sub-topic 1-5 TPs/Draft CR**

**Draft CR**

[**R4-2400830**](file:///D:\RAN4%23110\Docs\R4-2400830.zip) **(HPUE\_FR1\_FDD\_NR\_CADC\_R18) Draft CR for TS 38.101-1 to update NR CA with 2DL HPUE requirement on FDD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

*Huawei: Some MSD requirements missing for n3 and n8 PC2.*

*Apple: same comments. Suggest to refer to Apple contribution 0192, where there is table to summarize the combinations.*

*CMCC: Mark two CRs as return to.*

**Decision: Revised to R4-2403863 (from R4-2400830).**

[**R4-2403863**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403863.zip) **(HPUE\_FR1\_FDD\_NR\_CADC\_R18) Draft CR for TS 38.101-1 to update NR CA with 2DL HPUE requirement on FDD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

**Decision: Endorsed.**

[**R4-2400831**](file:///D:\RAN4%23110\Docs\R4-2400831.zip) **(HPUE\_FR1\_FDD\_NR\_CADC\_R18) Draft CR for TS 38.101-1 to update NR CA with 3DL HPUE requirement on FDD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: CMCC*

**Decision: Not pursued.**

[**R4-2401264**](file:///D:\RAN4%23110\Docs\R4-2401264.zip) **Correct the NOTE for harmonic MSD for PC2 inter-band CA with single PC2 FDD band**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, China Unicom*

**Decision: Endorsed.**

[**R4-2402463**](file:///D:\RAN4%23110\Docs\R4-2402463.zip) **Draft CR for 38.101-1: T-Mobile USA PC2 FDD with no MSD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

Skyworks: For CA\_n25A-n41A, there may be MSD requirements missing.

Qualcomm: it seems n71 cross MSD defined for PC3 is not included for PC2, n25+n66+n71 needs further checking.

**Decision: Revised to** [**R4-2403669**](file:///D:\RAN4%23110\Docs\R4-2403669.zip) **(from** [**R4-2402463**](file:///D:\RAN4%23110\Docs\R4-2402463.zip)**).**

[**R4-2403669**](file:///D:\RAN4%23110\Docs\R4-2403669.zip) **Draft CR for 38.101-1: T-Mobile USA PC2 FDD with no MSD**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

Skyworks: For CA\_n25A-n41A, there may be MSD requirements missing.

Qualcomm: it seems n71 cross MSD defined for PC3 is not included for PC2, n25+n66+n71 needs further checking.

**Decision: Endorsed.**

**TP**

[**R4-2402464**](file:///D:\RAN4%23110\Docs\R4-2402464.zip) **TP for TR 38.850: DL CA\_n25(2A) UL n25 PC2**

*Type: pCR For: Approval  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

*Qualcomm: Do we need capture 1Tx and 2Tx separately?*

**Decision: Approved.**

[**R4-2402465**](file:///D:\RAN4%23110\Docs\R4-2402465.zip) **TP for TR 38.850: DL CA\_n66(2A) UL n77 PC2**

*Type: pCR For: Approval  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

**Decision: Approved.**

[**R4-2402467**](file:///D:\RAN4%23110\Docs\R4-2402467.zip) **TP for TR 38.850: DL CA\_n25A-n71A UL n25 PC2 and n71 PC2**

*Type: pCR For: Approval  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

Qualcomm: for MSD, there is some calculation error.

T-Mobile USA: approve the TP with 2Tx as TBD.

Apple: Are we going to agree 1Tx MSD value and allow companies to contribution next time.

Qualcomm: There is quite discussions for 1Tx vs 2Tx.

Skyworks: agree with Qualcomm. Better to have a WF first.

**Decision: Revised to** [**R4-2403670**](file:///D:\RAN4%23110\Docs\R4-2403670.zip) **(from** [**R4-2402467**](file:///D:\RAN4%23110\Docs\R4-2402467.zip)**).**

[**R4-2403670**](file:///D:\RAN4%23110\Docs\R4-2403670.zip) **TP for TR 38.850: DL CA\_n25A-n71A UL n25 PC2 and n71 PC2**

*Type: pCR For: Approval  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

**Decision: Approved.**

[**R4-2402469**](file:///D:\RAN4%23110\Docs\R4-2402469.zip) **TP for TR 38.850: DL CA\_n41A-n71A UL n71 PC2**

*Type: pCR For: Approval  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

Qualcomm: it should be 9dB for PC2.

**Decision: Revised to** [**R4-2403671**](file:///D:\RAN4%23110\Docs\R4-2403671.zip) **(from** [**R4-2402469**](file:///D:\RAN4%23110\Docs\R4-2402469.zip)**).**

[**R4-2403671**](file:///D:\RAN4%23110\Docs\R4-2403671.zip) **TP for TR 38.850: DL CA\_n41A-n71A UL n71 PC2**

*Type: pCR For: Approval  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

Qualcomm: it should be 9dB for PC2.

**Decision: Approved.**

[**R4-2402470**](file:///D:\RAN4%23110\Docs\R4-2402470.zip) **TP for TR 38.850: DL CA\_n66A-n77A UL n66 PC2**

*Type: pCR For: Approval  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

Skyworks: 2Tx issue needs be discussed further.

**Decision: Revised to** [**R4-2403672**](file:///D:\RAN4%23110\Docs\R4-2403672.zip) **(from** [**R4-2402470**](file:///D:\RAN4%23110\Docs\R4-2402470.zip)**).**

[**R4-2403672**](file:///D:\RAN4%23110\Docs\R4-2403672.zip) **TP for TR 38.850: DL CA\_n66A-n77A UL n66 PC2**

*Type: pCR For: Approval  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

Skyworks: 2Tx issue needs be discussed further.

**Decision: Approved.**

[**R4-2402471**](file:///D:\RAN4%23110\Docs\R4-2402471.zip) **TP for TR 38.850: DL CA\_n71A-n77A UL n71 PC2**

*Type: pCR For: Approval  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

Qualcomm: 3dB issue for harmonic.

**Decision: Revised to** [**R4-2403673**](file:///D:\RAN4%23110\Docs\R4-2403673.zip) **(from** [**R4-2402471**](file:///D:\RAN4%23110\Docs\R4-2402471.zip)**).**

**[R4-2403673](D:\\RAN4#110\\Docs\\R4-2403673.zip) TP for TR 38.850: DL CA\_n71A-n77A UL n71 PC2**

*Type: pCR For: Approval  
 38.850 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

Qualcomm: 3dB issue for harmonic.

**Decision: Approved.**

### 7.20 High power UE for FR1 for FDD single band(s) with PC2

#### 7.20.1 Rapporteur input (WID/TR/big CR)

[**R4-2400352**](file:///D:\RAN4%23110\Docs\R4-2400352.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:** The document was **for email approval**.

[**R4-2400353**](file:///D:\RAN4%23110\Docs\R4-2400353.zip) **BigCR for High power UE for FDD single band PC2**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2001 rev Cat: B (Rel-18)  
  
 Source: China Unicom*

**Decision:** The document was **for email approval**.

[**R4-2400354**](file:///D:\RAN4%23110\Docs\R4-2400354.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:** The document was **for email approval**.

#### 7.20.2 UE RF requirements

**Sub-topic 2-1 AMPR**

Issue 2-1-1: NS\_07

[**R4-2400369**](file:///D:\RAN4%23110\Docs\R4-2400369.zip) **PC2 n13 NS\_07**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Decision: Noted.**

Issue 2-1-2: NS\_17

[**R4-2402212**](file:///D:\RAN4%23110\Docs\R4-2402212.zip) **PC2 A-MPR for band n28 NS\_17**

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

**Decision: Noted.**

Issue 2-1-3: NS\_46

[**R4-2402213**](file:///D:\RAN4%23110\Docs\R4-2402213.zip) **PC2 A-MPR for band n7 NS\_46**

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

**Decision: Noted.**

[**R4-2402742**](file:///D:\RAN4%23110\Docs\R4-2402742.zip) **PC2 A-MPR for bands n7 and n28**

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

**Decision: Noted.**

Issue 2-1-4: A-MPR for n26 PC2

[**R4-2402214**](file:///D:\RAN4%23110\Docs\R4-2402214.zip) **PC2 A-MPR for band n26**

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

**Decision: Noted.**

Issue 2-1-5: NS\_06 (A-MPR for n13, n14, n85 PC2)

[**R4-2400170**](file:///D:\RAN4%23110\Docs\R4-2400170.zip) **On n28 with full band duplexer**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

[**R4-2400171**](file:///D:\RAN4%23110\Docs\R4-2400171.zip) **On A-MPR for FDD single band with PC2**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

**Sub-topic 2-2 TPs/Draft CRs**

[**R4-2400699**](file:///D:\RAN4%23110\Docs\R4-2400699.zip) **TP for TR 38.896 to add PC2 for n14**

*Type: pCR For: Approval  
 38.896 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: AT&T, FirstNet*

**Decision: Revised to** [**R4-2403625**](file:///D:\RAN4%23110\Docs\R4-2403625.zip) **(from** [**R4-2400699**](file:///D:\RAN4%23110\Docs\R4-2400699.zip)**).**

[**R4-2403625**](file:///D:\RAN4%23110\Docs\R4-2403625.zip) **TP for TR 38.896 to add PC2 for n14**

*Type: pCR For: Approval  
 38.896 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: AT&T, FirstNet, Apple, Huawei*

**Decision: Approved.**

[**R4-2402743**](file:///D:\RAN4%23110\Docs\R4-2402743.zip) **DraftCR for Adding PC2 requirements for band n7**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Qualcomm Inc.*

**Decision: Not pursued.**

[**R4-2403627**](file:///D:\RAN4%23110\Docs\R4-2403627.zip) **DraftCR for Adding PC2 requirements for band n7**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Qualcomm Inc.*

**Decision: Withdrawn.**

[**R4-2400700**](file:///D:\RAN4%23110\Docs\R4-2400700.zip) **TP for TR 38.896 to add PC2 for n2**

*Type: pCR For: Approval  
 38.896 v1.2.0 CR- rev Cat: (Rel-18)  
  
 Source: AT&T, Verizon, Skyworks*

**Decision: Approved.**

**Withdrawn**

[**R4-2400370**](file:///D:\RAN4%23110\Docs\R4-2400370.zip) **PC2 n26 NS\_12,13,14,15**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

MCC: The author do not plan to present this contribution at RAN4#110.

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

[**R4-2400371**](file:///D:\RAN4%23110\Docs\R4-2400371.zip) **PC2 n7 NS\_46**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Skyworks Solutions Inc.*

**Abstract:**

MCC: The author do not plan to present this contribution at RAN4#110.

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

### 7.21 Additional NR bands for UL-MIMO in Rel-18

#### 7.21.1 Rapporteur input (WID/TR/big CR)

[**R4-2400951**](file:///D:\RAN4%23110\Docs\R4-2400951.zip) **TS 38.101-1 big CR for NR\_bands\_UL\_MIMO\_R18**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2065 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **for email approval**.

[**R4-2400952**](file:///D:\RAN4%23110\Docs\R4-2400952.zip) **Revised WID: Additional NR bands for UL-MIMO in Rel-18**

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

**Decision: Endorsed.**

#### 7.21.2 UE RF requirements

**Draft CR**

[**R4-2400355**](file:///D:\RAN4%23110\Docs\R4-2400355.zip) **Draft CR to TS38.101-1[R18] Adding n8 PC2 UL MIMO**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: China Unicom, Huawei, HiSilicon*

**Decision: Endorsed.**

[**R4-2400953**](file:///D:\RAN4%23110\Docs\R4-2400953.zip) **Draft CR for 38.101-1: add PC3 UL-MIMO configurations for n26**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Telstra*

**Decision: Endorsed.**

[**R4-2400954**](file:///D:\RAN4%23110\Docs\R4-2400954.zip) **draft CR for TS 38.101-1 add PC3 and PC2 UL-MIMO configurations for n104**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, CMCC, China Unicom, China Telecom*

**Decision: Endorsed.**

[**R4-2400955**](file:///D:\RAN4%23110\Docs\R4-2400955.zip) **draft CR for TS 38.101-1 add PC3 UL-MIMO configurations for n105**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Spark*

**Decision: Endorsed.**

### 7.22 Adding new channel bandwidth(s) support to existing NR bands

#### 7.22.1 Rapporteur input (WID/TR/big CR)

[**R4-2402333**](file:///D:\RAN4%23110\Docs\R4-2402333.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:** The document was **for email approval**.

#### 7.22.2 UE RF requirements

[**R4-2401567**](file:///D:\RAN4%23110\Docs\R4-2401567.zip) **n28 3MHz operation and asymmetric bandwidth discussions**

*Type: discussion For: Discussion  
 Source: Rakuten Mobile, Inc*

**Decision: Noted.**

**CR**

[**R4-2401489**](file:///D:\RAN4%23110\Docs\R4-2401489.zip) **CR 38.101-1 for corrections in tables 5.2-1 and 5.3.5-1**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2109 rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR 38.101-1 for corrections in tables 5.2-1 and 5.3.5-1

**Decision: Agreed.**

#### 7.22.3 BS RF requirements

### 7.23 Simultaneous Rx/Tx inter-band combinations for NR CA/DC, NR SUL and LTE/NR DC in Rel-18

#### 7.23.1 Rapporteur input (WID/TR/big CR)

[**R4-2400852**](file:///D:\RAN4%23110\Docs\R4-2400852.zip) **Revised WID on Simultaneous Rx-Tx basket**

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

**Decision:** The document was **for email approval**.

[**R4-2400853**](file:///D:\RAN4%23110\Docs\R4-2400853.zip) **Big CR to 38.101-1 on simultaneous Rx-Tx basket**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2054 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **for email approval**.

[**R4-2400854**](file:///D:\RAN4%23110\Docs\R4-2400854.zip) **TR 38.894 v0.5.0**

*Type: draft TR For: Agreement  
 38.894 v0.5.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision:** The document was **for email approval**.

#### 7.23.2 Identification of simultaneous Rx/Tx capability for band combinations and UE RF requirements

[**R4-2400583**](file:///D:\RAN4%23110\Docs\R4-2400583.zip) **MSD for higher order combinations of CA\_n40A-41A and CA\_n39A-41A supporting simultaneous Rx/Tx**

*Type: discussion For: Approval  
 Source: Murata Manufacturing Co Ltd.*

**Decision: Noted.**

[**R4-2400856**](file:///D:\RAN4%23110\Docs\R4-2400856.zip) **Discussion on simultaneous Rx-Tx requirement applied to CA\_n39A-n40A-n41A**

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

**Decision: Noted.**

[**R4-2402087**](file:///D:\RAN4%23110\Docs\R4-2402087.zip) **Discussion on Simultaneous Rx/Tx**

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

**Decision: Noted.**

[**R4-2402315**](file:///D:\RAN4%23110\Docs\R4-2402315.zip) **Discussion on the simultaneous Rx-Tx for CA\_n40A-n41A-n79A**

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

**Decision: Noted.**

**CR/Draft CR**

[**R4-2400026**](file:///D:\RAN4%23110\Docs\R4-2400026.zip) **CR: Correction to remedy 3GU error of CR1907r2**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1984 rev Cat: F (Rel-18)  
  
 Source: ETSI MCC*

**Decision: Agreed.**

[**R4-2400027**](file:///D:\RAN4%23110\Docs\R4-2400027.zip) **CR: Introduce Simultaneous Rx-Tx to remedy the de-implementation of CR1907r2**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1985 rev Cat: F (Rel-18)  
  
 Source: ETSI MCC*

**Decision: Agreed.**

[**R4-2400855**](file:///D:\RAN4%23110\Docs\R4-2400855.zip) **draftCR to 38.101-3 Correction on the simultaneous Rx-Tx for DC\_40\_n41 and DC\_39\_n41**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

CHTTL: PC2 EN-DC is not support for 40-n41. It should be removed.

Skyworks: DC\_40-n41 FFS MSD for PC3 needs be removed.

**Decision: Revised to** [**R4-2403604**](file:///D:\RAN4%23110\Docs\R4-2403604.zip) **(from** [**R4-2400855**](file:///D:\RAN4%23110\Docs\R4-2400855.zip)**).**

**[R4-2403604](D:\\RAN4#110\\Docs\\R4-2403604.zip) draftCR to 38.101-3 Correction on the simultaneous Rx-Tx for DC\_40\_n41 and DC\_39\_n41**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Endorsed.**

### 7.24 4Rx support for NR FR1 bands (<2.6GHz) in Rel-18

#### 7.24.1 Rapporteur input (WID/TR/big CR)

[**R4-2401287**](file:///D:\RAN4%23110\Docs\R4-2401287.zip) **Revised WID: 4Rx support for NR FR1 bands (<2.6GHz) in Rel-18**

*Type: WID revised For: Endorsement  
 Source: ZTE Corporation*

**Decision:** The document was **for email approval**.

[**R4-2401288**](file:///D:\RAN4%23110\Docs\R4-2401288.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 v18.4.0 CR-2090 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision:** The document was **for email approval**.

#### 7.24.2 UE RF requirements

**Draft CR**

[**R4-2401265**](file:///D:\RAN4%23110\Docs\R4-2401265.zip) **draft CR to TS38.101-1:4Rx for n26**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

*Huawei: the WI is for handheld. But the CR for FWA.*

*OPPO: it would be problematic.*

**Decision: Endorsed.**

### 7.25 3Tx NR inter-band UL Carrier Aggregation (CA) and EN-DC

#### 7.25.1 Rapporteur input (WID/TR/big CR)

[**R4-2401786**](file:///D:\RAN4%23110\Docs\R4-2401786.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 v18.4.0 CR-2122 rev Cat: F (Rel-18)  
  
 Source: OPPO*

**Decision:** The document was **for email approval**.

[**R4-2401787**](file:///D:\RAN4%23110\Docs\R4-2401787.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 v18.4.0 CR-1159 rev Cat: F (Rel-18)  
  
 Source: OPPO*

**Decision:** The document was **for email approval**.

[**R4-2401788**](file:///D:\RAN4%23110\Docs\R4-2401788.zip) **Revised WID for 3Tx NR inter-band UL CA and EN-DC basket WI**

*Type: WID revised For: Endorsement  
 Source: OPPO*

**Decision:** The document was **for email approval**.

[**R4-2401789**](file:///D:\RAN4%23110\Docs\R4-2401789.zip) **TR 38.880 for 3Tx band combinations**

*Type: draft TR For: Agreement  
 38.880 v0.2.0 CR- rev Cat: (Rel-18)  
  
 Source: OPPO*

**Decision:** The document was **for email approval**.

#### 7.25.2 UE RF requirements with PC2 and PC1.5

**Draft CR**

[**R4-2401262**](file:///D:\RAN4%23110\Docs\R4-2401262.zip) **Merge the tables for 3Tx band combination**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

**TP**

[**R4-2400208**](file:///D:\RAN4%23110\Docs\R4-2400208.zip) **TP for TR 38.880 Input for CA\_n7A-n77A with 3Tx**

*Type: pCR For: Approval  
 38.880 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, Bell Mobility, TELUS*

**Decision: Approved.**

[**R4-2400209**](file:///D:\RAN4%23110\Docs\R4-2400209.zip) **TP for TR 38.880 Input for CA\_n25A-n77A with 3Tx**

*Type: pCR For: Approval  
 38.880 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, Bell Mobility, TELUS*

*Huawei: cross band isolation is needed.*

**Decision: Approved.**

[**R4-2400897**](file:///D:\RAN4%23110\Docs\R4-2400897.zip) **TP for TR 38.880: PC2 and PC1.5 3Tx inter-band CA\_n66-n77**

*Type: pCR For: Approval  
 38.880 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Verizon, AT&T, Samsung, Ericsson*

**Decision: Approved.**

[**R4-2400898**](file:///D:\RAN4%23110\Docs\R4-2400898.zip) **TP for TR 38.880: PC2 3Tx inter-band CA\_n5-n77**

*Type: pCR For: Approval  
 38.880 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: Verizon, AT&T, Samsung, Ericsson*

**Decision: Approved.**

[**R4-2402450**](file:///D:\RAN4%23110\Docs\R4-2402450.zip) **TP for TR 38.880: Input for CA\_n71A-n77A with 3Tx**

*Type: pCR For: Approval  
 38.880 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

*Murata: PC2 MSD by adding 3dB \* IMD order or 3\*5=15 dB, it should be 4.8dB.*

**Decision: Revised to** [**R4-2403639**](file:///D:\RAN4%23110\Docs\R4-2403639.zip) **(from** [**R4-2402450**](file:///D:\RAN4%23110\Docs\R4-2402450.zip)**).**

**[R4-2403639](D:\\RAN4#110\\Docs\\R4-2403639.zip) TP for TR 38.880: Input for CA\_n71A-n77A with 3Tx**

*Type: pCR For: Approval  
 38.880 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: T-Mobile USA*

*Murata: PC2 MSD by adding 3dB \* IMD order or 3\*5=15 dB, it should be 4.8dB.*

**Decision: Approved.**

## 8 Rel-18 on-going non-spectrum related work items for NR

### 8.1 Further RF requirements enhancement for NR and EN-DC in FR1

#### 8.1.1 UE RF requirements maintenance

##### 8.1.1.1 4Tx UE RF requirements

[**R4-2400341**](file:///D:\RAN4%23110\Docs\R4-2400341.zip) **Delta PpowerClsss for 4Tx for SRS antenna switching**

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

**Abstract:**

To discuss delta Ppowerclass aspect in case 4Tx capable device uses SRS antenna switching.

**Decision: Noted.**

[**R4-2401518**](file:///D:\RAN4%23110\Docs\R4-2401518.zip) **Remaining TxD capability requirements for 4Tx**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

**CR/Draft CR**

[**R4-2400719**](file:///D:\RAN4%23110\Docs\R4-2400719.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core ) 4Tx RF issues**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2049 rev Cat: F (Rel-18)  
  
 Source: Qualcomm*

**Decision: Agreed.**

[**R4-2401260**](file:///D:\RAN4%23110\Docs\R4-2401260.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core) Update TxD capabilities name and correct the requirements**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2087 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

*Vivo: fine with the changes in general part but have different views for change in other clauses.*

*Nokia: we can just have option and develop CR next meeting.*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2401519**](file:///D:\RAN4%23110\Docs\R4-2401519.zip) **Extension for TxD capability requirements for 4Tx**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2402419**](file:///D:\RAN4%23110\Docs\R4-2402419.zip) **R18 Cat-F CR 38.101-1 correction CR for 4Tx requirements**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2160 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2403667**](file:///D:\RAN4%23110\Docs\R4-2403667.zip) **(from** [**R4-2402419**](file:///D:\RAN4%23110\Docs\R4-2402419.zip)**).**

[**R4-2403667**](file:///D:\RAN4%23110\Docs\R4-2403667.zip) **R18 Cat-F CR 38.101-1 correction CR for 4Tx requirements**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2160 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon, vivo, ZTE*

**Decision: Agreed.**

**LS out**

[**R4-2402420**](file:///D:\RAN4%23110\Docs\R4-2402420.zip) **draft LS on verification of full power rank 2 UL operation for UE supporting 4Tx**

*Type: LS out For: Approval  
 to RAN5  
 Source: Huawei, HiSilicon*

*Vivo: we are not against it. We would like to clarify the purpose.*

*Nokia: We have similar view as Vivo. What RAN5 action should be taken.*

*Huawei: looking at the current specification of transmission mode, for some Tx mode we use “or”. I doubt that RAN5 can identify which mode should be verified.*

*Nokia: there is no requirement that UE supports TxD and also support full power mode.*

**Decision: Noted.**

##### 8.1.1.2 8Rx UE RF requirements (resubmitted CR)

[**R4-2400343**](file:///D:\RAN4%23110\Docs\R4-2400343.zip) **Handling of SRS Tx port switching pattern for 8Rx**

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

**Abstract:**

To discuss texts associated with supportedSRS-TxPortSwitchBeyond4Rx-r17.

**Decision: Noted.**

**CR**

[**R4-2400344**](file:///D:\RAN4%23110\Docs\R4-2400344.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core) Correction on delta TRxSRS related texts for 8Rx**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1999 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Correction for texts associated with supportedSRS-TxPortSwitchBeyond4Rx-r17.

**Decision: Revised to** [**R4-2403668**](file:///D:\RAN4%23110\Docs\R4-2403668.zip) **(from** [**R4-2400344**](file:///D:\RAN4%23110\Docs\R4-2400344.zip)**).**

[**R4-2403668**](file:///D:\RAN4%23110\Docs\R4-2403668.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core) Correction on delta TRxSRS related texts for 8Rx**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1999 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Ericsson, ZTE*

**Abstract:**

Correction for texts associated with supportedSRS-TxPortSwitchBeyond4Rx-r17.

**Decision: Revised to R4-2403856 (from R4-2403668).**

[**R4-2403856**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403856.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core) Correction on delta TRxSRS related texts for 8Rx**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1999 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Ericsson, ZTE*

**Abstract:**

Correction for texts associated with supportedSRS-TxPortSwitchBeyond4Rx-r17.

**Decision: Agreed.**

[**R4-2401261**](file:///D:\RAN4%23110\Docs\R4-2401261.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core) Add four SRS ports description for ?TRxSRS requirement of 8Rx**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2088 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2402617**](file:///D:\RAN4%23110\Docs\R4-2402617.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core) CR to TS 38.101-1 on 8Rx insertion loss**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2177 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Merged (with R4-24xxxxx).**

##### 8.1.1.3 Lower MSD for inter-band CA/EN-DC/DC combinations

**CR/Draft CR**

[**R4-2400720**](file:///D:\RAN4%23110\Docs\R4-2400720.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core ) Power class for Lower MSD verification – TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2050 rev Cat: F (Rel-18)  
  
 Source: Qualcomm*

**Abstract:**

Wording clarification for TS38.101-1

**Decision: Revised to** [**R4-2403663**](file:///D:\RAN4%23110\Docs\R4-2403663.zip) **(from** [**R4-2400720**](file:///D:\RAN4%23110\Docs\R4-2400720.zip)**).**

[**R4-2403663**](file:///D:\RAN4%23110\Docs\R4-2403663.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core ) Power class for Lower MSD verification – TS38.101-1**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2050 rev Cat: F (Rel-18)  
  
 Source: Qualcomm, Nokia, Nokia Shanghai Bell*

**Abstract:**

Wording clarification for TS38.101-1

**Decision: Agreed.**

[**R4-2402149**](file:///D:\RAN4%23110\Docs\R4-2402149.zip) **draft CR for TS 38.101-1: 4Rx/8Rx applicability for Lower-MSD requirements**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: CHTTL, Samsung*

**Decision: Revised to** [**R4-2403664**](file:///D:\RAN4%23110\Docs\R4-2403664.zip) **(from** [**R4-2402149**](file:///D:\RAN4%23110\Docs\R4-2402149.zip)**).**

[**R4-2403664**](file:///D:\RAN4%23110\Docs\R4-2403664.zip) **draft CR for TS 38.101-1: 4Rx/8Rx applicability for Lower-MSD requirements**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: CHTTL, Samsung, ZTE, Huawei, AT&T, NTT DOCOMO INC.*

**Decision: Endorsed.**

[**R4-2402207**](file:///D:\RAN4%23110\Docs\R4-2402207.zip) **draft CR for TS 38.101-3: 4Rx/8Rx applicability for Lower-MSD requirements**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: CHTTL, Samsung*

**Decision: Revised to** [**R4-2403665**](file:///D:\RAN4%23110\Docs\R4-2403665.zip) **(from** [**R4-2402207**](file:///D:\RAN4%23110\Docs\R4-2402207.zip)**).**

[**R4-2403665**](file:///D:\RAN4%23110\Docs\R4-2403665.zip) **draft CR for TS 38.101-3: 4Rx/8Rx applicability for Lower-MSD requirements**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: CHTTL, Samsung, ZTE, Huawei, AT&T, NTT DOCOMO INC.*

**Decision: Endorsed.**

[**R4-2402215**](file:///D:\RAN4%23110\Docs\R4-2402215.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core) Correction of Lower-MSD requirements for NR CA**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2146 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2402216**](file:///D:\RAN4%23110\Docs\R4-2402216.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core) Correction of Lower-MSD requirements for EN-DC**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1168 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2402673**](file:///D:\RAN4%23110\Docs\R4-2402673.zip) **(NR\_ENDC\_RF\_FR1\_enh2-Core) Power class for lower MSD verification - TS38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Qualcomm Technologies Int*

**Abstract:**

Wording clarification for TS38.101-3

**Decision: Revised to** [**R4-2403666**](file:///D:\RAN4%23110\Docs\R4-2403666.zip) **(from** [**R4-2402673**](file:///D:\RAN4%23110\Docs\R4-2402673.zip)**).**

**[R4-2403666](D:\\RAN4#110\\Docs\\R4-2403666.zip) (NR\_ENDC\_RF\_FR1\_enh2-Core) Power class for lower MSD verification - TS38.101-3**

*Type: draftCR For: Endorsement  
 38.101-3 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Qualcomm, Nokia, Nokia Shanghai Bell*

**Abstract:**

Wording clarification for TS38.101-3

**Decision: Endorsed.**

#### 8.1.2 RRM performance requirements

#### 8.1.3 Demodulation and CSI requirements

#### 8.1.4 Moderator summary and conclusions

[**R4-2401077**](file:///D:\RAN4%23110\Docs\R4-2401077.zip) **Topic summary for [110][118] FR1\_enh2\_part1**

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

**Abstract:**

[110][118] FR1\_enh2\_part1 AI 8.1.1.3

**Decision: Noted.**

**Minutes and agreements after the first round**

Refer to the hyperlinks below for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/02.Tuesday/03.%5B118%5D_R4-2401077%20Topic%20Summary_%5B110%5D%5B118%5D_v00.docx>

[**R4-2401078**](file:///D:\RAN4%23110\Docs\R4-2401078.zip) **Topic summary for [110][119] FR1\_enh2\_part2**

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

**Abstract:**

[110][119] FR1\_enh2\_part2 AI 8.1.1.1

**Decision: Noted.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/02.Tuesday/04.%5B119%5D_R4-2401078_Topic%20Summary_%5B110%5D%5B119%5D%20FR1_enh2_part2.docx>

**Issue 1-1-1: Whether address ΔPPowerClass for 4Tx and requirements for SRS antenna**

**Agreement:**

* RAN4 should address ΔPPowerClass for 4Tx and requirements for SRS antenna in the future meetings with consideration of these shared observations

[**R4-2401079**](file:///D:\RAN4%23110\Docs\R4-2401079.zip) **Topic summary for [110][120] FR1\_enh2\_part3**

*Type: other For: Information  
 Source: Moderator(NTT DOCOMO)*

**Abstract:**

[110][120] FR1\_enh2\_part3 AI 8.1.1.2

**Decision: Noted.**

**Minutes and agreements after the first round**

Pefer to the following hyperlinks for details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/02.Tuesday/05.%5B120%5D_R4-2401079%20Topic%20summary%20for%20%5B110%5D%5B120%5D%20FR1_enh2_part3.docx>

### 8.2 NR RF requirements enhancement for FR2, Phase 3

#### 8.2.1 UL 256QAM core requirements maintenance

**CR/Draft CR**

[**R4-2400688**](file:///D:\RAN4%23110\Docs\R4-2400688.zip) **Correction of table references on MPR simulation results**

*Type: CR For: Agreement  
 38.891 v18.0.0 CR-0001 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Correct the table references on MPR simulation results.

**Decision:** The document was **revised to** [**R4-2400701**](file:///D:\RAN4%23110\Docs\R4-2400701.zip).

[**R4-2400701**](file:///D:\RAN4%23110\Docs\R4-2400701.zip) **Correction of table references on MPR simulation results**

*Type: CR For: Agreement  
 38.891 v18.0.0 CR-0001 rev 1 Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

(Replaces [R4-2400688](file:///D:\RAN4%23110\Docs\R4-2400688.zip))

**Abstract:**

Correct the table references on MPR simulation results.

**Decision: Agreed.**

[**R4-2401514**](file:///D:\RAN4%23110\Docs\R4-2401514.zip) **draft CR to 38.101-2 on UL RMC for 256QAM**

*Type: draftCR For: Endorsement  
 38.101-2 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Revised to** [**R4-2403633**](file:///D:\RAN4%23110\Docs\R4-2403633.zip) **(from** [**R4-2401514**](file:///D:\RAN4%23110\Docs\R4-2401514.zip)**).**

**[R4-2403633](D:\\RAN4#110\\Docs\\R4-2403633.zip) draft CR to 38.101-2 on UL RMC for 256QAM**

*Type: draftCR For: Endorsement  
 38.101-2 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

Chair: fix the sextion numbering issue.

**Decision: Endorsed.**

#### 8.2.2 Beam correspondence requirements maintenance for RRC\_INACTIVE and initial access

##### 8.2.2.1 Beam correspondence requirement applicability

**Topic #1: Beam correspondence for initial access and RRC\_INACTIVE**

[**R4-2402394**](file:///D:\RAN4%23110\Docs\R4-2402394.zip) **Beam correspondence in initial access for other power classes**

*Type: other For: Approval  
 Source: Sony, Ericsson*

**Decision: Noted.**

Draft CR/CR

[**R4-2401513**](file:///D:\RAN4%23110\Docs\R4-2401513.zip) **draft CR to 38.101-2 on BC in initial access and RRC\_INACTIVE**

*Type: draftCR For: Endorsement  
 38.101-2 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

Apple: I wonder whether we need this sentence. Once the feature list is agreed, the sentence is not needed.

Vivo: we have agreed that the feature is mandatory. It is better to have some reflection.

**Decision: Withdrawn.**

[**R4-2402410**](file:///D:\RAN4%23110\Docs\R4-2402410.zip) **(FR2\_req\_Ph3) Beam correspondence requirement for power classes other than PC3 in initial access and RRC\_INACTIVE**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0732 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Parsing Failure: Change request category wrong on CR cover for TDoc [R4-2402410](file:///D:\RAN4%23110\Docs\R4-2402410.zip). Database value : F. CR cover value : Cat F. Change request Work Item wrong on CR cover for TDoc [R4-2402410](file:///D:\RAN4%23110\Docs\R4-2402410.zip). Database value : NR\_RF\_FR2\_req\_Ph3-Core. CR cover value : NR\_FR2\_re

**Decision:** The document was **revised to** [**R4-2402937**](file:///D:\RAN4%23110\Docs\R4-2402937.zip).

[**R4-2402937**](file:///D:\RAN4%23110\Docs\R4-2402937.zip) **(FR2\_req\_Ph3) Beam correspondence requirement for power classes other than PC3 in initial access and RRC\_INACTIVE**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0732 rev 1 Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Parsing Failure: Change request category wrong on CR cover for TDoc [R4-2402410](file:///D:\RAN4%23110\Docs\R4-2402410.zip). Database value : F. CR cover value : Cat F. Change request Work Item wrong on CR cover for TDoc [R4-2402410](file:///D:\RAN4%23110\Docs\R4-2402410.zip). Database value : NR\_RF\_FR2\_req\_Ph3-Core. CR cover value : NR\_FR2\_re.

Mediatek: it is good to list the wording that it is applied to all power classes rather than repeating the wording for each.

**Decision: Revised to** [**R4-2403634**](file:///D:\RAN4%23110\Docs\R4-2403634.zip) **(from** [**R4-2402937**](file:///D:\RAN4%23110\Docs\R4-2402937.zip)**).**

**[R4-2403634](D:\\RAN4#110\\Docs\\R4-2403634.zip) (FR2\_req\_Ph3) Beam correspondence requirement for power classes other than PC3 in initial access and RRC\_INACTIVE**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0732 rev 1 Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

**Decision: Agreed.**

##### 8.2.2.2 UE beam type and DRX implications

##### 8.2.2.3 Beam correspondence test issues

#### 8.2.3 BS demodulation requirements

#### 8.2.4 Moderator summary and conclusions

[**R4-2401080**](file:///D:\RAN4%23110\Docs\R4-2401080.zip) **Topic summary for [110][121] FR2\_enh\_req\_Ph3\_part1**

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

**Abstract:**

[110][121] FR2\_enh\_req\_Ph3\_part1 AI 8.2.2

**Decision: Noted.**

**Minutes and agreement after the first round**

Refer to the following hyperlinks for details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/01.Monday/10.%5B121%5D_Topic%20Summary%20%5B110%5D%5B121%5D%20FR2_enh_req_Ph3_part1%20v00.docx>

**Issue 1-2: Relaxation for beam correspondence requirements in initial access**

* Proposals
  + Option 1: 2 dB for PC7 and 0 dB for other PCs (PC1/5/6)
  + Option 2: Others
* Recommended WF
  + Option 1

**Agreement:**

* Reuse the existing relaxations for PC1, PC5, PC6 and PC7.

[**R4-2401081**](file:///D:\RAN4%23110\Docs\R4-2401081.zip) **Topic summary for [110][122] FR2\_enh\_req\_Ph3\_part2**

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

**Abstract:**

[110][122] FR2\_enh\_req\_Ph3\_part2 AI 8.2.1

**Decision: Noted.**

### 8.3 Requirement for NR FR2 multi-Rx chain DL reception

#### 8.3.1 UE RF requirements maintenance for simultaneous DL reception with up to 4 layer MIMO

[**R4-2401509**](file:///D:\RAN4%23110\Docs\R4-2401509.zip) **Discussion on the performance of FR2 multi-Rx in different bands**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2402252**](file:///D:\RAN4%23110\Docs\R4-2402252.zip) **Discussion on applicable bands of Rel-18 Multi-RX DL requirements**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

**CR/Draft CR**

[**R4-2400427**](file:///D:\RAN4%23110\Docs\R4-2400427.zip) **CR on FR2 multi-RX**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0691 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2400962**](file:///D:\RAN4%23110\Docs\R4-2400962.zip) **Draft CR for TS 38.101-2: MultiRx PC3 RF requirement applicable frequency range**

*Type: draftCR For: Endorsement  
 38.101-2 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2403630**](file:///D:\RAN4%23110\Docs\R4-2403630.zip) **(from** [**R4-2400962**](file:///D:\RAN4%23110\Docs\R4-2400962.zip)**).**

[**R4-2403630**](file:///D:\RAN4%23110\Docs\R4-2403630.zip) **Draft CR for TS 38.101-2: MultiRx PC3 RF requirement applicable frequency range**

*Type: draftCR For: Endorsement  
 38.101-2 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon, Apple, Samsung, vivo*

**Decision: Endorsed.**

[**R4-2401204**](file:///D:\RAN4%23110\Docs\R4-2401204.zip) **CR for Rel-18 38.101-2 to change the suffix K to M for simultaneous reception or transmission in multiple directions.**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0710 rev Cat: F (Rel-18)  
  
 Source: Xiaomi*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2401510**](file:///D:\RAN4%23110\Docs\R4-2401510.zip) **draft CR to 38.101-2 on initial UE orientation of FR2-1 multiRx**

*Type: draftCR For: Endorsement  
 38.101-2 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2401511**](file:///D:\RAN4%23110\Docs\R4-2401511.zip) **draft editorial correction on FR2-1 multiRx**

*Type: draftCR For: Endorsement  
 38.101-2 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2402253**](file:///D:\RAN4%23110\Docs\R4-2402253.zip) **Clarification on operating bands for simultaneous reception or transmission in multiple directions**

*Type: draftCR For: Endorsement  
 38.101-2 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Samsung*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2400428**](file:///D:\RAN4%23110\Docs\R4-2400428.zip) **CR on reasoning of defining multi-RX RF requirements for all FR2-1 bands based on 28GHz simulation results**

*Type: CR For: Agreement  
 38.751 v18.0.0 CR-0001 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Revised to R4-2403845 (from R4-2400428).**

[**R4-2403845**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403845.zip) **CR on reasoning of defining multi-RX RF requirements based on 28GHz simulation results**

*Type: CR For: Agreement  
 38.751 v18.0.0 CR-0001 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Agreed.**

[**R4-2401512**](file:///D:\RAN4%23110\Docs\R4-2401512.zip) **draft CR to 38.751 on update of UE orientation**

*Type: draftCR For: Endorsement  
 38.751 v18.0.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Endorsed.**

#### 8.3.2 RRM core requirements maintenance for simultaneous DL reception from different directions

#### 8.3.3 RRM performance requirements

#### 8.3.4 Demodulation performance and CSI requirements

#### 8.3.5 Moderator summary and conclusions

[**R4-2401082**](file:///D:\RAN4%23110\Docs\R4-2401082.zip) **Topic summary for [110][123] FR2\_multiRx\_UERF\_part1**

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

**Abstract:**

[110][123] FR2\_multiRx\_UERF\_part1 AI 8.3.1

**Decision: Noted.**

**Minutes and agreements in the first round**

Refer to the following hyperlinks for details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/01.Monday/08.%5B123%5D_R4-2401082.docx>

**1.2.1 Applicable bands for the UE RF requirement**

**Agreement:**

* Remove n262

**1.2.2 Void section 5.5 K (**[**R4-2400427**](file:///D:\RAN4%23110\Docs\R4-2400427.zip)**)?**

**Agreement:**

* Retain the title and remove the text for clause of 5.5K.

**1.2.3 Suffix change to M?**

**Agreement:**

* Change the suffix for FR2 Multi-Rx and STxMP from K to M
* Void 5.xK and leave the content in the clause empty

**1.2.4 Annex L, include ’In the test, n is set to 2’?**

**Agreement:**

* No, most points have n = 2, but the poles can have more than 2 AoA pairs associated with them
  + Further check with TE vendor

**1.2.7 Annex J, add explicit list of permitted UE alignments**

**Agreement:**

* figure out the way to capture the three missing orientations.

**1.2.8 Remove redundant RMC information from PC6?**

**Agreement:**

* Agree on the proposal of removing redundant RMC information from PC6 as above.

### 8.4 Even Further RRM enhancement for NR and MR-DC

### 8.5 Further enhancements on NR and MR-DC measurement gaps and measurements without gaps

### 8.6 Completion of specification support for bandwidth part operation without restriction in NR

### 8.7 Support of intra-band non-collocated EN-DC/NR-CA deployment

#### 8.7.1 UE RF requirements maintenance

[**R4-2400409**](file:///D:\RAN4%23110\Docs\R4-2400409.zip) **On RF requirement for intra-band non-collocated CA/EN-DC**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2401249**](file:///D:\RAN4%23110\Docs\R4-2401249.zip) **Discussion on RF requirements for non-collocated ENDC NRCA**

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

**Decision: Noted.**

**CR**

[**R4-2400283**](file:///D:\RAN4%23110\Docs\R4-2400283.zip) **Rel-18 CR for 38.101-1 NonCol\_IntraB\_NR\_CA**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2068 rev Cat: F (Rel-18)  
  
 Source: KDDI Corporation, Samsung*

**Abstract:**

To remove all [] putting into the IE name based on RAN2’s agreements. Parsing failure: Change request Work Item wrong on CR cover for TDoc [R4-2400283](file:///D:\RAN4%23110\Docs\R4-2400283.zip). Database value : NonCol\_intraB\_ENDC\_NR\_CA-Core. CR cover value : NonCol\_intraB\_ENDC\_NR\_CA. A revision w

**Decision:** The document was **revised to** [**R4-2402945**](file:///D:\RAN4%23110\Docs\R4-2402945.zip).

[**R4-2402945**](file:///D:\RAN4%23110\Docs\R4-2402945.zip) **Rel-18 CR for 38.101-1 NonCol\_IntraB\_ENDC\_NR\_CA**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2068 rev 1 Cat: F (Rel-18)  
  
 Source: KDDI, Samsung*

(Replaces [R4-2400283](file:///D:\RAN4%23110\Docs\R4-2400283.zip))

**Abstract:**

To remove all [] putting into the IE name based on RAN2’s agreements. The author indicated a revision may be required.

**Decision:** The document was **revised to** [**R4-2403251**](file:///D:\RAN4%23110\Docs\R4-2403251.zip).

[**R4-2403251**](file:///D:\RAN4%23110\Docs\R4-2403251.zip) **Rel-18 CR for 38.101-1 NonCol\_IntraB\_ENDC\_NR\_CA**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2068 rev 2 Cat: F (Rel-18)  
  
 Source: KDDI, Samsung*

**Abstract:**

To remove all [] putting into the IE name based on RAN2’s agreements.

Huawei: add the reference to RAN2 CR.

**Decision: Revised to** [**R4-2403685**](file:///D:\RAN4%23110\Docs\R4-2403685.zip) **(from** [**R4-2403251**](file:///D:\RAN4%23110\Docs\R4-2403251.zip)**).**

[**R4-2403685**](file:///D:\RAN4%23110\Docs\R4-2403685.zip) **Rel-18 CR for 38.101-1 NonCol\_IntraB\_ENDC\_NR\_CA**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2068 rev 2 Cat: F (Rel-18)  
  
 Source: KDDI, Samsung*

**Abstract:**

To remove all [] putting into the IE name based on RAN2’s agreements.

Huawei: add the reference to RAN2 CR.

**Decision: Agreed.**

[**R4-2400284**](file:///D:\RAN4%23110\Docs\R4-2400284.zip) **Rel-18 CR for 38.101-3 NonCol\_IntraB\_ENDC**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1146 rev Cat: F (Rel-18)  
  
 Source: KDDI Corporation, Samsung*

**Abstract:**

To remove all [] putting into the IE name based on RAN2’s agreements. Parsing Failure: Change request Work Item wrong on CR cover for TDoc [R4-2400284](file:///D:\RAN4%23110\Docs\R4-2400284.zip). Database value : NonCol\_intraB\_ENDC\_NR\_CA-Core. CR cover value : NonCol\_intraB\_ENDC\_NR\_CA. A revision wi

**Decision:** The document was **revised to** [**R4-2402946**](file:///D:\RAN4%23110\Docs\R4-2402946.zip).

[**R4-2402946**](file:///D:\RAN4%23110\Docs\R4-2402946.zip) **Rel-18 CR for 38.101-3 NonCol\_IntraB\_ENDC\_NR\_CA**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1146 rev 1 Cat: F (Rel-18)  
  
 Source: KDDI, Samsung*

(Replaces [R4-2400284](file:///D:\RAN4%23110\Docs\R4-2400284.zip))

**Abstract:**

To remove all [] putting into the IE name based on RAN2’s agreements. The author indicated a revision may be required.

**Decision:** The document was **revised to** [**R4-2403252**](file:///D:\RAN4%23110\Docs\R4-2403252.zip).

[**R4-2403252**](file:///D:\RAN4%23110\Docs\R4-2403252.zip) **Rel-18 CR for 38.101-3 NonCol\_IntraB\_ENDC\_NR\_CA**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1146 rev 2 Cat: F (Rel-18)  
  
 Source: KDDI, Samsung*

**Abstract:**

To remove all [] putting into the IE name based on RAN2’s agreements.

**Decision: Revised to** [**R4-2403686**](file:///D:\RAN4%23110\Docs\R4-2403686.zip) **(from** [**R4-2403252**](file:///D:\RAN4%23110\Docs\R4-2403252.zip)**).**

[**R4-2403686**](file:///D:\RAN4%23110\Docs\R4-2403686.zip) **Rel-18 CR for 38.101-3 NonCol\_IntraB\_ENDC\_NR\_CA**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1146 rev 2 Cat: F (Rel-18)  
  
 Source: KDDI, Samsung, Huawei*

**Abstract:**

To remove all [] putting into the IE name based on RAN2’s agreements.

**Decision: Agreed.**

[**R4-2400410**](file:///D:\RAN4%23110\Docs\R4-2400410.zip) **Clarification on RF requirement for intra-band non-collocated EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1125 rev Cat: F (Rel-16)  
  
 Source: Apple*

**Abstract:**

Parsing Failure: Change request Work Item wrong on CR cover for TDoc [R4-2400410](file:///D:\RAN4%23110\Docs\R4-2400410.zip). Database value : NonCol\_intraB\_ENDC\_NR\_CA-Core. CR cover value : HYPERLINK "https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=950181"NonCol\_intr

Huawei: concern on Note 5.

Murata: keep the consistent.

Ericsson: We refer to keep the power in the table.

Mediatek: we are not sure if note 5 will cause confusion. It is better to keep note 5.

Huawei: note 5 has nothing to do with power imbalance. It should be added into band combination table. We do not need it.

**Decision:** The document was **revised to** [**R4-2402940**](file:///D:\RAN4%23110\Docs\R4-2402940.zip).

[**R4-2402940**](file:///D:\RAN4%23110\Docs\R4-2402940.zip) **Clarification on RF requirement for intra-band non-collocated EN-DC**

*Type: CR For: Agreement  
 38.101-3 v16.18.0 CR-1125 rev 1 Cat: F (Rel-16)  
  
 Source: Apple, Nokia*

(Replaces [R4-2400410](file:///D:\RAN4%23110\Docs\R4-2400410.zip))

**Decision: Agreed.**

[**R4-2400411**](file:///D:\RAN4%23110\Docs\R4-2400411.zip) **Clarification on RF requirement for intra-band non-collocated EN-DC**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1126 rev Cat: A (Rel-17)  
  
 Source: Apple, Nokia*

**Decision: Agreed.**

[**R4-2400412**](file:///D:\RAN4%23110\Docs\R4-2400412.zip) **Clarification on RF requirement for intra-band non-collocated EN-DC**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1127 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Revised to** [**R4-2403687**](file:///D:\RAN4%23110\Docs\R4-2403687.zip) **(from** [**R4-2400412**](file:///D:\RAN4%23110\Docs\R4-2400412.zip)**).**

[**R4-2403687**](file:///D:\RAN4%23110\Docs\R4-2403687.zip) **Clarification on RF requirement for intra-band non-collocated EN-DC**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1127 rev Cat: F (Rel-18)  
  
 Source: Apple, Nokia*

**Decision: Agreed.**

[**R4-2400413**](file:///D:\RAN4%23110\Docs\R4-2400413.zip) **Modification on power imbalance requirements**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2008 rev Cat: F (Rel-18)  
  
 Source: Apple*

**Decision: Revised to** [**R4-2403688**](file:///D:\RAN4%23110\Docs\R4-2403688.zip) **(from** [**R4-2400413**](file:///D:\RAN4%23110\Docs\R4-2400413.zip)**).**

**[R4-2403688](D:\\RAN4#110\\Docs\\R4-2403688.zip) Modification on power imbalance requirements**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2008 rev Cat: F (Rel-18)  
  
 Source: Apple, Nokia*

**Decision: Agreed.**

#### 8.7.2 RRM Core requirements maintenance

#### 8.7.3 RRM performance requirements

#### 8.7.4 Demodulation performance requirements

#### 8.7.5 Moderator summary and conclusions

[**R4-2401083**](file:///D:\RAN4%23110\Docs\R4-2401083.zip) **Topic summary for [110][124] NonCol\_intraB**

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

**Abstract:**

[110][124] NonCol\_intraB AI 8.7.1

**Decision: Noted.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/03.Wednesday/03.%5B124%5D_R4-2401083_Topic_summary_%5B110%5D%5B124%5D.docx>

### 8.8 Enhanced NR support for high speed train scenario in frequency range 2

### 8.9 Air-to-ground network for NR

#### 8.9.1 FR1 co-existence requirements maintenance for ATG network

#### 8.9.2 UE RF requirements maintenance

##### 8.9.2.1 Tx requirements

[**R4-2402510**](file:///D:\RAN4%23110\Docs\R4-2402510.zip) **Discussion on the applicability of 1024QAM for ATG UE**

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

**Decision: Noted.**

**CR/Draft CR**

[**R4-2401876**](file:///D:\RAN4%23110\Docs\R4-2401876.zip) **(NR\_ATG-Core) CR for TR 38.876 to update frequency error, configured transmitted power, SEM and transmit intermodulation**

*Type: CR For: Agreement  
 38.876 v18.0.0 CR-0002 rev Cat: F (Rel-18)  
  
 Source: CMCC*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2402055**](file:///D:\RAN4%23110\Docs\R4-2402055.zip) **CR for TR 38.876 to maintain the Tx RF requirements for ATG UE**

*Type: CR For: Agreement  
 38.876 v18.0.0 CR-0003 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Revised to** [**R4-2403689**](file:///D:\RAN4%23110\Docs\R4-2403689.zip) **(from** [**R4-2402055**](file:///D:\RAN4%23110\Docs\R4-2402055.zip)**).**

[**R4-2403689**](file:///D:\RAN4%23110\Docs\R4-2403689.zip) **CR for TR 38.876 to maintain the Tx RF requirements for ATG UE**

*Type: CR For: Agreement  
 38.876 v18.0.0 CR-0003 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Agreed.**

[**R4-2400230**](file:///D:\RAN4%23110\Docs\R4-2400230.zip) **CR for 38101-1 to update ATG related signaling name**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1995 rev Cat: F (Rel-18)  
  
 Source: China Mobile International Ltd*

**Decision: Revised to** [**R4-2403690**](file:///D:\RAN4%23110\Docs\R4-2403690.zip) **(from** [**R4-2400230**](file:///D:\RAN4%23110\Docs\R4-2400230.zip)**).**

[**R4-2403690**](file:///D:\RAN4%23110\Docs\R4-2403690.zip) **CR for 38101-1 to update ATG related signaling name**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1995 rev Cat: F (Rel-18)  
  
 Source: CMCC, Huawei, HiSilicon, ZTE Corporation, Ericsson, CAICT*

**Decision: Revised to R4-2403864 (from R4-2403690).**

[**R4-2403864**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403864.zip) **CR for 38101-1 to update ATG related signaling name**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1995 rev Cat: F (Rel-18)  
  
 Source: CMCC, Huawei, HiSilicon, ZTE Corporation, Ericsson, CAICT*

**Decision: Agreed.**

[**R4-2402056**](file:///D:\RAN4%23110\Docs\R4-2402056.zip) **CR for TS 38.101-1 to maintain ATG UE RF requirements**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2136 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2402509**](file:///D:\RAN4%23110\Docs\R4-2402509.zip) **(NR\_ATG-Core)Maintenance CR for TS 38.101-1: ATG UE RF requirements**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Merged (with R4-24xxxxx).**

##### 8.9.2.2 Rx requirements

[**R4-2400826**](file:///D:\RAN4%23110\Docs\R4-2400826.zip) **(NR\_ATG-Core) Discussion on 1024QAM for ATG UE Rx**

*Type: discussion For: Decision  
 Source: CMCC*

**Decision: Noted.**

[**R4-2401591**](file:///D:\RAN4%23110\Docs\R4-2401591.zip) **Discussion on ATG UE RF 1024 QAM**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

This paper discusses the remaining open issues of ATG UE RF Rx 1024 QAM.

**Decision: Noted.**

[**R4-2402057**](file:///D:\RAN4%23110\Docs\R4-2402057.zip) **Discussion on ATG UE supporting 1024QAM**

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

**Decision: Noted.**

**CR/Draft CR**

[**R4-2400146**](file:///D:\RAN4%23110\Docs\R4-2400146.zip) **CR for 38.101-1 UL power in 7.5J Adjacent channel selectivity for ATG FR1 R18**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1987 rev Cat: F (Rel-18)  
  
 Source: CAICT*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2401590**](file:///D:\RAN4%23110\Docs\R4-2401590.zip) **Draft CR Correction of 38.101-1 to FRC reference channel for ATG UE maximum input level**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

Add A.3.2.x for 1024 QAM in the maximum input level table for ATG UE

**Decision: Not pursued.**

#### 8.9.3 BS RF requirements maintenance

#### 8.9.4 BS RF conformance testing requirements

#### 8.9.5 RRM core requirements maintenance

#### 8.9.6 RRM performance requirements

#### 8.9.7 Demodulation performance requirements

#### 8.9.8 Moderator summary and conclusions

[**R4-2401084**](file:///D:\RAN4%23110\Docs\R4-2401084.zip) **Topic summary for [110][125] NR\_ATG\_UERF\_part1**

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

**Abstract:**

[110][125] NR\_ATG\_UERF\_part1 AI 8.9.1

**Decision: Withdrawn.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2401085**](file:///D:\RAN4%23110\Docs\R4-2401085.zip) **Topic summary for [110][126] NR\_ATG\_UERF\_part2**

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

**Abstract:**

[110][126] NR\_ATG\_UERF\_part2 AI 8.9.2

**Decision: Noted.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/03.Wednesday/04.%5B126%5D_Draft%20R4-2401085%20Topic_Summary_110_%5B126%5D%20NR_ATG_UERF_part2.docx>

**Issue 1-1-2: Discussion on the applicable tolerance requirements for ATG PCMAX,f,c**

* **Proposal:** 
  + Option 1: The tolerance for applicable values of ATG PCMAX,f,c could be specified in Table 6.2J.2-1.
* Table 6.2J.2-1: PCMAX tolerance

|  |  |
| --- | --- |
| PCMAX,f,c (dBm) | Tolerance T(PCMAX,f,c) (dB) |
| 23 < PCMAX,c ≤ 40 | 2.0 |
| 21 ≤ PCMAX,c ≤ 23 | 2.0 |
| 20 ≤ PCMAX,c < 21 | 2.5 |
| 19 ≤ PCMAX,c < 20 | 3.5 |
| 18 ≤ PCMAX,c < 19 | 4.0 |
| 13 ≤ PCMAX,c < 18 | 5.0 |
| 8 ≤ PCMAX,c < 13 | 6.0 |
| -40 ≤ PCMAX,c < 8 | 7.0 |

* Recommended WF
  + TBA

**Agreement:**

* Agree on Option 1.

#### 8.10 NR support for dedicated spectrum less than 5MHz for FR1

#### 8.10.1 System parameter maintenance

**CR/Draft CR**

[**R4-2402616**](file:///D:\RAN4%23110\Docs\R4-2402616.zip) **CR to TS 38.104 for sub 5MHz channel bandwidth**

*Type: CR For: Agreement  
 38.104 v18.4.0 CR-0598 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision:** The document was **revised to** [**R4-2402639**](file:///D:\RAN4%23110\Docs\R4-2402639.zip).

[**R4-2402639**](file:///D:\RAN4%23110\Docs\R4-2402639.zip) **(NR\_FR1\_lessthan\_5MHz\_BW-Core) CR to TS 38.104 for sub 5MHz channel bandwidth**

*Type: CR For: Agreement  
 38.104 v18.4.0 CR-0598 rev 1 Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Revised to** [**R4-2403693**](file:///D:\RAN4%23110\Docs\R4-2403693.zip) **(from** [**R4-2402639**](file:///D:\RAN4%23110\Docs\R4-2402639.zip)**).**

[**R4-2403693**](file:///D:\RAN4%23110\Docs\R4-2403693.zip) **(NR\_FR1\_lessthan\_5MHz\_BW-Core) CR to TS 38.104 for sub 5MHz channel bandwidth**

*Type: CR For: Agreement  
 38.104 v18.4.0 CR-0598 rev 1 Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Not pursued.**

[**R4-2402737**](file:///D:\RAN4%23110\Docs\R4-2402737.zip) **[NR\_FR1\_lessthan\_5MHz\_BW-Core] draft CR to TS 38.101-1 CR implementation correction**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Qualcomm Inc.*

**Decision: Endorsed.**

[**R4-2402738**](file:///D:\RAN4%23110\Docs\R4-2402738.zip) **[NR\_FR1\_lessthan\_5MHz\_BW-Core] draft CR to TS 38.104 CR implementation correction**

*Type: draftCR For: Endorsement  
 38.104 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Qualcomm Inc.*

**Decision: Endorsed.**

**LS out**

[**R4-2402237**](file:///D:\RAN4%23110\Docs\R4-2402237.zip) **Reply LS on inter-frequency neighbour cells supporting NR dedicated spectrum less than 5 MHz for FR1**

*Type: LS out For: Approval  
 to RAN1, cc RAN2  
 Source: ZTE Corporation*

**Decision: Noted.**

[**R4-2402574**](file:///D:\RAN4%23110\Docs\R4-2402574.zip) **Response to LS on inter-frequency neighbour cells supporting NR dedicated spectrum less than 5 MHz for FR1**

*Type: response For: Decision  
 Source: Huawei Technologies France*

**Abstract:**

MCC: This a response to the RAN1 LS in R1-2312668. At the end of this response paper is a draft LS To RAN1 and Cc: RAN2 for Rel-18 work item code NR\_FR1\_lessthan\_5MHz\_BW.

**Decision: Revised to R4-2403852 (from R4-2402574).**

**[R4-2403852](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403852.zip) Response to LS on inter-frequency neighbour cells supporting NR dedicated spectrum less than 5 MHz for FR1**

*Type: response For: Decision  
 Source: Huawei Technologies France*

**Abstract:**

MCC: This a response to the RAN1 LS in R1-2312668. At the end of this response paper is a draft LS To RAN1 and Cc: RAN2 for Rel-18 work item code NR\_FR1\_lessthan\_5MHz\_BW.

**Decision: Approved.**

#### 8.10.2 UE RF requirement maintenance

[**R4-2402406**](file:///D:\RAN4%23110\Docs\R4-2402406.zip) **(NR\_FR1\_lessthan\_5MHz\_BW) NS\_17 for Band n28 3 MHz operation**

*Type: other For: Approval  
 Source: Nokia, Nokia Shanghai Bell, Skyworks Solutions Inc.*

**Decision: Noted.**

**CR/Draft CR**

[**R4-2401386**](file:///D:\RAN4%23110\Docs\R4-2401386.zip) **(NR\_FR1\_lessthan\_5MHz\_BW-Core) CR to add 3MHz CBW parameter values for EVM window length - TS38.101-1, Rel-18, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2097 rev Cat: F (Rel-18)  
  
 Source: Anritsu Limited*

**Decision: Endorsed.**

[**R4-2402407**](file:///D:\RAN4%23110\Docs\R4-2402407.zip) **(NR\_FR1\_lessthan\_5MHz\_BW) NS\_17 correction on Band n28 3 MHz operation in Japan**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2158 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Skyworks Solutions Inc.*

**Abstract:**

Parsing Failure: Change request category wrong on CR cover for TDoc [R4-2402407](file:///D:\RAN4%23110\Docs\R4-2402407.zip). Database value : F. CR cover value : Cat F. A revision will be required.

**Decision:** The document was **revised to** [**R4-2402935**](file:///D:\RAN4%23110\Docs\R4-2402935.zip).

[**R4-2402935**](file:///D:\RAN4%23110\Docs\R4-2402935.zip) **NS\_17 correction on Band n28 3 MHz operation in Japan**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2158 rev 1 Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Skyworks Solutions Inc.*

Qualcomm: there are changes to CA table in the CR. But CR is not covered in this release. Why do we touch CA table.

Huawei: our concern is that we do need MPR for Rel-17. We will provide the results in the next meeting. For this meeting we cannot agree on the CR.

Nokia: CA can be discussed further. To Huawei, 6dB margin exists for A-MPR in our simulation. Why do we need MPR?

**Decision: Postponed.**

[**R4-2402615**](file:///D:\RAN4%23110\Docs\R4-2402615.zip) **CR to TS 38.101-1 for sub 5MHz channel bandwidth**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2176 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision:** The document was **revised to** [**R4-2402638**](file:///D:\RAN4%23110\Docs\R4-2402638.zip).

[**R4-2402638**](file:///D:\RAN4%23110\Docs\R4-2402638.zip) **(NR\_FR1\_lessthan\_5MHz\_BW-Core) CR to TS 38.101-1 for sub 5MHz channel bandwidth**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2176 rev 1 Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Revised to R4-2403861 (from R4-2402638).**

[**R4-2403861**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403861.zip) **(NR\_FR1\_lessthan\_5MHz\_BW-Core) CR to TS 38.101-1 for sub 5MHz channel bandwidth**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2176 rev 1 Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Agreed.**

**Withdrawn**

[**R4-2400595**](file:///D:\RAN4%23110\Docs\R4-2400595.zip) **[NR\_FR1\_lessthan\_5MHz\_BW-Core] CR to add 3MHz CBW parameter values for EVM window length - TS38.101-1, Rel-18, Cat-F**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2025 rev Cat: F (Rel-18)  
  
 Source: Anritsu Limited*

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

#### 8.10.3 BS RF requirement maintenance

#### 8.10.4 RRM core requirement maintenance

#### 8.10.5 RRM performance requirements

#### 8.10.6 Demodulation performance requirements

#### 8.10.7 Moderator summary and conclusions

[**R4-2401086**](file:///D:\RAN4%23110\Docs\R4-2401086.zip) **Topic summary for [110][127] NR\_FR1\_lessthan\_5MHz\_BW**

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

**Abstract:**

[110][127] NR\_FR1\_lessthan\_5MHz\_BW AI 8.10.1, 8.10.2

**Decision: Noted.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/03.Wednesday/05.%5B127%5D_R4-2401086.docx>

**Issue 1-1: Reply LS to RAN1 LS in** [**R4-2400012**](file:///D:\RAN4%23110\Docs\R4-2400012.zip) **(**[**R4-2400481**](file:///D:\RAN4%23110\Docs\R4-2400481.zip)**,** [**R4-2402237**](file:///D:\RAN4%23110\Docs\R4-2402237.zip)**,** [**R4-2402574**](file:///D:\RAN4%23110\Docs\R4-2402574.zip)**,** [**R4-2402809**](file:///D:\RAN4%23110\Docs\R4-2402809.zip)**,** [**R4-2402889**](file:///D:\RAN4%23110\Docs\R4-2402889.zip)**)**

**Agreements:**

* RAN4 agree that there would be issue for a UE not supporting less than 5MHz but provided with a neighbour cell with SSB on the new GSCN value in the handover scenario.
* RAN4 agree that there would be similar issue for LTE with SIB24 as NR with SIB4.
* RAN4 suggest RAN2 to handle this in RAN2 specifications.

**Issue 1-2: CR in** [**R4-2402638**](file:///D:\RAN4%23110\Docs\R4-2402638.zip) **(Revision of** [**R4-2402615**](file:///D:\RAN4%23110\Docs\R4-2402615.zip)**)**

**Agreement:**

* Revise the CR to include the phrase ‘in the current release’ as usually done.

**Issue 1-3: CR in** [**R4-2402616**](file:///D:\RAN4%23110\Docs\R4-2402616.zip)

**Agreement:**

* Revise the CR to include the phrase ‘in the current release’ as usually done.

### 8.11 Enhancement of TRP and TRS requirements and test methodologies

### 8.12 Enhancement of Multiple Input Multiple Output Over-the-Air test methodology and requirements for NR UEs

### 8.13 NR demodulation performance evolution

### 8.14 Expanded and improved NR positioning

#### 8.14.1 RF requirements maintenance

[**R4-2400044**](file:///D:\RAN4%23110\Docs\R4-2400044.zip) **Discussion on remaining UE RF issues for positioning**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

**LS out**

[**R4-2402503**](file:///D:\RAN4%23110\Docs\R4-2402503.zip) **Response to LS on SRS and PRS bandwidth aggregation for positioning on guard**

*Type: other For: Decision  
 Source: Ericsson*

**Abstract:**

LS to Ran1/RAN2 is discussed in this paper considering the WF last meeting. In the Annex a draft LS is proposed to To RAN1 and Cc RAN2 on LS on SRS and PRS bandwidth aggregation feature for positioning Rel-18 Work Item NR\_pos\_enh2.

**Decision: Revised to** [**R4-2403654**](file:///D:\RAN4%23110\Docs\R4-2403654.zip) **(from** [**R4-2402503**](file:///D:\RAN4%23110\Docs\R4-2402503.zip)**).**

[**R4-2403654**](file:///D:\RAN4%23110\Docs\R4-2403654.zip) **Response to LS on SRS and PRS bandwidth aggregation for positioning on guard**

*Type: other For: Decision  
 Source: Ericsson*

**Abstract:**

LS to Ran1/RAN2 is discussed in this paper considering the WF last meeting. In the Annex a draft LS is proposed to To RAN1 and Cc RAN2 on LS on SRS and PRS bandwidth aggregation feature for positioning Rel-18 Work Item NR\_pos\_enh2.

**Decision: Approved.**

**Draft CR**

[**R4-2402504**](file:///D:\RAN4%23110\Docs\R4-2402504.zip) **Draft CR to 38.101-1 for SRS aggregation for positioning**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to add teh RF requirement for feature 41-4-7

**Decision: Revised to** [**R4-2403655**](file:///D:\RAN4%23110\Docs\R4-2403655.zip) **(from** [**R4-2402504**](file:///D:\RAN4%23110\Docs\R4-2402504.zip)**).**

**[R4-2403655](D:\\RAN4#110\\Docs\\R4-2403655.zip) Draft CR to 38.101-1 for SRS aggregation for positioning**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to add teh RF requirement for feature 41-4-7

**Decision: Endorsed.**

[**R4-2403858**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403858.zip) **Big CR for to 38.101-1 for SRS aggregation for positioning**

*Type: CR For Agreement  
 38.101-1 v18.x.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Decision: Agreed.**

#### 8.14.2 RRM core requirements maintenance

#### 8.14.3 RRM performance requirements

#### 8.14.4 Moderator summary and conclusions

[**R4-2401087**](file:///D:\RAN4%23110\Docs\R4-2401087.zip) **Topic summary for [110][128] NR\_pos\_enh2\_UERF**

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

**Abstract:**

[110][128] NR\_pos\_enh2\_UERF AI 8.14.1

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403656**](file:///D:\RAN4%23110\Docs\R4-2403656.zip) **WF on UE RF for NR positioning enhancement**

*Type: other For: Approval  
 Source: CATT*

**Decision: Approved.**

**Minutes and agreements after the first round**

Refer to the hyperlinks below for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/02.Tuesday/09.%5B128%5D_R4-2401087%20Topic%20summary%20for%20%5B110%5D%5B128%5D%20NR_pos_enh2_UERF.docx>

**Issue 1-1: How to understand the difference between the feature 41-4-6 and 41-4-7**

* Proposals
  + Option 1:
    - CA capability is pre-requisite for a UE support feature 41-4-6
    - 41-4-7 is decoupled with CA
* Recommended WF
  + Option 1 is agreed

**Agreement:**

* CA capability is pre-requisite for a UE support feature 41-4-6
* 41-4-7 is decoupled with CA

**Issue 1-2: UE RF requirements for 41-4-6**

* Proposals
  + Option 1: The requirements can be covered by current intra-band contiguous CA requirements
* Recommended WF
  + Option 1 is agreed

**Agreement:**

* No new RF requirement need be specified for 41-4-6.
  + FFS on whether and which intra-band contiguous CA requirement can be applied.

**Issue 1-3: Parameter defined in feature 41-4-6**

* Proposals
  + Option 1: Parameter defined in feature 41-4-6 needs to be in line with CA capability.
* Recommended WF
  + Option 1 is agreed
  + The wording in the LS can be further discussed when LS is drafted.

**Agreement:**

* Parameter defined in feature 41-4-6 needs to be in line with CA capability.
  + FFS on the list which parameters should be aligned

**Issue 1-5: Power class for 41-4-7**

* Proposals
  + Option 1: the power class to transmit the SRS aggregated CCs needs to be reported
* Recommended WF
  + Option 1 is agreed
  + The UE RF requirements related to power class can be further discussed.

**Agreement:**

* the power class to transmit the SRS aggregated CCs needs to be reported.
  + FFS on the details of reporting

### 8.15 Multi-carrier enhancements for NR

#### 8.15.1 Maintenance for switching time and other RF aspects up to 3 or 4 bands

[**R4-2401106**](file:///D:\RAN4%23110\Docs\R4-2401106.zip) **Views on RAN2 LS and UE feature list for Rel-18 Tx switching**

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

**Decision: Noted.**

[**R4-2401523**](file:///D:\RAN4%23110\Docs\R4-2401523.zip) **Discussion of LS on UL Tx switching**

*Type: other For: Discussion  
 Source: vivo*

**Abstract:**

Session Chair: Treat this under email thread [129].

**Decision: Noted.**

[**R4-2401542**](file:///D:\RAN4%23110\Docs\R4-2401542.zip) **Discussions and updated Schedule for Rel-18 TRP TRS requirements work**

*Type: other For: Approval  
 Source: vivo*

**Abstract:**

Session Chair: Treat this under email thread [129].

**Decision: Noted.**

**LS out**

[**R4-2401277**](file:///D:\RAN4%23110\Docs\R4-2401277.zip) **Reply LS on UL Tx switching**

*Type: LS out For: Approval  
 to RAN2  
 Source: ZTE Corporation*

**Decision: Noted.**

[**R4-2401524**](file:///D:\RAN4%23110\Docs\R4-2401524.zip) **[Draft] Reply LS on UL Tx switching**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: vivo*

**Decision: Revised to** [**R4-2403657**](file:///D:\RAN4%23110\Docs\R4-2403657.zip) **(from** [**R4-2401524**](file:///D:\RAN4%23110\Docs\R4-2401524.zip)**).**

[**R4-2403657**](file:///D:\RAN4%23110\Docs\R4-2403657.zip) **[Draft] Reply LS on UL Tx switching**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: vivo*

**Decision: Approved.**

**Draft CR**

[**R4-2401525**](file:///D:\RAN4%23110\Docs\R4-2401525.zip) **Corrections of UL Tx switching period applicability for 2 band case for Rel-18**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Abstract:**

Session Chair: Treat this under email thread [129].

**Decision: Not pursued.**

##### 8.15.1.1 UL Tx switching with single TAG

[**R4-2402312**](file:///D:\RAN4%23110\Docs\R4-2402312.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.**

**CR/Draft CR**

[**R4-2400851**](file:///D:\RAN4%23110\Docs\R4-2400851.zip) **(NR\_MC\_enh-Core) CR for 38.101-1: Correction on time mask for Rel-18 Tx switching**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2053 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

*ZTE: need more time to check.*

*Huawei: we have concern that RAN1 spec has different structure than RAN4. The CR is not against the agreement.*

**Decision: Agreed.**

[**R4-2400937**](file:///D:\RAN4%23110\Docs\R4-2400937.zip) **CR for 38.101-1: Capability update for tx switching across three or four uplink bands**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2061 rev Cat: F (Rel-18)  
  
 Source: China Telecom*

**Abstract:**

Update the capability for unaffected band involved for DualUL. The uplinkTxSwitchingMaintainedUL-Trans -r18 is changed to be maintainedUL-Trans-r18

Mediatek:

**Decision: Endorsed.**

[**R4-2401844**](file:///D:\RAN4%23110\Docs\R4-2401844.zip) **(NR\_MC\_enh-Core) Clarification of three-band switching gap lengths for CA and SUL**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to clarify the wording on the switching gap length for three-band switching for CA and SUL (start and end points unclear, correction of notation and removal of square brackets)

**Decision: Endorsed.**

##### 8.15.1.2 UL Tx switching with multiple TAGs (CRs corresponding to RAN discussion can be submitted in this agenda)

#### 8.15.2 RRM core requirements maintenance

#### 8.15.3 RRM performance requirements

#### 8.15.4 Moderator summary and conclusions

[**R4-2401088**](file:///D:\RAN4%23110\Docs\R4-2401088.zip) **Topic summary for [110][129] NR\_MC\_enh\_UERF**

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

**Abstract:**

[110][129] NR\_MC\_enh\_UERF AI 8.15.1

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403658**](file:///D:\RAN4%23110\Docs\R4-2403658.zip) **WF on MC UE RF requirements and feature list**

*Type: other For: Approval  
 Source: China Telecom*

**Decision: Revised to R4-2403865 (from R4-2403658).**

[**R4-2403865**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403865.zip) **WF on MC UE RF requirements and feature list**

*Type: other For: Approval  
 Source: China Telecom*

**Decision: Approved.**

**Minutes and agreements after the first round**

Refer to the hyperlinks below for details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/02.Tuesday/10.%5B129%5D_R4-2401088%20summary%20for%20%5B110%5D%5B129%5D%20NR_MC_enh_UERF_v0.docx>

**Issue 1-1-1:** [**R4-2400022**](file:///D:\RAN4%23110\Docs\R4-2400022.zip) **LS on UL Tx switching**

**Agreement:**

* Extend the 3/4 band requirements to also cover 2 band fallback cases in Rel-18.

**Issue 1-2-2: On-going capabilities**

**Agreement:**

* Do not distinguish one TAG and two TAG
* Do not distinguish 3 band and 4 band cases
* Remove FG 38-3
* Align the wording for 38-8 and 38-9 based on RAN4 agreements

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| 38.  NR\_MC\_enh | 38-1 | Switching period for dynamic UL Tx switching across up to 4 bands in case of inter-band CA, SUL up to two TAGs | UE to indicate support of dynamic UL Tx switching across up to 4 bands for inter-band UL CA, or SUL.  switchingPeriodFor2T-r18 indicates the length of 2Tx-2Tx switching period. switchingPeriodFor1T-r18 indicates the length of 1Tx-2Tx switching and/or 1Tx-1Tx switching period, as specified in TS 38.101-1. n35us represents 35 us, n140us represents 140us, and n210us represents 210us, as specified in TS 38.101-1. |  | Yes |  | UL Tx switching across more than 2 bands cannot be supported for the band pair in the band combination | Per BC, details are up to RAN2 | No need | Applicable only to FR1 |  |  | Optional with capability signaling |

### 8.16 Further NR mobility enhancements

### 8.17 Dual Tx/Rx Multi-SIM for NR

### 8.18 NR NTN enhancement

#### 8.18.1 General aspects

#### 8.18.2 Co-existence study for above 10GHz bands

#### 8.18.3 SAN RF requirements

#### 8.18.4 SAN RF conformance testing requirements

#### 8.18.5 UE RF requirements

**Big CR**

[**R4-2401116**](file:///D:\RAN4%23110\Docs\R4-2401116.zip) **Big CR on TS38.101-5 for UE RF Requirements**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0060 rev Cat: B (Rel-18)  
  
 Source: Samsung Electronics France SA*

**Abstract:**

reserved for Big CR on TS 38.101-5

**Decision:** The document was **for email approval**.

**Discussion**

[**R4-2402523**](file:///D:\RAN4%23110\Docs\R4-2402523.zip) **Joint contribution for NTN VSAT RF requirements in Ka-band**

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

**Decision: Noted.**

[**R4-2402933**](file:///D:\RAN4%23110\Docs\R4-2402933.zip) **Remaining issues on VSAT UE requirements for above 10 GHz**

*Type: discussion For: Discussion  
 Source: THALES, Magister Solutions Ltd*

**Abstract:**

The current paper is to discuss the latest remaining issues for VSAT UE requirement definition in above 10 GHz applicable to TS 38.101-5.

**Decision: Noted.**

##### 8.18.5.1 Tx RF requirements

[**R4-2400285**](file:///D:\RAN4%23110\Docs\R4-2400285.zip) **Discussions on NTN UE Tx RF requirements**

*Type: other For: Approval  
 Source: Samsung*

**Decision: Noted.**

[**R4-2400712**](file:///D:\RAN4%23110\Docs\R4-2400712.zip) **VSAT device type reference architecture and requirements**

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

**Decision: Noted.**

[**R4-2402062**](file:///D:\RAN4%23110\Docs\R4-2402062.zip) **Discussion on Tx requirement for Ka band NTN UE**

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

**Decision: Noted.**

[**R4-2402331**](file:///D:\RAN4%23110\Docs\R4-2402331.zip) **NTN enhancement: VSAT spurious emission**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution discusses the VSAT spurious requirements, with a detailed analysis of Europe situation

**Decision: Noted.**

[**R4-2402521**](file:///D:\RAN4%23110\Docs\R4-2402521.zip) **Further discussion on UE Tx RF requirements for NTN in Ka-band**

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

**Decision: Noted.**

**Draft CR**

[**R4-2400286**](file:///D:\RAN4%23110\Docs\R4-2400286.zip) **draftCR to TS 38.101-5 sub-clause 9.2.1**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

Inmarsat: misalignment of terminology. Use GSO and Non-GSO.

R&S: Can we add the terms in section 3?

Ericsson: OK with GSO. We should use LEO rather than non-GSO.

Qualcomm: we have different numbers for GSO and LEO. Worst case for UE or BS?

**Decision: Revised to** [**R4-2403641**](file:///D:\RAN4%23110\Docs\R4-2403641.zip) **(from** [**R4-2400286**](file:///D:\RAN4%23110\Docs\R4-2400286.zip)**).**

[**R4-2403641**](file:///D:\RAN4%23110\Docs\R4-2403641.zip) **draftCR to TS 38.101-5 sub-clause 9.2.1**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Samsung*

**Decision: Endorsed.**

[**R4-2400713**](file:///D:\RAN4%23110\Docs\R4-2400713.zip) **(NR\_NTN\_enh-Core) draft CR clarifications for the FCC requirements**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Qualcomm Incorporated*

**Decision: Endorsed.**

[**R4-2402329**](file:///D:\RAN4%23110\Docs\R4-2402329.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - clauses 9.2.3**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 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

ZTE: the last table should be TBD.

Huawei: we do not have power class definition for Ka band. The concept is not correct.

LGE: Pumax includes the tolerance. No need to have tolerance table.

Huawei: there is no definition of P\_Powerclass.

**Decision: Revised to** [**R4-2403642**](file:///D:\RAN4%23110\Docs\R4-2403642.zip) **(from** [**R4-2402329**](file:///D:\RAN4%23110\Docs\R4-2402329.zip)**).**

[**R4-2403642**](file:///D:\RAN4%23110\Docs\R4-2403642.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - clauses 9.2.3**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

**Decision: Endorsed.**

[**R4-2402332**](file:///D:\RAN4%23110\Docs\R4-2402332.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - Tx spurious**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Thales*

**Abstract:**

This contribution is a draft CR to TS 38.101-5, introducing NTN Ka-band, drafting clause 10.7

**Decision:** The document was **revised to** [**R4-2402762**](file:///D:\RAN4%23110\Docs\R4-2402762.zip).

[**R4-2402762**](file:///D:\RAN4%23110\Docs\R4-2402762.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - Tx spurious**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson, Thales*

(Replaces [R4-2402332](file:///D:\RAN4%23110\Docs\R4-2402332.zip))

**Abstract:**

This contribution is a draft CR to TS 38.101-5, introducing NTN Ka-band, drafting clause 10.7

ZTE: the table should be aligned with the conclusion on TRP vs ERIP.

**Decision: Endorsed.**

[**R4-2402526**](file:///D:\RAN4%23110\Docs\R4-2402526.zip) **Draft CR to TS 38.101-5 Clause 9.3 Output power dynamics**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2403643**](file:///D:\RAN4%23110\Docs\R4-2403643.zip) **(from** [**R4-2402526**](file:///D:\RAN4%23110\Docs\R4-2402526.zip)**).**

[**R4-2403643**](file:///D:\RAN4%23110\Docs\R4-2403643.zip) **Draft CR to TS 38.101-5 Clause 9.3 Output power dynamics**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

*Huawei: Time mask is applied to TDD. NTN is FDD.*

*Ericsson: we can consider time mask but we just need to point to the corresponding requirments.*

**Decision: Endorsed.**

[**R4-2402924**](file:///D:\RAN4%23110\Docs\R4-2402924.zip) **Draft CR for 38101-5**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: THALES*

**Abstract:**

Finalisation of requirements in TS 38.101-5 for NTN UE in Ka-band with clauses 9.5.2.2, 9.6.

**Decision: Revised to** [**R4-2403644**](file:///D:\RAN4%23110\Docs\R4-2403644.zip) **(from** [**R4-2402924**](file:///D:\RAN4%23110\Docs\R4-2402924.zip)**).**

**[R4-2403644](D:\\RAN4#110\\Docs\\R4-2403644.zip) Draft CR for 38101-5**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: THALES*

**Abstract:**

Finalisation of requirements in TS 38.101-5 for NTN UE in Ka-band with clauses 9.5.2.2, 9.6.

Huawei: additional NS value should be added.

**Decision: Endorsed.**

##### 8.18.5.2 Rx RF requirements

[**R4-2402063**](file:///D:\RAN4%23110\Docs\R4-2402063.zip) **Discussion on Rx requirement for Ka band NTN UE**

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

**Decision: Noted.**

[**R4-2402522**](file:///D:\RAN4%23110\Docs\R4-2402522.zip) **Further discussion on UE Rx RF requirements for NTN in Ka-band**

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

**Decision: Noted.**

**Draft CR**

[**R4-2402061**](file:///D:\RAN4%23110\Docs\R4-2402061.zip) **Draft CR for 38.101-5 to introduce clause 10.1~10.3**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

*ZTE: Revision and capture the agreed OTA values after discussion.*

**Decision: Revised to** [**R4-2403645**](file:///D:\RAN4%23110\Docs\R4-2403645.zip) **(from** [**R4-2402061**](file:///D:\RAN4%23110\Docs\R4-2402061.zip)**).**

[**R4-2403645**](file:///D:\RAN4%23110\Docs\R4-2403645.zip) **Draft CR for 38.101-5 to introduce clause 10.1~10.3**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

*ZTE: Revision and capture the agreed OTA values after discussion.*

**Decision: Endorsed.**

[**R4-2402330**](file:///D:\RAN4%23110\Docs\R4-2402330.zip) **NTN enhancement: draft CR to TS 38.101-5 NTN Ka-band - clauses 10.7**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 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: Endorsed.**

[**R4-2402527**](file:///D:\RAN4%23110\Docs\R4-2402527.zip) **Draft CR to TS 38.101-5 Clause 10.4 Maximum input power requirement**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Revised to** [**R4-2403646**](file:///D:\RAN4%23110\Docs\R4-2403646.zip) **(from** [**R4-2402527**](file:///D:\RAN4%23110\Docs\R4-2402527.zip)**).**

[**R4-2403646**](file:///D:\RAN4%23110\Docs\R4-2403646.zip) **Draft CR to TS 38.101-5 Clause 10.4 Maximum input power requirement**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2402528**](file:///D:\RAN4%23110\Docs\R4-2402528.zip) **Draft CR to TS 38.101-5 Clause 10.6 Blocking requirement**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

*Huawei: the interference level should be higher and we need discuss it.*

**Decision: Revised to** [**R4-2403647**](file:///D:\RAN4%23110\Docs\R4-2403647.zip) **(from** [**R4-2402528**](file:///D:\RAN4%23110\Docs\R4-2402528.zip)**).**

[**R4-2403647**](file:///D:\RAN4%23110\Docs\R4-2403647.zip) **Draft CR to TS 38.101-5 Clause 10.6 Blocking requirement**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

*Huawei: the interference level should be higher and we need discuss it.*

**Decision: Endorsed.**

[**R4-2402529**](file:///D:\RAN4%23110\Docs\R4-2402529.zip) **Draft CR to TS 38.101-5 Annex: NTN VSAT related FRC**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

*Huawei: FRC may not be applicable for FDD bands.*

*ZTE: for FR2, table comes from FR2-1. FDD configuraton should be updated accordingly. The other issue is the maximum order of modulation.*

**Decision: Revised to** [**R4-2403648**](file:///D:\RAN4%23110\Docs\R4-2403648.zip) **(from** [**R4-2402529**](file:///D:\RAN4%23110\Docs\R4-2402529.zip)**).**

**[R4-2403648](D:\\RAN4#110\\Docs\\R4-2403648.zip) Draft CR to TS 38.101-5 Annex: NTN VSAT related FRC**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

##### 8.18.5.3 PUSCH DMRS bundling requirements and others

**CR/ Draft CR**

[**R4-2402064**](file:///D:\RAN4%23110\Docs\R4-2402064.zip) **CR for 38.101-5 to introduce Phase continuity requirements for NTN UE DMRS bundling**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0068 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon*

Ericsson: we do not need copy this table. We can refer to Table.

**Decision: Revised to R4-2403866 (from R4-2402064).**

[**R4-2403866**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403866.zip) **CR for 38.101-5 to introduce Phase continuity requirements for NTN UE DMRS bundling**

*Type: CR For: Agreement  
 38.101-5 v18.4.0 CR-0068 rev Cat: B (Rel-18)  
  
 Source: Huawei, HiSilicon, Ericsson*

Ericsson: we do not need copy this table. We can refer to Table.

**Decision: Agreed.**

[**R4-2402496**](file:///D:\RAN4%23110\Docs\R4-2402496.zip) **Draft CR to 38.101-5 on DMRS bundling for FR1**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

in this CR, we provide the DMRS bundling requirment updates in specificaiton

Huawei: TDD condition should be removed. The window is not applicable to NGSO.

**Decision: Merged (with R4-24xxxxx).**

[**R4-2402497**](file:///D:\RAN4%23110\Docs\R4-2402497.zip) **Draft CR to 38.101-5 on DMRS bundling for FR2**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

in this CR, we provide the DMRS bundling requirment updates for NTN FR2 band in specificaiton

**Decision: Revised to R4-2403867 (from R4-2402497).**

[**R4-2403867**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403867.zip) **Draft CR to 38.101-5 on DMRS bundling for FR2**

*Type: draftCR For: Endorsement  
 38.101-5 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

in this CR, we provide the DMRS bundling requirment updates for NTN FR2 band in specificaiton

**Decision: Endorsed.**

**LS out**

[**R4-2402498**](file:///D:\RAN4%23110\Docs\R4-2402498.zip) **LS on DMRS\_bundling capaiblity extension to FR2 FDD band**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

in this LS, we propose to extend the previous new capability to FR2

**Decision: Withdrawn.**

#### 8.18.6 RRM core requirements

#### 8.18.7 RRM performance requirements

#### 8.18.8 Demodulation performance requirements

#### 8.18.9 Moderator summary and conclusions

[**R4-2401089**](file:///D:\RAN4%23110\Docs\R4-2401089.zip) **Topic summary for [110][130] NR\_NTN\_enh\_UERF**

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

**Abstract:**

[110][130] NR\_NTN\_enh\_UERF AI 8.18.5

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403649**](file:///D:\RAN4%23110\Docs\R4-2403649.zip) **WF on NR-NTN UE RF requirements**

*Type: other For: Approval  
 Source: ZTE, Samsung*

**Decision: Approved.**

**Minutes and agreements after the first round**

Refer to the hyperlinks below for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/02.Tuesday/06.%5B130%5D_R4-2401089%20Topic%20summary%20for%20%5B110%5D%5B130%5D%20NR_NTN_enh_UERF_v04.docx>

**Issue 2-1: The minimum peak EIRP and minimum output power for VSAT**

**Agreement:**

* Define two sets of minimum peak EIRP requirements
  + Set 1 requirements: based on type 1/2 UE with GSO, which can cover type 4/5 UE with GSO
  + Set 2 requirements: for type 3 UE with LEO [600]km
    - For (type 3 UE) fixed VSAT supporting LEO only with electronical steering antenna, specify the minimum EIRP as [60, 62, or 67.6] dBm.
      * Further down-selection of the values of minimum EIRP

**Issue 2-3: Transmitter spurious emission**

**Agreement:**

* Further check if Prated,c,sys is based on TRP or EIRP.
  + If Prated,c,sys is based on TRP, go with proposal 3
  + If Prated,c,sys is based on EIRP, go with proposal 4

**Issue 2-6: the applicability of antenna type for GSO and LEO scenario**

**Agreement:**

* Add the following definitions:
  + Co-polarized transmission: when the DUT transmission antenna polarization is aligned with test antenna polarization.
  + Cross-polarized transmission: when the DUT transmission antenna polarization is aligned with the tangent of the test antenna polarization.

**Issue 2-7: feature list**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Features** | **Index** | **Feature group** | **Components** | **Prerequisite feature groups** | **Need for the gNB to know if the feature is supported** | **Applicable to the capability signalling exchange between UEs (V2X WI only)”.** | **Consequence if the feature is not supported by the UE** | **Type**  **(the ‘type’ definition from UE features should be based on the granularity of 1) Per UE or 2) Per Band or 3) Per BC or 4) Per FS or 5) Per FSPC)** | **Need of FDD/TDD differentiation** | **Need of FR1/FR2 differentiation** | **Capability interpretation for mixture of FDD/TDD and/or FR1/FR2** | **Note** | **Mandatory/Optional** |
| 40.NR\_NTN\_enh | 40-1 | VSAT UE type in NTN | Support of fixed or mobile VSAT (Very Small Aperture Terminal) UE type  a) Type 1: a fixed VSAT, which is allowed to access to a cell for MSS (mobile satellite service) or FSS (fixed satellite service) from regulation perspective.  b) Type 2: a mobile VSAT, which is allowed to access to an MSS cell from regulation perspective.  A VSAT (Very Small Aperture Terminal) UE as defined in TS 38.101-5 must indicate support of this capability with only one type. If this capability is absent, a mobile VSAT is supported by default. |  | Yes | N/A | The network doesn’t know the VSAT UE type and cannot decide whether it’s allowed to handover this UE to an FSS cell. | Per UE | N/A | N/A | N/A | Support receiving access control indication in system information | Optional with capability signalling |
| 40.NR\_NTN\_enh | 40-2 | Beam steering | Support of beam steering capability   1. Type 1: Fully electronically-steered beam UEs 2. Type 2: Fully mechanically-steered beam UEs   A VSAT (Very Small Aperture Terminal) UE as defined in TS 38.101-5 must indicate support of this capability with only one type. |  | Yes | N/A | Beam steering is not supported. | [Per-band or per UE] | FDD only | N/A | N/A | The capability is not applicable for UE other than VSAT. | Optional with capability signaling |

**Issue 2-1: REFSENS requirements**

**Agreement:**

* For minimum EIS requirement,Lower aperture size/low antenna gain compared with 60cm/39.7dBi simulation assumption could be considered for minimum EIS requirement.
  + FFS on the concrete values of requirements

**Issue 2-2: Maximum input power for NTN VSAT**

**Agreement:**

* Specify [-101]dBm as OTA maximum input level for (type 3 UE) fixed VSAT supporting LEO only with electronical steering antenna.
  + Take the proposal 2 method into consideration for the further evaluation to confirm the value above
  + Further study on the modulation order for maximum input level.

**Issue 2-7: Others**

* Proposal 1: References and inputs should be carefully used between GSO and NGSO:

**Agreement:**

* Use ERC 74-01 as reference for band n512.

### 8.19 Further NR coverage enhancements

#### 8.19.1 UE RF requirements maintenance

[**R4-2402386**](file:///D:\RAN4%23110\Docs\R4-2402386.zip) **Discussion on power class capability for NR Coverage Enhancement**

*Type: discussion For: Discussion  
 Source: LG Electronics UK*

**Decision: Noted.**

**LS out**

[**R4-2402438**](file:///D:\RAN4%23110\Docs\R4-2402438.zip) **Draft LS on power class capability for NR Coverage Enhancement**

*Type: LS out For: Approval  
 to RAN2  
 Source: LG Electronics UK*

**Abstract:**

Chair: This should be treated under email thread [131].

**Decision: Revised to** [**R4-2403659**](file:///D:\RAN4%23110\Docs\R4-2403659.zip) **(from** [**R4-2402438**](file:///D:\RAN4%23110\Docs\R4-2402438.zip)**).**

**[R4-2403659](D:\\RAN4#110\\Docs\\R4-2403659.zip) Draft LS on power class capability for NR Coverage Enhancement**

*Type: LS out For: Approval  
 to RAN2  
 Source: LG Electronics UK*

**Abstract:**

Chair: This should be treated under email thread [131].

**Decision: Approved.**

##### 8.19.1.1 Enhancement of increasing UE power high limit for CA and DC

[**R4-2400339**](file:///D:\RAN4%23110\Docs\R4-2400339.zip) **Necessity of UE capability associated with dpc-Reporting-FR1**

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

**Abstract:**

This contribution discusses necessity of a UE capability for dpc-Reporting-FR1.

**Decision: Noted.**

[**R4-2402926**](file:///D:\RAN4%23110\Docs\R4-2402926.zip) **On Power Class for Uplink Tx Switching**

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

**Decision: Noted.**

**CR/Draft CR**

[**R4-2400337**](file:///D:\RAN4%23110\Docs\R4-2400337.zip) **(NR\_cov\_enh2-Core) Correction on dpc-Reporting-FR1 related requirements**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-1998 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Samsung*

**Abstract:**

Modify notes associated with dpc-Reporting-FR1 to make them alinged with RAN2 specifications, i.e., a UE supports this feature needs to be configured with dpc-Reporting-FR1 to make it enabled.

**Decision: Agreed.**

[**R4-2400338**](file:///D:\RAN4%23110\Docs\R4-2400338.zip) **(NR\_cov\_enh2-Core) Correction on dpc-Reporting-FR1 related requirements**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1124 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Modify notes associated with dpc-Reporting-FR1 to make them alinged with RAN2 specifications, i.e., a UE supports this feature needs to be configured with dpc-Reporting-FR1 to make it enabled.

**Decision: Agreed.**

[**R4-2401845**](file:///D:\RAN4%23110\Docs\R4-2401845.zip) **(NR\_cov\_enh2-Core) Correction of Pcmax per serving cell to enable the DPC reporting feature for all UEs**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the Pcmax for serving cells to enable the DPC reporting and improving scheduling for all UEs, including UEs not reporting duty-cycle capabilities

**Decision: Not pursued.**

[**R4-2402618**](file:///D:\RAN4%23110\Docs\R4-2402618.zip) **(NR\_cov\_enh2-Core) CR to TS38.101-1 on higher power limit for inter-band CA with an intra-band component**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2178 rev Cat: F (Rel-18)  
  
 Source: MediaTek Inc.*

**Decision: Agreed.**

**LS out**

[**R4-2400340**](file:///D:\RAN4%23110\Docs\R4-2400340.zip) **Draft LS on dpc-Reporting-FR1**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

An LS to request to introduce a UE capability for dpc-Reporting-FR1.

**Decision: Revised to** [**R4-2403660**](file:///D:\RAN4%23110\Docs\R4-2403660.zip) **(from** [**R4-2400340**](file:///D:\RAN4%23110\Docs\R4-2400340.zip)**).**

**[R4-2403660](D:\\RAN4#110\\Docs\\R4-2403660.zip) Draft LS on dpc-Reporting-FR1**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

An LS to request to introduce a UE capability for dpc-Reporting-FR1.

**Decision: Noted.**

##### 8.19.1.2 Enhancement to reduce MPR/PAR

[**R4-2400956**](file:///D:\RAN4%23110\Docs\R4-2400956.zip) **Remaining issues for Rel-18 MPR reduction**

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

**Decision: Noted.**

[**R4-2401508**](file:///D:\RAN4%23110\Docs\R4-2401508.zip) **Discussion on the revision of MPR reduction and A-MPR part**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2402506**](file:///D:\RAN4%23110\Docs\R4-2402506.zip) **NR coverage enhancement feature**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

the power boosting feature is discussed in this paper

**Decision: Noted.**

**CR/Draft CR**

[**R4-2400957**](file:///D:\RAN4%23110\Docs\R4-2400957.zip) **Draft CR for 38.101-1: clarification on Rel-18 power boosting**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2401507**](file:///D:\RAN4%23110\Docs\R4-2401507.zip) **draft CR to 38.101 for revision and supplement of MPR reduction and A-MPR part**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2402085**](file:///D:\RAN4%23110\Docs\R4-2402085.zip) **(NR\_cov\_enh2) BigCR to 38.101 for Corrections for MPR reduction**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2139 rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell, Huawei, HiSilicon, vivo, Ericsson*

**Decision: Agreed.**

[**R4-2402086**](file:///D:\RAN4%23110\Docs\R4-2402086.zip) **(NR\_cov\_enh2) draftCR to 38.101 for Corrections for MPR reduction**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Decision: Merged (with R4-24xxxxx).**

[**R4-2402505**](file:///D:\RAN4%23110\Docs\R4-2402505.zip) **Draft CR to 38.101-1 for coverage enhancement maintenance**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the power boosting feature

**Decision: Merged (with R4-24xxxxx).**

#### 8.19.2 BS demodulation performance requirements

#### 8.19.3 Moderator summary and conclusions

[**R4-2401090**](file:///D:\RAN4%23110\Docs\R4-2401090.zip) **Topic summary for [110][131] NR\_cov\_enh2\_part1**

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

**Abstract:**

[110][131] NR\_cov\_enh2\_part1 AI 8.19.1, 8.19.1.1

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403661**](file:///D:\RAN4%23110\Docs\R4-2403661.zip) **WF on coverage enhancement for part 1**

*Type: other For: Approval  
 Source: Huawei*

**Decision: Revised to R4-2403862 (from R4-2403661).**

[**R4-2403862**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403862.zip) **WF on coverage enhancement for part 1**

*Type: other For: Approval  
 Source: Huawei*

**Decision: Return to.**

**Minutes and agreements after the first round**

Refer to the hyperlinks below for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/02.Tuesday/11.%5B131%5D_R4-2401090%20Topic%20summary%20for%20%5B110%5D%5B131%5D%20NR_cov_enh2_part1_v1.docx>

**Issue 1-1: Whether to introduce UE capability for dpc-Reporting-FR1**

**Agreement:**

* Introduce UE capability for dpc-Reporting-FR1

**Issue 1-3: Whether to extend the value range of PowerClassPerBandPerBC in order to cover PC5 for better support high power limit for PC3+PC5 CA/DC**

* Proposals
  + Option 1: Yes, inform RAN2 to include PC5 on top of {PC1.5, PC2, PC3} into ue-PowerClassPerBandPerBC-r17. (LG)
  + Option 2: Others.
* Recommended WF
  + TBA

**Agreement:**

* Inform RAN2 that per-band per BC power class capability should include power class 5 since Rel-18.

**Issue 1-4: On the incomplete subscript for ppowerclass\_CA**

* Proposals
  + Option 1: Approve CR [R4-2402618](file:///D:\RAN4%23110\Docs\R4-2402618.zip), in which **ppowerclass\_CA** is changed to **ppowerclass\_CA, B** as it is supposed to be in TS 38.101-1 clause 6.2A.4.1.3. (MediaTek)
  + Option 2: Others.
* Recommended WF
  + Option 1.

**Agreement:**

* **ppowerclass\_CA** is changed to **ppowerclass\_CA, B** in TS 38.101-1 clause 6.2A.4.1.3.

[**R4-2401091**](file:///D:\RAN4%23110\Docs\R4-2401091.zip) **Topic summary for [110][132] NR\_cov\_enh2\_part2**

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

**Abstract:**

[110][132] NR\_cov\_enh2\_part2 AI 8.19.1.2

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403662**](file:///D:\RAN4%23110\Docs\R4-2403662.zip) **WF on coverage enhancement for part 2**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Revised to R4-2403885 (from R4-2403662).**

[**R4-2403885**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403885.zip) **WF on coverage enhancement for part 2**

*Type: other For: Approval  
 Source: Nokia*

**Decision: Return to.**

**Minutes and agreements after the first round**

Refer to the hyperlinks below for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/02.Tuesday/12.%5B132%5D_R4-2401091%20Topic%20summary%20for%20%5B110%5D%5B132%5D%20NR_cov_enh2_part2_v1.docx>

**Issue 2-1-2:**

* Proposals
  + Option 1: Agree editorial changes (Nokia)  
    A white paper with black text

    Description automatically generated
  + Option 2: TBA
* Recommended WF
  + TBA

**Agreement:**

* Agree on Option 1.

**Issue 2-3-1: Clean Up**

* Proposals
  + Option 1: Minor editorials Nokia (R4- 2401507):  
     A screenshot of a computer program

    Description automatically generated
  + Option 2: TBA
* Recommended WF
  + TBA

**Agreement:**

* Agree on Option 1.

**Issue 3-2: Configured transmitted power for UL MIMO**

* Proposals
  + Option 1: Ericsson ([R4-2402505](file:///D:\RAN4%23110\Docs\R4-2402505.zip)):

A screenshot of a computer

Description automatically generated

* + Option 2: TBA
* Recommended WF
  + TBA

**Agreement:**

* Agree on Option 1.

### 8.20 NR Network-controlled Repeaters

### 8.21 NR MIMO evolution for downlink and uplink

#### 8.21.1 UE RF requirements maintenance for simultaneous transmission with multi-panel (STxMP)

##### 8.21.1.1 Configured transmitted power

**Topic #1: STxMP**

[**R4-2400731**](file:///D:\RAN4%23110\Docs\R4-2400731.zip) **UL Beam overlapping case for STxMP mDCI**

*Type: other For: Approval  
 Source: InterDigital, Europe, Ltd.*

**Abstract:**

Addressing the UL Beam overlapping case for STxMP mDCI.

**Decision: Noted.**

[**R4-2402877**](file:///D:\RAN4%23110\Docs\R4-2402877.zip) **On relaxation factor in the configured transmitted power for STxMP**

*Type: other For: Approval  
 Source: Ericsson India Private Limited*

**Decision: Noted.**

LS out

[**R4-2402380**](file:///D:\RAN4%23110\Docs\R4-2402380.zip) **Draft LS to inform conclusion of configured transmitted power for STxMP**

*Type: LS out For: Approval  
 to RAN2, cc RAN1  
 Source: Samsung*

**Decision: Noted.**

CR/Draft CR

[**R4-2401242**](file:///D:\RAN4%23110\Docs\R4-2401242.zip) **(NR\_MIMO\_evo\_DL\_UL-Core) CR for TS38.101-2: Remove redundant illustration from the statement of tolerance in configured transmitted power for STxMP**

*Type: CR For: Agreement  
 38.101-2 v18.4.0 CR-0715 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

[**R4-2401515**](file:///D:\RAN4%23110\Docs\R4-2401515.zip) **draft CR to 38.101-2 on FR2 sTxMP**

*Type: draftCR For: Endorsement  
 38.101-2 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Revised to** [**R4-2403631**](file:///D:\RAN4%23110\Docs\R4-2403631.zip) **(from** [**R4-2401515**](file:///D:\RAN4%23110\Docs\R4-2401515.zip)**).**

**[R4-2403631](D:\\RAN4#110\\Docs\\R4-2403631.zip) draft CR to 38.101-2 on FR2 sTxMP**

*Type: draftCR For: Endorsement  
 38.101-2 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Endorsed.**

##### 8.21.1.2 Other UE RF requirements

**Topic #2: 8Tx**

[**R4-2400347**](file:///D:\RAN4%23110\Docs\R4-2400347.zip) **On Relative Phase/Power Error Requirements within Port Groups for 8TX UE**

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

**Abstract:**

To discuss a request enclosed in RAN1 LS of R1-2312566.

**Decision: Noted.**

[**R4-2400711**](file:///D:\RAN4%23110\Docs\R4-2400711.zip) **UE capability for TDM's SRS for 8-port TX**

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

**Decision: Noted.**

[**R4-2401521**](file:///D:\RAN4%23110\Docs\R4-2401521.zip) **Discussion of LS On Relative Phase/Power Error Requirements within Port Groups for 8TX UE**

*Type: other For: Discussion  
 Source: vivo*

**Decision: Noted.**

LS out

[**R4-2400348**](file:///D:\RAN4%23110\Docs\R4-2400348.zip) **Draft LS reply on Relative Phase/Power Error Requirements within Port Groups for 8TX UE**

*Type: LS out For: Approval  
 to RAN1  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Draft LS reply to R1-2312566

**Decision: Revised to** [**R4-2403632**](file:///D:\RAN4%23110\Docs\R4-2403632.zip) **(from** [**R4-2400348**](file:///D:\RAN4%23110\Docs\R4-2400348.zip)**).**

[**R4-2403632**](file:///D:\RAN4%23110\Docs\R4-2403632.zip) **Draft LS reply on Relative Phase/Power Error Requirements within Port Groups for 8TX UE**

*Type: LS out For: Approval  
 to RAN1  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Draft LS reply to R1-2312566

**Decision: Approved.**

[**R4-2401522**](file:///D:\RAN4%23110\Docs\R4-2401522.zip) **[Draft] Reply LS on Relative Phase/Power Error Requirements within Port Groups for 8TX UE**

*Type: LS out For: Approval  
 to RAN1  
 Source: vivo*

**Decision: Noted.**

#### 8.21.2 RRM core requirements maintenance

#### 8.21.3 RRM performance requirements

#### 8.21.4 Demodulation performance requirements

#### 8.21.5 Moderator summary and conclusions

[**R4-2401092**](file:///D:\RAN4%23110\Docs\R4-2401092.zip) **Topic summary for [110][133] NR\_MIMO\_evo\_DL\_UL\_UERF**

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

**Abstract:**

[110][133] NR\_MIMO\_evo\_DL\_UL\_UERF AI 8.21.1

**Decision: Noted.**

**Minutes and agreements in the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/01.Monday/09.%5B133%5D_Summary_%5B110%5D%5B133%5D_MIMO_evo_v2_mod.docx>

**Issue 1-5: Remove Table 6.2.4-2 from where specifying the tolerance T(∆P) for applicable values of ∆P for STxMP in Clause 6.2K.4**

**Agreement:**

* Remove Table 6.2.4-2 from where specifying the tolerance T(∆P) for applicable values of ∆P for STxMP in Clause 6.2K.4

### 8.22 NR sidelink evolution

#### 8.22.1 UE RF requirements maintenance

[**R4-2401812**](file:///D:\RAN4%23110\Docs\R4-2401812.zip) **(NR\_SL\_enh2-Core) Big CR to TR 38.786 UE NR sidelink evolution**

*Type: CR For: Agreement  
 38.786 v18.0.0 CR-0002 rev Cat: F (Rel-18)  
  
 Source: OPPO*

**Decision:** The document was **for email approval**.

[**R4-2401813**](file:///D:\RAN4%23110\Docs\R4-2401813.zip) **(NR\_SL\_enh2-Core) BigCR to TS38.101-1 for Sidelink enhancement**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2124 rev Cat: F (Rel-18)  
  
 Source: OPPO*

**Decision:** The document was **for email approval**.

[**R4-2401530**](file:///D:\RAN4%23110\Docs\R4-2401530.zip) **(NR\_SL\_enh2-Core) Remaining issues for Rel-18 Sidelink evolution**

*Type: other For: Discussion  
 Source: vivo*

**Decision: Noted.**

**CR/Draft CR**

[**R4-2401215**](file:///D:\RAN4%23110\Docs\R4-2401215.zip) **CR for Rel-18 38.101-1 is to introduce the missed abbreviations and modify the arrangement of clause for SL-U**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2077 rev Cat: F (Rel-18)  
  
 Source: xiaomi*

**Decision: Revised to** [**R4-2403677**](file:///D:\RAN4%23110\Docs\R4-2403677.zip) **(from** [**R4-2401215**](file:///D:\RAN4%23110\Docs\R4-2401215.zip)**).**

[**R4-2403677**](file:///D:\RAN4%23110\Docs\R4-2403677.zip) **CR for Rel-18 38.101-1 is to introduce the missed abbreviations and modify the arrangement of clause for SL-U**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2077 rev Cat: F (Rel-18)  
  
 Source: xiaomi*

**Decision: Agreed.**

[**R4-2401531**](file:///D:\RAN4%23110\Docs\R4-2401531.zip) **(NR\_SL\_enh2-Core) Maintenance CR on requirements of sidelink evolution for TR 38.786**

*Type: draftCR For: Endorsement  
 38.786 v18.0.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Endorsed.**

##### 8.22.1.1 Sidelink on a single unlicensed spectrum

[**R4-2401432**](file:///D:\RAN4%23110\Docs\R4-2401432.zip) **On feature list of SL-U**

*Type: discussion For: Approval  
 Source: LG Electronics Finland*

**Abstract:**

In this paper, we provide our views on the default power class and the feature list related to Rel-18 SL-U power class based on the core requirements.

**Decision: Noted.**

**Draft CR**

[**R4-2401808**](file:///D:\RAN4%23110\Docs\R4-2401808.zip) **(NR\_SL\_enh2-Core) draftCR to TS38.101-1 for SL-U**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: OPPO*

**Decision: Endorsed.**

###### 8.22.1.1.1 System parameters (channel bandwidth, channel arrangement)

[**R4-2401809**](file:///D:\RAN4%23110\Docs\R4-2401809.zip) **(NR\_SL\_enh2-Core) Further discussion on the remaining NS values for SL-U**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

**Draft CR**

[**R4-2401532**](file:///D:\RAN4%23110\Docs\R4-2401532.zip) **(NR\_SL\_enh2-Core) Maintenance CR on system parameters of sidelink evolution for TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

*Meta: Maximum transmission bandwidth configuration is not needed. But the last sentence after the table is needed.*

*LGE: Our view is aligned with Meta. For wide band operation, no need to handle RB numbers. We can directly copy the table from NR-U. The last sentence should be captured.*

*Qualcomm: for table below, a subset of RB sets needs be modified.*

*Vivo: the table is needed.*

**Decision: Revised to** [**R4-2403678**](file:///D:\RAN4%23110\Docs\R4-2403678.zip) **(from** [**R4-2401532**](file:///D:\RAN4%23110\Docs\R4-2401532.zip)**).**

**[R4-2403678](D:\\RAN4#110\\Docs\\R4-2403678.zip) (NR\_SL\_enh2-Core) Maintenance CR on system parameters of sidelink evolution for TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Endorsed.**

###### 8.22.1.1.2 Tx requirements

[**R4-2401464**](file:///D:\RAN4%23110\Docs\R4-2401464.zip) **Remaining A-MPR NS values for SL-U**

*Type: discussion For: Approval  
 Source: LG Electronics Finland*

**Abstract:**

This document initiates the discussion and proposes a way forward on how to treat and define the remaining 12 NS values for NR SL-U to ensure worldwide use of this feature.

**Decision: Noted.**

[**R4-2401810**](file:///D:\RAN4%23110\Docs\R4-2401810.zip) **(NR\_SL\_enh2-Core) MPR results for PSFCH**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

**CR/Draft CR**

[**R4-2401153**](file:///D:\RAN4%23110\Docs\R4-2401153.zip) **draft CR on SL-U configured transmitted power.**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It is draft CR on SL-U default power class and configured tranmsitted power based on RAN4 agreement.

**Decision: Endorsed.**

[**R4-2401154**](file:///D:\RAN4%23110\Docs\R4-2401154.zip) **draft CR on SL-U operating band, NS\_61 CBW, MPR, and A-MPR**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It is draft CR to correct typos of SL-U operating band, NS\_61 CBW, MPR and A-MPR.

**Decision: Endorsed.**

[**R4-2401533**](file:///D:\RAN4%23110\Docs\R4-2401533.zip) **(NR\_SL\_enh2-Core) Maintenance CR on Tx and Rx requirements of sidelink evolution for TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

*LGE: technically we agree. Some editorial. Some modificiaiton is for NR\_U. We should avoid it.*

**Decision: Revised to** [**R4-2403679**](file:///D:\RAN4%23110\Docs\R4-2403679.zip) **(from** [**R4-2401533**](file:///D:\RAN4%23110\Docs\R4-2401533.zip)**).**

[**R4-2403679**](file:///D:\RAN4%23110\Docs\R4-2403679.zip) **(NR\_SL\_enh2-Core) Maintenance CR on Tx and Rx requirements of sidelink evolution for TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Endorsed.**

[**R4-2401559**](file:///D:\RAN4%23110\Docs\R4-2401559.zip) **Draft CR on NS\_28 and NS\_30 A-MPR for SL-U**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: LG Electronics Finland*

**Abstract:**

Add NS\_28 and NS\_30 A-MPR requirements for SL-U.

OPPO: the CR introduces the new feature requirements in the spec.

**Decision: Not pursued.**

[**R4-2401465**](file:///D:\RAN4%23110\Docs\R4-2401465.zip) **CR to TR 38.786 NS\_28 and NS\_30 A-MPR for SL-U**

*Type: CR For: Agreement  
 38.786 v18.0.0 CR-0001 rev Cat: F (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

Add NS\_28 and NS\_30 A-MPR requirements to TR 38.786 based on [R4-2401464](file:///D:\RAN4%23110\Docs\R4-2401464.zip).

OPPO: check the CR.

**Decision: Agreed.**

[**R4-2401811**](file:///D:\RAN4%23110\Docs\R4-2401811.zip) **(NR\_SL\_enh2-Core) CR to TR 38.786 MPR results for PSFCH**

*Type: draftCR For: Endorsement  
 38.786 v18.0.0 CR- rev Cat: F (Rel-18)  
  
 Source: OPPO*

**Decision: Endorsed.**

###### 8.22.1.1.3 Rx requirements

##### 8.22.1.2 Con-current operation on Uu and sidelink

**Draft CR**

[**R4-2401807**](file:///D:\RAN4%23110\Docs\R4-2401807.zip) **(NR\_SL\_enh2-Core) draftCR to TS38.101-1 for SL-U concurrent operation**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: OPPO*

*Meta: The band is defined as NR band. Do not need differentiate it in this table.*

**Decision: Not pursued.**

##### 8.22.1.3 Sidelink CA

[**R4-2400722**](file:///D:\RAN4%23110\Docs\R4-2400722.zip) **(NR\_SL\_enh2-Core) PEMAX,CA for SL CA**

*Type: other For: Approval  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Qualcomm Technologies Int*

**Decision: Noted.**

[**R4-2401157**](file:///D:\RAN4%23110\Docs\R4-2401157.zip) **Maintenance of SL CA**

*Type: discussion For: Discussion  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It discussed SL CA MPR for non-contiguous RB allocation and SL CA A-MPR.

Huawei: there is no request from FCC. We can hold on it. There would be no need to intrdocue A-MPR.

LGE: We had discussion. We can consider the current FCC regulation. Based on current regulation, we can define the requirements.

Huawei: we have captured the simulation results already. We just need to point to TR. We are OK to discuss it in the future.

Qualcomm: support Huawei position to wait for FCC work finish.

**Decision: Noted.**

**CR/Draft CR**

[**R4-2400721**](file:///D:\RAN4%23110\Docs\R4-2400721.zip) **(NR\_SL\_enh2-Core) Bandwidth support for SL CA**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2051 rev Cat: F (Rel-18)  
  
 Source: Qualcomm*

**Decision: Endorsed.**

[**R4-2401155**](file:///D:\RAN4%23110\Docs\R4-2401155.zip) **draft CR on SL CA configured transmitted power**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It is draft CR to refer the corresponding IE name based on RAN2 agreement.

**Decision: Merged (with R4-24xxxxx).**

[**R4-2401156**](file:///D:\RAN4%23110\Docs\R4-2401156.zip) **draft CR on SL CA MPR for non-contiguous RB allocation**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: LG Electronics*

**Abstract:**

It is draft CR on SL CA MPR for non-contiguous RB allocation.

**Decision: Not pursued.**

[**R4-2401534**](file:///D:\RAN4%23110\Docs\R4-2401534.zip) **(NR\_SL\_enh2-Core) CR on updated the Pemax of Sidelink CA for TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

*LGE: we would like to put P\_EMAX,C*

**Decision: Revised to** [**R4-2403680**](file:///D:\RAN4%23110\Docs\R4-2403680.zip) **(from** [**R4-2401534**](file:///D:\RAN4%23110\Docs\R4-2401534.zip)**).**

[**R4-2403680**](file:///D:\RAN4%23110\Docs\R4-2403680.zip) **(NR\_SL\_enh2-Core) CR on updated the Pemax of Sidelink CA for TS 38.101-1**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

*LGE: we would like to put P\_EMAX,C*

**Decision: Endorsed.**

[**R4-2401535**](file:///D:\RAN4%23110\Docs\R4-2401535.zip) **(NR\_SL\_enh2-Core) CR on updated the Pemax of Sidelink CA for TR 38.786**

*Type: draftCR For: Endorsement  
 38.786 v18.0.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Revised to** [**R4-2403681**](file:///D:\RAN4%23110\Docs\R4-2403681.zip) **(from** [**R4-2401535**](file:///D:\RAN4%23110\Docs\R4-2401535.zip)**).**

[**R4-2403681**](file:///D:\RAN4%23110\Docs\R4-2403681.zip) **(NR\_SL\_enh2-Core) CR on updated the Pemax of Sidelink CA for TR 38.786**

*Type: draftCR For: Endorsement  
 38.786 v18.0.0 CR- rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Endorsed.**

[**R4-2401806**](file:///D:\RAN4%23110\Docs\R4-2401806.zip) **(NR\_SL\_enh2-Core) draftCR to TS38.101-1 for SL CA**

*Type: draftCR For: Endorsement  
 38.101-1 v18.4.0 CR- rev Cat: F (Rel-18)  
  
 Source: OPPO*

*Huawei: No non-contiguous CA. Is the change necessary?*

**Decision: Not pursued.**

[**R4-2402411**](file:///D:\RAN4%23110\Docs\R4-2402411.zip) **(NR\_SL\_enh2)CR to 38.101-1 on SL CA**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2159 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Merged (with R4-24xxxxx).**

**Withdrawn**

[**R4-2400869**](file:///D:\RAN4%23110\Docs\R4-2400869.zip) **(NR\_SL\_enh2)CR to 38.101-1 on SL CA**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2055 rev Cat: F (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

Parsing Failure: Release number wrong on CR cover for TDoc [R4-2400869](file:///D:\RAN4%23110\Docs\R4-2400869.zip). Database value : Rel-18. CR cover value : Rel-15. A revision will be required.

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

[**R4-2402402**](file:///D:\RAN4%23110\Docs\R4-2402402.zip) **(NR\_SL\_enh2)CR to 38.101-1 on SL CA**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2157 rev Cat: F (Rel-18)  
  
 Source: Huawei Device Co., Ltd*

**Abstract:**

Parsing Failure: Change request number wrong on CR cover for TDoc [R4-2402402](file:///D:\RAN4%23110\Docs\R4-2402402.zip). Database value : 2157. CR cover value : 2055. A revision will be required.

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

##### 8.22.1.4 Co-channel coexistence for LTE sidelink and NR sidelink

#### 8.22.2 RRM core requirements maintenance

#### 8.22.3 RRM performance requirements

#### 8.22.4 UE demodulation performance requirements

#### 8.22.5 Moderator summary and conclusions

[**R4-2401093**](file:///D:\RAN4%23110\Docs\R4-2401093.zip) **Topic summary for [110][134] NR\_SL\_enh2\_UERF\_part1**

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

**Abstract:**

[110][134] NR\_SL\_enh2\_UERF\_part1 AI 8.22.1.1

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403682**](file:///D:\RAN4%23110\Docs\R4-2403682.zip) **WF on SL contiguous CA with non-contiguous allocation and new NS values**

*Type: other For: Approval  
 Source: LGE*

**Decision: Revised to R4-2403868 (from R4-2403682).**

[**R4-2403868**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403868.zip) **WF on NR sidlink UE RF requirements**

*Type: other For: Approval  
 Source: LGE*

**Decision: Approved.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/03.Wednesday/13.%5B134%5D_R4-241xxxx%20Topic%20summary%20for%20%5B110%5D%5B134%5D%20NR_SL_enh2_UERF_part1_v00.docx>

**Issue 1-1-1: UE feature list**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Features** | **Index** | **Feature group** | **Components** | **Prerequisite feature groups** | **Need for the gNB to know if the feature is supported** | **Applicable to the capability signalling exchange between UEs (V2X WI only)”.** | **Consequence if the feature is not supported by the UE** | **Type**  **(the ‘type’ definition from UE features should be based on the granularity of 1) Per UE or 2) Per Band or 3) Per BC or 4) Per FS or 5) Per FSPC)** | **Need of FDD/TDD differentiation** | **Need of FR1/FR2 differentiation** | **Capability interpretation for mixture of FDD/TDD and/or FR1/FR2** | **Note** | **Mandatory/Optional** |
| 45.  NR\_SL\_enh2 | 45-3 | Power class for sidelink unlicensed | This parameter indicates the supported power class for this band used for sidelink unlicensed. If the field is absent, the UE supports the default power class in TS 38.101-1 [2], Table 6.2E.1F-1. |  | Yes | Yes | UE cannot transmit in proper power class as specified in 38.101-1, e.g., power class 5 | Per Band | No | FR1 only | N/A |  | Optional with capability signalling |

**Issue 1-2-1: Default power class**

* Proposals: Add Note 2: Power class 5 is default power class unless otherwise stated into the Table 6.2E.1F-1.
* Moderator WF:
  + Agree on adding the Note
  + Detail can be discussed in the draft CR [R4-2401153](file:///D:\RAN4%23110\Docs\R4-2401153.zip)

**Agreement:**

* Add Note 2: Power class 5 is default power class unless otherwise stated into the Table 6.2E.1F-1.

**Issue 1-2-2: Configured transmitted power**

* Proposals: Instead of refering 6.2E.4, introduce the requirement of SL-U transmitted power with corresponding power class, MPR, A-MPR and Pcma,c tolerance based on the agreement in RAN4#106bis-e
* Moderator WF:
  + Agree on adding the subclause for SL-U configured transmitted power
  + Detail can be discussed in the draft CR [R4-2401153](file:///D:\RAN4%23110\Docs\R4-2401153.zip)

**Agreement:**

* Agree on adding the subclause for SL-U configured transmitted power

**Issue 2-1-1: Remaining NS values for SL-U**

* Proposals
  + Proposal 1: Specify the A-MPR for NS\_28 and NS\_30 in this meeting (RAN4#110).
  + Proposal 2: If SL is agreed as Rel-19 RAN4-led package and the remaining NS values are included, specify them in Rel-19. If not, specify them in Rel-18 maintenance.
  + Proposal 3: To finish the NS values and corresponding requirements in Rel-19 RAN4 Sidelink WID.

**Agreement:**

* If SL is agreed as Rel-19 RAN4-led package and the remaining NS values are included, specify them in Rel-19. If not, specify them in Rel-18 maintenance.

**Issue 2-2-1: MPR results for PSFCH**

* Proposal: To capture OPPO’s MPR results in TR 387.786
* . Moderator WF:
  + Agree on the proposal

**Agreement:**

* Agree on the proposal

[**R4-2401094**](file:///D:\RAN4%23110\Docs\R4-2401094.zip) **Topic summary for [110][135] NR\_SL\_enh2\_UERF\_part2**

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

**Abstract:**

[110][135] NR\_SL\_enh2\_UERF\_part2 AI 8.22.1.2, 8.22.1.4

**Decision: Noted.**

[**R4-2401095**](file:///D:\RAN4%23110\Docs\R4-2401095.zip) **Topic summary for [110][136] NR\_SL\_enh2\_UERF\_part3**

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

**Abstract:**

[110][136] NR\_SL\_enh2\_UERF\_part3 AI 8.22.1.3

**Decision: Noted.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/03.Wednesday/15.%5B136%5D_draft_R4-2301095%20Topic%20summary%20for%20%5B110%5D%5B136%5D%20NR_SL_enh2_UERF_part3%20(2).docx>

**Issue 1: Channel bandwidth for Sidelink CA**

* Option 1: Brackets added around SL CA bandwidth for 20MHz

Table 5.3E.1A-1 NR SL intra-band contiguous CA operating bands for SL CA in FR1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Sidelink CA configuration / Bandwidth combination set** | | | | | | | |
| Sidelink CA configuration | Sidelink CA configuration for TX | Component carriers in order of increasing carrier frequency | | | | Maximum aggregated  bandwidth [MHz] | Bandwidth combination set |
| Channel bandwidths for carrier [MHz] | Channel bandwidths for carrier [MHz] | Channel bandwidths for carrier [MHz] | Channel bandwidths for carrier [MHz] |
| SL\_n47B | SL\_n47B | 10 | 10, 20,30 |  |  | 70 | 0 |
|  |  | [20] | [20,30] |  |  |  |  |
|  |  | 30 | 30,40 |  |  |  |  |

* Option 2: Only the configuration of 10MHz+10MHz, and 30MHz+40MHz were requested by companies. The rest configurations may not be necessary. Remove the channel bandwidth configuration of 20MHz+.., and 30MHz +30MHz in Table 5.3E.1A-1

Table 5.3E.1A-1 NR SL intra-band contiguous CA operating bands for SL CA in FR1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Sidelink CA configuration / Bandwidth combination set** | | | | | | | |
| Sidelink CA configuration | Sidelink CA configuration for TX | Component carriers in order of increasing carrier frequency | | | | Maximum aggregated  bandwidth [MHz] | Bandwidth combination set |
| Channel bandwidths for carrier [MHz] | Channel bandwidths for carrier [MHz] | Channel bandwidths for carrier [MHz] | Channel bandwidths for carrier [MHz] |
| SL\_n47B | SL\_n47B | 10 | 10 |  |  | 70 | 0 |
|  |  | 30 | 40 |  |  |  |  |

* Option 3: Brackets removed around SL CA bandwidth for 20MHz
* Table 5.3E.1A-1 NR SL intra-band contiguous CA operating bands for SL CA in FR1

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **Sidelink CA configuration / Bandwidth combination set** | | | | | | | |
| Sidelink CA configuration | Sidelink CA configuration for TX | Component carriers in order of increasing carrier frequency | | | | Maximum aggregated  bandwidth (MHz) | Bandwidth combination set |
| Channel bandwidths for carrier (MHz) | Channel bandwidths for carrier (MHz) | Channel bandwidths for carrier (MHz) | Channel bandwidths for carrier (MHz) |
| SL\_n47B | SL\_n47B | 10 | 10, 20,30 |  |  | 70 | 0 |
|  |  | 20 | 20,30 |  |  |  |  |
|  |  | 30 | 30,40 |  |  |  |  |

**Agreement:**

* Agree on option 1.

**Issue 2: PEMAX,CA for Sidelink CA**

**Agreement:**

* Allow PEMAX,CA, defined by IE sl-maxTransPower-CA

### 8.23 Enhanced support of reduced capability NR devices

#### 8.23.1 UE RF requirements maintenance

**CR for RedCap**

[**R4-2401216**](file:///D:\RAN4%23110\Docs\R4-2401216.zip) **CR for Rel-18 38.101-1 is to modify the requirements for eRedCap**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2078 rev Cat: F (Rel-18)  
  
 Source: Xiaomi*

*Nokia: no need. The refered Table is incorrect.*

*Qualcomm: the cover sheet needs be updated. Agree with Nokia.*

**Decision: Revised to** [**R4-2403683**](file:///D:\RAN4%23110\Docs\R4-2403683.zip) **(from** [**R4-2401216**](file:///D:\RAN4%23110\Docs\R4-2401216.zip)**).**

**[R4-2403683](D:\\RAN4#110\\Docs\\R4-2403683.zip) CR for Rel-18 38.101-1 is to modify the requirements for eRedCap**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2078 rev Cat: F (Rel-18)  
  
 Source: Xiaomi*

**Decision: Agreed.**

#### 8.23.2 RRM core requirements maintenance

#### 8.23.3 RRM performance requirements

#### 8.23.4 Demodulation performance requirements

#### 8.23.5 Moderator summary and conclusions

[**R4-2401096**](file:///D:\RAN4%23110\Docs\R4-2401096.zip) **Topic summary for [110][137] NR\_redcap\_enh\_UERF**

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

**Abstract:**

[110][137] NR\_redcap\_enh\_UERF AI 8.23.1

**Decision: Noted.**

### 8.24 Enhanced NR Sidelink Relay

### 8.25 Mobile IAB (Integrated Access and Backhaul) for NR

### 8.26 Network energy saving for NR

#### 8.26.1 BS conformance testing requirements

[**R4-2400549**](file:///D:\RAN4%23110\Docs\R4-2400549.zip) **Discussion on BS conformance testing requirements for NES**

*Type: other For: Approval  
 Source: Fujitsu Limited*

**Decision: Noted.**

[**R4-2400773**](file:///D:\RAN4%23110\Docs\R4-2400773.zip) **Discussion on BS conformance testing for NES**

*Type: discussion For: Discussion  
 38.104 v CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Noted.**

[**R4-2402241**](file:///D:\RAN4%23110\Docs\R4-2402241.zip) **Discussion on NES BS RF tests**

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

**Decision: Noted.**

#### 8.26.2 RRM core requirements maintenance

#### 8.26.3 RRM performance requirements

#### 8.26.4 UE demodulation performance and CSI requirements

#### 8.26.5 Moderator summary and conclusions

[**R4-2401097**](file:///D:\RAN4%23110\Docs\R4-2401097.zip) **Topic summary for [110][138] Netw\_Energy\_NR**

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

**Abstract:**

[110][138] Netw\_Energy\_NR AI 8.26.1

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403684**](file:///D:\RAN4%23110\Docs\R4-2403684.zip) **WF on NES conformance testing**

*Type: other For: Approval  
 Source: Huawei*

**Decision: Approved.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/03.Wednesday/02.%5B138%5D_R4-2401097%20Topic%20Summary%20for%20%5B110%5D%5B138%5D%20Netw_Energy_NR.DOCX>

**Issue 1: RF conformance testing requirements**

* Proposals
  + Option 1: Consider introduction of new testing to measure and determine the transmit ON time of the BS for Network energy savings for BS conformance testing.( [R4-2402241](file:///D:\RAN4%23110\Docs\R4-2402241.zip), Nokia)
  + Option 2: No additional Transmit ON/OFF transient time conformance testing is needed for spatial and power domains techniques. (Fujitsu, Huawei)
    - Proposal 1: No additional Transmit ON/OFF transient time conformance testing is needed for both spatial and power domain techniques.（[R4-2400549](file:///D:\RAN4%23110\Docs\R4-2400549.zip), Fujitsu）
    - Proposal 2: No conformance testing is needed for spatial and power domains techniques as there are no new core requirements. ([R4-2400773](file:///D:\RAN4%23110\Docs\R4-2400773.zip), Huawei）
* Recommended WF
  + TBA

**Agreement:**

* Agreed on Option 2.

### 8.27 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)

[**R4-2402620**](file:///D:\RAN4%23110\Docs\R4-2402620.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 v18.4.0 CR-6045 rev Cat: B (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision:** The document was **for email approval**.

[**R4-2402622**](file:///D:\RAN4%23110\Docs\R4-2402622.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:** The document was **for email approval**.

[**R4-2402623**](file:///D:\RAN4%23110\Docs\R4-2402623.zip) **TR 36.718-02-01 LTE-A CA for x(x=123456) DL y(y=12) UL**

*Type: draft TR For: Agreement  
 36.718-02-01 v0.0.5 CR- rev Cat: (Rel-18)  
  
 Source: Huawei Technologies France*

**Decision:** The document was **for email approval**.

#### 9.1.2 UE RF requirements for 1 UL

##### 9.1.2.1 Requirements with specific issues

[**R4-2402089**](file:///D:\RAN4%23110\Docs\R4-2402089.zip) **Simulation results for LTE CA\_28C**

*Type: discussion For: Approval  
 Source: Nokia, America Movil*

*Chair: the content is OK to the group.*

**Decision: Noted.**

[**R4-2402090**](file:///D:\RAN4%23110\Docs\R4-2402090.zip) **Simulation results for LTE CA\_2C**

*Type: discussion For: Approval  
 Source: Nokia, America Movil*

*Chair: the content is OK to the group.*

**Decision: Noted.**

##### 9.1.2.2 Requirements without specific issues

**Draft CR**

[**R4-2400923**](file:///D:\RAN4%23110\Docs\R4-2400923.zip) **Draft CR for TS 36.101 on inter-band CA configuration for CA\_1-1-3-20-28**

*Type: draftCR For: Endorsement  
 36.101 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

[**R4-2402098**](file:///D:\RAN4%23110\Docs\R4-2402098.zip) **draftCR to 36.101 Additions of UL configurations to combinations with B40 and B42**

*Type: draftCR For: Endorsement  
 36.101 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: Nokia, nbn*

**Decision: Endorsed.**

#### 9.1.3 UE RF requirements for 2UL

##### 9.1.3.1 Requirements with specific issues

**TP**

[**R4-2402358**](file:///D:\RAN4%23110\Docs\R4-2402358.zip) **TP to TR 36.718-02-01 Addition of CA\_7-40**

*Type: pCR For: Approval  
 36.718-02-01 v0.0.4 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, Spark NZ Ltd*

**Decision: Revised to** [**R4-2403792**](file:///D:\RAN4%23110\Docs\R4-2403792.zip) **(from** [**R4-2402358**](file:///D:\RAN4%23110\Docs\R4-2402358.zip)**).**

**[R4-2403792](D:\\RAN4#110\\Docs\\R4-2403792.zip) TP to TR 36.718-02-01 Addition of CA\_7-40**

*Type: pCR For: Approval  
 36.718-02-01 v0.0.4 CR- rev Cat: (Rel-18)  
  
 Source: Samsung, Spark NZ Ltd*

**Decision: Approved.**

##### 9.1.3.2 Requirements without specific issues

**Draft CR**

[**R4-2400924**](file:///D:\RAN4%23110\Docs\R4-2400924.zip) **Draft CR for TS 36.101 on inter-band CA configuration for CA\_1-1-3-7-20**

*Type: draftCR For: Endorsement  
 36.101 v18.4.0 CR- rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Endorsed.**

#### 9.1.4 Moderator summary and conclusions

[**R4-2401067**](file:///D:\RAN4%23110\Docs\R4-2401067.zip) **Topic summary for [110][108] LTE\_Baskets**

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

**Abstract:**

[110][108] LTE\_Baskets AI 9.1

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

### 9.2 Introduction of the Extended L-band (UL 1668-1675, DL 1518-1525) for IoT NTN

#### 9.2.1 General aspects (TR)

**CR**

[**R4-2402856**](file:///D:\RAN4%23110\Docs\R4-2402856.zip) **CR to TR 36.764 to introduce IoT NTN Extended L-band**

*Type: CR For: Agreement  
 36.764 v18.0.0 CR-0001 rev Cat: B (Rel-18)  
  
 Source: Inmarsat, Viasat*

*Qualcomm: no explitly mention of ETSI regulation. Some regulation is out of scope of RAN4. OK to include the regulation. We also want to make sure it is clear there.*

**Decision: Revised to** [**R4-2403650**](file:///D:\RAN4%23110\Docs\R4-2403650.zip) **(from** [**R4-2402856**](file:///D:\RAN4%23110\Docs\R4-2402856.zip)**).**

**[R4-2403650](D:\\RAN4#110\\Docs\\R4-2403650.zip) CR to TR 36.764 to introduce IoT NTN Extended L-band**

*Type: CR For: Agreement  
 36.764 v18.0.0 CR-0001 rev Cat: B (Rel-18)  
  
 Source: Inmarsat, Viasat*

**Decision: Agreed.**

#### 9.2.2 Band definition and system parameters

#### 9.2.3 UE RF requirements

**CR**

[**R4-2402224**](file:///D:\RAN4%23110\Docs\R4-2402224.zip) **CR to TS36.102: Addition of some missing bands in UE spurious emissions coexistence clause**

*Type: CR For: Agreement  
 36.102 v18.4.0 CR-0029 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

#### 9.2.4 SAN RF requirements

**CR**

[**R4-2402225**](file:///D:\RAN4%23110\Docs\R4-2402225.zip) **CR to TS36.181 Introduction of the extended L-band**

*Type: CR For: Agreement  
 36.181 v18.2.0 CR-0012 rev Cat: B (Rel-18)  
  
 Source: ZTE Corporation*

**Decision: Agreed.**

#### 9.2.5 RRM core requirements

#### 9.2.6 Moderator summary and conclusions

[**R4-2401075**](file:///D:\RAN4%23110\Docs\R4-2401075.zip) **Topic summary for [110][116] IoT\_NTN\_extLband**

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

**Abstract:**

[110][116] IoT\_NTN\_extLband AI 9.2

**Decision: Noted.**

### 9.3 High Power UE (Power Class 2) for LTE FDD Band 14

#### 9.3.1 General aspects (TR/big CR)

[**R4-2400702**](file:///D:\RAN4%23110\Docs\R4-2400702.zip) **Big CR on High Power UE (Power Class 2) for LTE FDD Band 14**

*Type: CR For: Agreement  
 36.101 v18.4.0 CR-6035 rev Cat: B (Rel-18)  
  
 Source: AT&T*

**Abstract:**

For post meeting email approval.

**Decision:** The document was **for email approval**.

[**R4-2400703**](file:///D:\RAN4%23110\Docs\R4-2400703.zip) **TR 36.770 v0.2.0**

*Type: draft TR For: Agreement  
 36.770 v0.2.0 CR- rev Cat: (Rel-18)  
  
 Source: AT&T*

**Abstract:**

Post Meeting Document to capture approved TPs at RAN4#110.

**Decision:** The document was **for email approval**.

**TP**

[**R4-2400698**](file:///D:\RAN4%23110\Docs\R4-2400698.zip) **TP for TR 36.770 Conclusions**

*Type: pCR For: Approval  
 36.770 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: AT&T*

**Decision: Approved.**

#### 9.3.2 UE RF requirements

[**R4-2401528**](file:///D:\RAN4%23110\Docs\R4-2401528.zip) **Discussion on the maximum output power tolerance of band 14**

*Type: other For: Discussion  
 Source: vivo*

**Decision: Noted.**

##### 9.3.2.1 Tx requirements

[**R4-2400172**](file:///D:\RAN4%23110\Docs\R4-2400172.zip) **On HPUE for LTE Band 14**

*Type: other For: Approval  
 Source: Apple*

**Decision: Noted.**

**TP**

[**R4-2400693**](file:///D:\RAN4%23110\Docs\R4-2400693.zip) **TP for TR 36.770 UE maximum output power**

*Type: pCR For: Approval  
 36.770 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: AT&T, FirstNet*

**Decision: Approved.**

[**R4-2400694**](file:///D:\RAN4%23110\Docs\R4-2400694.zip) **TP for TR 36.770 A-MPR requirements**

*Type: pCR For: Approval  
 36.770 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: AT&T, FirstNet, Apple*

**Decision: Revised to** [**R4-2403607**](file:///D:\RAN4%23110\Docs\R4-2403607.zip) **(from** [**R4-2400694**](file:///D:\RAN4%23110\Docs\R4-2400694.zip)**).**

[**R4-2403607**](file:///D:\RAN4%23110\Docs\R4-2403607.zip) **TP for TR 36.770 A-MPR requirements**

*Type: pCR For: Approval  
 36.770 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: AT&T, FirstNet, Apple*

**Decision: Approved.**

[**R4-2400696**](file:///D:\RAN4%23110\Docs\R4-2400696.zip) **TP for TR 36.770 UE implementations**

*Type: pCR For: Approval  
 36.770 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: AT&T, FirstNet, Murata, Qualcomm*

**Decision: Approved.**

[**R4-2400697**](file:///D:\RAN4%23110\Docs\R4-2400697.zip) **TP for TR 36.770 Removal of System Performance Evaluation Clause**

*Type: pCR For: Approval  
 36.770 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: AT&T, FirstNet*

**Decision: Approved.**

##### 9.3.2.2 Rx requirements

**TP**

[**R4-2400695**](file:///D:\RAN4%23110\Docs\R4-2400695.zip) **TP for TR 36.770 Receiver sensitivity degradation evaluation**

*Type: pCR For: Approval  
 36.770 v0.1.0 CR- rev Cat: (Rel-18)  
  
 Source: AT&T, FirstNet*

**Decision: Approved.**

#### 9.3.3 Release independency

**CR**

[**R4-2401529**](file:///D:\RAN4%23110\Docs\R4-2401529.zip) **CR on the release independency of band 14 PC2 UE**

*Type: CR For: Agreement  
 36.307 v18.3.0 CR-4500 rev Cat: F (Rel-18)  
  
 Source: vivo*

**Decision: Agreed.**

#### 9.3.4 Moderator summary and conclusions

[**R4-2401076**](file:///D:\RAN4%23110\Docs\R4-2401076.zip) **Topic summary for [110][117] HPUE\_LTE\_FDD\_B14**

*Type: other For: Information  
 Source: Moderator(AT&T)*

**Abstract:**

[110][117] HPUE\_LTE\_FDD\_B14 AI 9.3

**Decision: Noted.**

**Minutes and agreement of online discussions**

Refer to the following hyperlinks for details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/01.Monday/02.%5B117%5D_R4-2401076_Summary_%5B110%5D%5B117%5D_HPUE_LTE_FDD_B14.docx>

**Issue 1-1: Maximum output power tolerance**

* Agreement: Maximum output power tolerance of +/-2 dB.

**Issue 2-1: A-MPR for NS\_06 for PC2 UE**

* Proposals
  + Option 1: Agree to the proposed A-MPR for NS\_06 for PC2 according to the table above.
  + Option 2: Agree to the proposed A-MPR for NS\_06 for PC2 according to the table above but modify RBstart to “0” for Region B.
  + Option 3: Others.
* Recommended WF
  + Option 2.

**Agreement:**

* Agree to the proposed A-MPR for NS\_06 for PC2 according to the table above but modify RBstart to “0” for Region B.

**Issue 2-2: TP for TR 36.770 A-MPR requirements**

* Proposals
  + Option 1: Agree to the text proposal.
  + Option 2: Revise the text proposal based on the outcome of Issue 2-1.
* Recommended WF
  + Option 2.

**Agreement:**

* Agree on Option 2.

### 9.4 IoT (Internet of Things) NTN (non-terrestrial network) enhancements

#### 9.4.1 UE RF requirements maintenance

#### 9.4.2 SAN RF requirements maintenance

#### 9.4.3 RRM core requirements maintenance

#### 9.4.4 RRM performance requirements

#### 9.4.5 Demodulation performance requirements

#### 9.4.6 Moderator summary and conclusions

[**R4-2401098**](file:///D:\RAN4%23110\Docs\R4-2401098.zip) **Topic summary for [110][139] IoT\_NTN\_enh\_UERF**

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

**Abstract:**

[110][139] IoT\_NTN\_enh\_UERF AI 9.4.1

**Decision: Withdrawn.**

## 10 Rel-18 feature list

[**R4-2400178**](file:///D:\RAN4%23110\Docs\R4-2400178.zip) **Updated Summary of Rel-18 UE RF Capabilities**

*Type: discussion For: Discussion  
 38.101-1 v CR- rev Cat: (Rel-18)  
  
 Source: Apple*

**Decision: Noted.**

[**R4-2400336**](file:///D:\RAN4%23110\Docs\R4-2400336.zip) **Input to Rel-18 RAN4 UE feature list for Rel-18 NR\_cov\_enh2**

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

**Abstract:**

This contribution provides the input to RAN4 UE feature list for Rel-18 NR\_cov\_enh2 based on the latest status of the WI.

**Decision: Noted.**

[**R4-2401107**](file:///D:\RAN4%23110\Docs\R4-2401107.zip) **UE feature list for Rel-18 NR\_MC\_enh**

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

**Decision: Noted.**

[**R4-2401564**](file:///D:\RAN4%23110\Docs\R4-2401564.zip) **Discussion on Rel-18 feature list**

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

**Decision: Noted.**

[**R4-2401846**](file:///D:\RAN4%23110\Docs\R4-2401846.zip) **Input to the Rel-18 RAN4 UE feature list for FG 28-1**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution contains proposed descriptions for the RAN4 feature set for FG 28-1

**Decision: Noted.**

[**R4-2402440**](file:///D:\RAN4%23110\Docs\R4-2402440.zip) **Views on RAN4 Rel-18 UE feature list**

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

**Decision: Noted.**

[**R4-2402517**](file:///D:\RAN4%23110\Docs\R4-2402517.zip) **RAN4 feature list for NCR-MT**

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

**Decision: Noted.**

**Topic summary**

[**R4-2401099**](file:///D:\RAN4%23110\Docs\R4-2401099.zip) **Topic summary for [110][140] NR\_LTE\_Rel-18\_feature\_list**

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

**Abstract:**

[110][140] NR\_LTE\_Rel-18\_feature\_list AI 10

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403635**](file:///D:\RAN4%23110\Docs\R4-2403635.zip) **WF on RAN4 Rel-18 feature list**

*Type: other For: Approval  
 Source: CMCC*

**Decision: Revised to R4-2403842 (from R4-2403635).**

[**R4-2403842**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403842.zip) **RAN4 Rel-18 feature list**

*Type: other For: Approval  
 Source: CMCC*

**Decision: Return to.**

[**R4-2403636**](file:///D:\RAN4%23110\Docs\R4-2403636.zip) **LS on RAN4 Rel-18 feature list**

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

**Decision: Return to.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/01.Monday/12.%5B140%5D_R4-2401099.docx>

**Minutes and agreements after the second round**

Refer to the following hyperlinks for details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/04.Thursday/08.%5B140%5D_R4-2403635_online_minutes.docx>

## 11 Rel-19 on-going non-spectrum related work items for NR

### 11.1 Artificial Intelligence (AI)/Machine Learning (ML) for NR Air Interface

#### 11.1.1 General aspects

[**R4-2400090**](file:///D:\RAN4%23110\Docs\R4-2400090.zip) **Discussion on general aspects for AIML for NR air**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2400133**](file:///D:\RAN4%23110\Docs\R4-2400133.zip) **Discussion on general aspects of AIML for NR air interface**

*Type: discussion For: Discussion  
 Source: CAICT*

**Decision: Noted.**

[**R4-2400505**](file:///D:\RAN4%23110\Docs\R4-2400505.zip) **General aspects on AI/ML for NR Air Interface**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2400560**](file:///D:\RAN4%23110\Docs\R4-2400560.zip) **AI/ML general**

*Type: discussion For: Approval  
 Source: Qualcomm, Inc.*

**Decision: Noted.**

[**R4-2401044**](file:///D:\RAN4%23110\Docs\R4-2401044.zip) **(NR\_AIML\_air-Core) Discussion on generalization**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2401566**](file:///D:\RAN4%23110\Docs\R4-2401566.zip) **General testability and interoperability discussions for NR AIML**

*Type: discussion For: Discussion  
 Source: NTT DOCOMO, INC.*

**Decision: Noted.**

[**R4-2401609**](file:///D:\RAN4%23110\Docs\R4-2401609.zip) **Discussion on general aspects on AI/ML**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2401684**](file:///D:\RAN4%23110\Docs\R4-2401684.zip) **General Aspects on AIML for NR air interface**

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

**Decision: Noted.**

[**R4-2401814**](file:///D:\RAN4%23110\Docs\R4-2401814.zip) **General aspects on AI/ML test**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2402388**](file:///D:\RAN4%23110\Docs\R4-2402388.zip) **General aspect of AI/ML for NR air interface**

*Type: other For: Approval  
 Source: Samsung*

**Decision: Noted.**

[**R4-2402412**](file:///D:\RAN4%23110\Docs\R4-2402412.zip) **AI general considerations**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Consderations on AI in RAN4 applicable to all use cases

**Decision: Noted.**

[**R4-2402439**](file:///D:\RAN4%23110\Docs\R4-2402439.zip) **Views on general aspects of AI-ML testability and interoperability**

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

**Decision: Noted.**

[**R4-2402565**](file:///D:\RAN4%23110\Docs\R4-2402565.zip) **On AIML Requirements and Testing Framework**

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

**Decision: Noted.**

#### 11.1.2 Testability and interoperability issues for beam management

[**R4-2400091**](file:///D:\RAN4%23110\Docs\R4-2400091.zip) **Discussion on testability and interoperability issues for BM**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2400134**](file:///D:\RAN4%23110\Docs\R4-2400134.zip) **Discussion on testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 Source: CAICT*

**Decision: Noted.**

[**R4-2400506**](file:///D:\RAN4%23110\Docs\R4-2400506.zip) **AI/ML Testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2400561**](file:///D:\RAN4%23110\Docs\R4-2400561.zip) **AI/ML beam prediction**

*Type: discussion For: Approval  
 Source: Qualcomm, Inc.*

**Decision: Noted.**

[**R4-2401046**](file:///D:\RAN4%23110\Docs\R4-2401046.zip) **(NR\_AIML\_air-Core) Discussion on testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2401171**](file:///D:\RAN4%23110\Docs\R4-2401171.zip) **Discussion on testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 38.133 v CR- rev Cat: ()  
  
 Source: xiaomi*

**Decision: Noted.**

[**R4-2401610**](file:///D:\RAN4%23110\Docs\R4-2401610.zip) **Discussion on testability and interoperability issues for beam management**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2401685**](file:///D:\RAN4%23110\Docs\R4-2401685.zip) **Testability and interoperability issues for beam management**

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

**Decision: Noted.**

[**R4-2401815**](file:///D:\RAN4%23110\Docs\R4-2401815.zip) **Testability and interoperability issues for beam management**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2401818**](file:///D:\RAN4%23110\Docs\R4-2401818.zip) **Discussion on the Interoperability and testability aspects of AI/ML Beam management**

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

**Decision: Noted.**

[**R4-2401920**](file:///D:\RAN4%23110\Docs\R4-2401920.zip) **Discussion on testability and interoperability for beam management with AI/ML**

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

**Decision: Noted.**

[**R4-2402304**](file:///D:\RAN4%23110\Docs\R4-2402304.zip) **Testability and interoperability issues for beam management**

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

**Decision: Noted.**

[**R4-2402389**](file:///D:\RAN4%23110\Docs\R4-2402389.zip) **Discussion on testability and interoperability issues for beam management**

*Type: other For: Approval  
 Source: Samsung*

**Decision: Noted.**

[**R4-2402414**](file:///D:\RAN4%23110\Docs\R4-2402414.zip) **AI beam management use case**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Overview of SI conclusions and impacts to RAN4 for beam management use case

**Decision: Noted.**

#### 11.1.3 Testability and interoperability issues for positioning accuracy enhancement

[**R4-2400092**](file:///D:\RAN4%23110\Docs\R4-2400092.zip) **Discussion on testability and interoperability issues for positioning**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2400136**](file:///D:\RAN4%23110\Docs\R4-2400136.zip) **Discussion on testability and interoperability issues for positioning accuracy enhancement**

*Type: discussion For: Discussion  
 Source: CAICT*

**Decision: Noted.**

[**R4-2400507**](file:///D:\RAN4%23110\Docs\R4-2400507.zip) **AI/ML Testability and interoperability issues for positioning accuracy enhancement**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2401043**](file:///D:\RAN4%23110\Docs\R4-2401043.zip) **(NR\_AIML\_air-Core) Discussion on testability and interoperability issues for positioning**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2401611**](file:///D:\RAN4%23110\Docs\R4-2401611.zip) **Discussion on testability and interoperability issues for positioning accuracy enhancement**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2401686**](file:///D:\RAN4%23110\Docs\R4-2401686.zip) **Testability and interoperability issues for positioning accuracy enhancement**

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

**Decision: Noted.**

[**R4-2401816**](file:///D:\RAN4%23110\Docs\R4-2401816.zip) **Testability and interoperability issues for positioning accuracy enhancement**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2401819**](file:///D:\RAN4%23110\Docs\R4-2401819.zip) **Discussion on the Interoperability and testability aspects of AI/ML positioning**

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

**Decision: Noted.**

[**R4-2402305**](file:///D:\RAN4%23110\Docs\R4-2402305.zip) **Testability and interoperability issues for positioning accuracy enhancement**

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

**Decision: Noted.**

[**R4-2402387**](file:///D:\RAN4%23110\Docs\R4-2402387.zip) **Discussion for further RAN4 study on AIML based positioning**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2402695**](file:///D:\RAN4%23110\Docs\R4-2402695.zip) **On issues related to AI/ML based positioning**

*Type: other For: Discussion  
 Source: Ericsson*

**Abstract:**

This paper discusses testability and interoperability issues for AI/ML based positioning

**Decision: Noted.**

#### 11.1.4 Testability and interoperability issues for CSI compression and CSI prediction

[**R4-2400093**](file:///D:\RAN4%23110\Docs\R4-2400093.zip) **Discussion on testability and interoperability issues for CSI**

*Type: discussion For: Discussion  
 Source: CATT*

**Decision: Noted.**

[**R4-2400135**](file:///D:\RAN4%23110\Docs\R4-2400135.zip) **Discussion on testability and interoperability issues for CSI compression and CSI prediction**

*Type: discussion For: Discussion  
 Source: CAICT*

**Decision: Noted.**

[**R4-2400508**](file:///D:\RAN4%23110\Docs\R4-2400508.zip) **AI/ML Testability and interoperability issues for CSI compression and CSI prediction**

*Type: discussion For: Discussion  
 Source: Apple*

**Decision: Noted.**

[**R4-2400562**](file:///D:\RAN4%23110\Docs\R4-2400562.zip) **AI/ML CSI**

*Type: discussion For: Approval  
 Source: Qualcomm, Inc.*

**Decision: Noted.**

[**R4-2401045**](file:///D:\RAN4%23110\Docs\R4-2401045.zip) **(NR\_AIML\_air-Core) Discussion on testability and interoperability issues for CSI compression and CSI prediction**

*Type: discussion For: Discussion  
 Source: CMCC*

**Decision: Noted.**

[**R4-2401172**](file:///D:\RAN4%23110\Docs\R4-2401172.zip) **Discussion on testability and interoperability issues for CSI**

*Type: discussion For: Discussion  
 38.133 v CR- rev Cat: ()  
  
 Source: xiaomi*

**Decision: Noted.**

[**R4-2401612**](file:///D:\RAN4%23110\Docs\R4-2401612.zip) **Discussion on testability and interoperability issues for CSI compression and CSI prediction**

*Type: discussion For: Discussion  
 Source: vivo*

**Decision: Noted.**

[**R4-2401687**](file:///D:\RAN4%23110\Docs\R4-2401687.zip) **Testability and interoperability issues for CSI compression and CSI prediction**

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

**Decision: Noted.**

[**R4-2401817**](file:///D:\RAN4%23110\Docs\R4-2401817.zip) **Testability and interoperability issues for CSI compression and CSI prediction**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2402306**](file:///D:\RAN4%23110\Docs\R4-2402306.zip) **Testability and interoperability issues for CSI compression and CSI prediction**

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

**Decision: Noted.**

[**R4-2402390**](file:///D:\RAN4%23110\Docs\R4-2402390.zip) **Discussion on testability and interoperability issues for AI-CSI**

*Type: other For: Approval  
 Source: Samsung*

**Decision: Noted.**

[**R4-2402413**](file:///D:\RAN4%23110\Docs\R4-2402413.zip) **AI CSI use case**

*Type: discussion For: Discussion  
 Source: Ericsson*

**Abstract:**

Discussion on open aspects for the 2-sided use case

**Decision: Noted.**

#### 11.1.5 Moderator summary and conclusions

[**R4-2401100**](file:///D:\RAN4%23110\Docs\R4-2401100.zip) **Topic summary for [110][141] NR\_AIML\_air**

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

**Abstract:**

[110][141] NR\_AIML\_air AI 11.1

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403712**](file:///D:\RAN4%23110\Docs\R4-2403712.zip) **WF on NR\_AIML\_air**

*Type: other For: Approval  
 Source: Qualcomm*

**Decision: Approved.**

[**R4-2403871**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403871.zip) **Ad hoc minutes on AI/ML**

*Type: other For: Approval  
 Source: Qualcomm*

**Decision: Noted.**

**Minutes and agreements after the first round**

Please refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/03.Wednesday/11.%5B141%5D_R4-2401100.docx>

**Issue 1-1: Generalization update**

**Agreement:**

* For AI/ML generalization [tests/requirements]
  + RAN4 should discuss it and decide the requirements/tests for each AI feature in the case-by-case manner

**Issue 1-2: Post deployment handling**

**Agreement:**

* To ensure the AI performance after device deployment, discuss the following options further
  + Option 1: Conduct the conformance testing for AI model/functionality before deployment
    - FFS on the feasibility
  + Option 2: Design the test to verify the performance monitoring
    - Depend on the other WG progress
    - Monitoring can be used for managing fallback, model update/model switching/model transfer, if applicable
  + Other options are not precluded

**Issue 1-5: On device training/fine-tuning**

**Agreement:**

* Come back to this issue after the other WG finalizes the corresponding procedure.

**Issue 1-6: Combinations of features/capabilities**

**Agreement:**

* Postpone the discussion for this issue until the Perf part.

**Issue 1-7: Test data handling**

**Agreement:**

* For inference test, use synthetic channels as baseline, and check whether it can be used for the individual use case

## 12 Liaison output to other groups and related issues

[**R4-2400572**](file:///D:\RAN4%23110\Docs\R4-2400572.zip) **Input for WP5D sharing studies**

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

**Abstract:**

Chair: Treat this under email thread [146].

**Decision: Noted.**

[**R4-2401878**](file:///D:\RAN4%23110\Docs\R4-2401878.zip) **Discussion on parameters of terrestrial component of IMT for sharing studies**

*Type: discussion For: Decision  
 Source: CMCC*

**Abstract:**

Chair: Treat this under email thread [146].

**Decision: Noted.**

[**R4-2402142**](file:///D:\RAN4%23110\Docs\R4-2402142.zip) **Discussion on IMT parameters for WP5D LS**

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

**Abstract:**

Chair: Treat this under email thread [146].

**Decision: Noted.**

[**R4-2402483**](file:///D:\RAN4%23110\Docs\R4-2402483.zip) **LS on Parameters of terrestrial component of IMT for sharing and compatibility studies in preparation for WRC-27 (4.4-4.8 GHz)**

*Type: discussion For: Information  
 Source: Ericsson*

**Abstract:**

In this contribution we give an overview on information currently available in RAN4 and studies to be conducted to be able to respond to requested information. Chair: Treat this under email thread [146].

**Decision: Noted.**

[**R4-2402511**](file:///D:\RAN4%23110\Docs\R4-2402511.zip) **Discussion on Reply LS to WP5D for WRC-27**

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

**Abstract:**

Chair: Treat this under email thread [146].

**Decision: Noted.**

[**R4-2402575**](file:///D:\RAN4%23110\Docs\R4-2402575.zip) **On UE IMT parameters for 4400-4800MHz, 7125-8400MHz and 14.8-15.35GHz**

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

**Abstract:**

In RAN4#110, RAN4 has received an LS from ITU-R WP5D [1] asking for IMT parameters for sharing and compatibility studies in 4400-4800MHz, 7125-8400MHz and 14.8-15.35GHz frequency ranges. In this contribution, we provide elements of answer and also share t

**Decision: Noted.**

**LS out**

[**R4-2402248**](file:///D:\RAN4%23110\Docs\R4-2402248.zip) **Draft LS on Parameters of terrestrial component of IMT for sharing and compatibility studies in the frequency bands 4 400-4 800 MHz, 7 125-8 400 MHz and 14.8-15.35 GHz from ITU-R Working Party 5D**

*Type: LS out For: Approval  
 to TSG RAN  
 Source: Spark NZ, Nokia*

**Abstract:**

Chair: Treat this under email thread [146].

**Decision: Noted.**

### 12.1 R18 related

Submit contributions if there is no dedicated AI for the corresponding WIs

#### 12.1.1 LS on combination of HST and RRM relaxation (R2-2311435)

#### 12.1.2 Others

**Maximum aggregated bandwidth for FR1 inter-band CA**

[**R4-2401516**](file:///D:\RAN4%23110\Docs\R4-2401516.zip) **Discussion on maximum aggregated bandwidth for FR1 inter-band CA**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

LS out

[**R4-2401517**](file:///D:\RAN4%23110\Docs\R4-2401517.zip) **draft reply LS on maximum aggregated bandwidth for FR1 inter-band CA**

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

**Decision: Approved.**

[**R4-2402065**](file:///D:\RAN4%23110\Docs\R4-2402065.zip) **Reply LS on applicability of maximum aggregated bandwidth UE capabilities to intra-band FR1 CA**

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

**Decision: Noted.**

### 12.2 R17 related

#### 12.2.1 Power class related topics

LS on ue-PowerClassPerBandPerBC-r17(R2-2211023)

Configured transmitted power for inter-band UL CA including intra band contiguous CA with higherPowerLimit, and about handling of NOTE for power class in CA configuration tables

Multiple tdocs per company are allowed

[**R4-2400202**](file:///D:\RAN4%23110\Docs\R4-2400202.zip) **Views on ue-PowerClassPerbandperBC-17 related power class IE applicability issues**

*Type: discussion For: Discussion  
 Source: Samsung*

**Decision: Noted.**

[**R4-2400345**](file:///D:\RAN4%23110\Docs\R4-2400345.zip) **On R2-2211023 on ue-PowerClassPerBandPerBC-r17**

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

**Abstract:**

This paper addresses the 2nd question of the following two questions enclosed in RAN2 LS of R2-2211023.

**Decision: Noted.**

[**R4-2401278**](file:///D:\RAN4%23110\Docs\R4-2401278.zip) **Views on LS on ue-PowerClassPerBandPerBC-r17**

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

**Decision: Noted.**

[**R4-2401279**](file:///D:\RAN4%23110\Docs\R4-2401279.zip) **Views on ue-PowerClassPerBandPerBC-r17 and power class indication**

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

**Decision: Noted.**

[**R4-2401520**](file:///D:\RAN4%23110\Docs\R4-2401520.zip) **Discussion of applicable power classes for NR CA**

*Type: other For: Approval  
 Source: vivo*

**Decision: Noted.**

[**R4-2401795**](file:///D:\RAN4%23110\Docs\R4-2401795.zip) **(Power\_Limit\_CA\_DC) R17 power class applicability related**

*Type: other For: Approval  
 Source: OPPO*

**Decision: Noted.**

[**R4-2401847**](file:///D:\RAN4%23110\Docs\R4-2401847.zip) **(Power\_Limit\_CA\_DC) On power-class indication in UE capability and compliance with associated requirements**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

In this contribution we consider HPUE power-class indication, the per-band-per-PC power class and missing or yet to be evaluated REFSENS exceptions.

**Decision: Noted.**

[**R4-2402211**](file:///D:\RAN4%23110\Docs\R4-2402211.zip) **Discussion on power class report for NR CA**

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

**Decision: Noted.**

[**R4-2402739**](file:///D:\RAN4%23110\Docs\R4-2402739.zip) **Powerclasses and maximum output power**

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

**Decision: Noted.**

**LS out**

[**R4-2400201**](file:///D:\RAN4%23110\Docs\R4-2400201.zip) **LS on further clarification for ue-PowerClassPerBandPerBC-r17**

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

**Abstract:**

It is a re-submission of the latest version for the LS of last meeting

**Decision: Revised to** [**R4-2403637**](file:///D:\RAN4%23110\Docs\R4-2403637.zip) **(from** [**R4-2400201**](file:///D:\RAN4%23110\Docs\R4-2400201.zip)**).**

[**R4-2403637**](file:///D:\RAN4%23110\Docs\R4-2403637.zip) **LS on further clarification for ue-PowerClassPerBandPerBC-r17**

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

**Abstract:**

It is a re-submission of the latest version for the LS of last meeting

**Decision: Noted.**

[**R4-2400346**](file:///D:\RAN4%23110\Docs\R4-2400346.zip) **Draft LS reply to R2-2211023 on ue-PowerClassPerBandPerBC-r17**

*Type: LS out For: Approval  
 to RAN2  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Draft LS reply to R2-2211023.

**Decision: Noted.**

[**R4-2402210**](file:///D:\RAN4%23110\Docs\R4-2402210.zip) **Reply LS on clarification for ue-PowerClassPerBandPerBC-r17**

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

**Decision: Noted.**

**CR/Draft CR**

[**R4-2401848**](file:///D:\RAN4%23110\Docs\R4-2401848.zip) **(Power\_Limit\_CA\_DC) Corrections to configured maximum power for serving cells of UL CA**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2130 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the Pcmax,f,c for serving cells of a BC such that the maximum UL output power and PH reports become correct

**Decision: Revised to R4-2403886 (from R4-2401848).**

[**R4-2403886**](http://10.10.10.10/ftp/RAN/RAN4/Inbox/R4-2403886.zip) **(Power\_Limit\_CA\_DC) Corrections to configured maximum power for serving cells of UL CA**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2130 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the Pcmax,f,c for serving cells of a BC such that the maximum UL output power and PH reports become correct

**Decision: Return to.**

[**R4-2401849**](file:///D:\RAN4%23110\Docs\R4-2401849.zip) **(Power\_Limit\_CA\_DC) Corrections to configured maximum power for serving cells of UL CA**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2131 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to correct the Pcmax,f,c for serving cells of a BC such that the maximum UL output power and PH reports become correct

**Decision: Return to.**

[**R4-2401850**](file:///D:\RAN4%23110\Docs\R4-2401850.zip) **(Power\_Limit\_CA\_DC) Correction to HPUE requirements for CA configurations**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2132 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

CR to specify the power requirement for NR non-CA BC, DL-only CA and with the per-band-per-BC power class present for inter-band CA

**Decision: Not pursued.**

[**R4-2401851**](file:///D:\RAN4%23110\Docs\R4-2401851.zip) **(Power\_Limit\_CA\_DC) Correction to HPUE requirements for CA configurations**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2133 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

CR to specify the power requirement for NR non-CA BC, DL-only CA and with the per-band-per-BC power class present for inter-band CA

**Decision: Withdrawn.**

[**R4-2401852**](file:///D:\RAN4%23110\Docs\R4-2401852.zip) **(Power\_Limit\_CA\_DC) Applicability of exceptions to REFSENS for CA and SUL to HPUE**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2134 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

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

**Decision: Not pursued.**

[**R4-2401853**](file:///D:\RAN4%23110\Docs\R4-2401853.zip) **(Power\_Limit\_CA\_DC) Applicability of exceptions to REFSENS for CA and SUL to HPUE**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2135 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

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

**Decision: Withdrawn.**

[**R4-2402208**](file:///D:\RAN4%23110\Docs\R4-2402208.zip) **(NR\_RF\_FR1-Core) CR for TS38101-1 Clarifying transmitted power requirements for NR CA**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2144 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Decision: Not pursued.**

[**R4-2402209**](file:///D:\RAN4%23110\Docs\R4-2402209.zip) **(NR\_RF\_FR1-Core) CR for TS38101-1 Clarifying transmitted power requirements for NR CA**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2145 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Withdrawn.**

[**R4-2402740**](file:///D:\RAN4%23110\Docs\R4-2402740.zip) **[NR\_PC2\_CA\_R17\_2BDL\_2BUL-Core] CR to TS 38.101-1: PHR and power classes**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2180 rev Cat: F (Rel-17)  
  
 Source: Qualcomm Inc.*

**Decision: Not pursued.**

[**R4-2402741**](file:///D:\RAN4%23110\Docs\R4-2402741.zip) **[NR\_PC2\_CA\_R17\_2BDL\_2BUL-Core] CR to TS 38.101-1: PHR and power classes - rel18 cat A**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2181 rev Cat: A (Rel-18)  
  
 Source: Qualcomm Inc.*

**Decision: Withdrawn.**

#### 12.2.2 Others

[**R4-2400266**](file:///D:\RAN4%23110\Docs\R4-2400266.zip) **Discussion on applicability of UE supported maximum aggregated bandwidth to FR1 intra-band CA**

*Type: other For: Approval  
 Source: Qualcomm Incorporated, Ericsson, T-Mobile USA*

**Decision: Noted.**

**CR/Draft CR**

[**R4-2400204**](file:///D:\RAN4%23110\Docs\R4-2400204.zip) **Rel18 Cat F CR for 38.101-3 Correct the IE name for HigherpowerLimit feature to align with RAN2**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1118 rev Cat: F (Rel-18)  
  
 Source: Samsung*

**Abstract:**

Note that the corrections in this Rel-18 CR are not exactly the same with the Rel-17 one, more(Note 9 of Table 6.2B.1.3-1) is included in this. Hence Cat F is adopted.

**Decision: Not pursued.**

[**R4-2400216**](file:///D:\RAN4%23110\Docs\R4-2400216.zip) **Rel17 Cat F CR for 38.101-3 Correct the IE name for HigherpowerLimit feature to align with RAN2**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1121 rev Cat: F (Rel-17)  
  
 Source: Samsung*

**Decision: Not pursued.**

[**R4-2402458**](file:///D:\RAN4%23110\Docs\R4-2402458.zip) **[NR\_BCS4-Core] CR for 38.101-3: Maximum Aggregated BW for BCS5**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1173 rev Cat: C (Rel-17)  
  
 Source: T-Mobile USA*

**Decision: Agreed.**

[**R4-2402459**](file:///D:\RAN4%23110\Docs\R4-2402459.zip) **[NR\_BCS4-Core] CR for 38.101-3: Maximum Aggregated BW for BCS5**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1174 rev Cat: A (Rel-18)  
  
 Source: T-Mobile USA*

**Decision: Agreed.**

[**R4-2402456**](file:///D:\RAN4%23110\Docs\R4-2402456.zip) **[NR\_BCS4-Core] CR for 38.101-1: Maximum Aggregated BW for BCS5**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2169 rev Cat: C (Rel-17)  
  
 Source: T-Mobile USA*

**Decision: Agreed.**

[**R4-2402457**](file:///D:\RAN4%23110\Docs\R4-2402457.zip) **[NR\_BCS4-Core] CR for 38.101-1: Maximum Aggregated BW for BCS5**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2170 rev Cat: A (Rel-18)  
  
 Source: T-Mobile USA*

**Decision: Agreed.**

**LS out**

[**R4-2400621**](file:///D:\RAN4%23110\Docs\R4-2400621.zip) **Reply LS on applicability of maximum aggregated bandwidth UE capabilities to intra-band FR1 CA.**

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

**Decision: Noted.**

[**R4-2401276**](file:///D:\RAN4%23110\Docs\R4-2401276.zip) **Reply LS on maximum aggregated bandwidth UE capabilities to intra-band FR1 CA**

*Type: LS out For: Approval  
 to RAN2  
 Source: ZTE Corporation*

**Decision: Noted.**

**Withdrawn**

[**R4-2400203**](file:///D:\RAN4%23110\Docs\R4-2400203.zip) **Rel17 Cat F CR for 38.101-3 Correct the IE name for HigherpowerLimit feature to align with RAN2**

*Type: CR For: Agreement  
 38.101-3 v17.12.0 CR-1117 rev Cat: F (Rel-17)  
  
 Source: Samsung*

**Abstract:**

The CR coversheet had the incorrect version of specification. Database value : 17.12.0. CR cover value : 17.2.0.

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

### 12.3 R15, R16 related

#### 12.3.1 Reply LS on update for “interBandMRDC-WithOverlapDL-Bands-r16” in 38.306 (R2-2309218)

#### 12.3.2 Reply LS on power scaling and PHR in 38.213 (R1-2310555)

#### 12.3.3 Others

### 12.4 Moderator summary and conclusions

[**R4-2401101**](file:///D:\RAN4%23110\Docs\R4-2401101.zip) **Topic summary for [110][142] NR\_reply\_LS\_UE\_RF**

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

**Abstract:**

[110][142] NR\_reply\_LS\_UE\_RF AI 12

**Decision: Noted.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/03.Wednesday/07.%5B142%5D_R4-2401101%20Topic%20summary_142%20v01.docx>

**Issue 1-1-1: Answer to RAN2 question: Can the new maximum aggregated bandwidth UE capabilities be applied genericly to intra-band FR1 CA as well as inter-band FR1 CA?.**

* Proposals
  + Option 1: Yes
  + Option 2: Yes, and also raise the fact that new UE capability is only to signal baseband bandwidth limitations and not RF aggregated bandwidth limitations. This was also indicated in previous RAN4 LS [R4-2322003](file:///D:\RAN4%23110\Docs\R4-2322003.zip).
* Recommended WF
  + TBD

**Agreement:**

* Agree on Option 1.

[**R4-2401102**](file:///D:\RAN4%23110\Docs\R4-2401102.zip) **Topic summary for [110][143] NR\_power\_class**

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

**Abstract:**

[110][143] NR\_power\_class AI 12.2.1

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403638**](file:///D:\RAN4%23110\Docs\R4-2403638.zip) **WF on NR UE power class**

*Type: other For: Approval  
 Source: Huawei*

**Decision: Return to.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/02.Tuesday/01.%5B143%5D_R4-2401102%20Draft%20Topic%20Summary.docx>

**Issue 1-1: It is suggested to differentiate power class and power class capability. And “power class fallback” means that the RF requirements corresponding to a lower power class apply. (Huawei)**

* Proposals：
  + Option 1: Agree
  + Option 2: Disagree
* Recommended WF
  + TBD

**Tentative agreement:**

* The power class indicated by UE capability is static or semi-static, and UE is expected to meet the corresponding requirements no matter what Delta\_P\_powerclass value indicates.
* Differentiate the indicated power class capability and Pcmax for UE.

**Issue 1-4: For NR non-CA band combinations, the UE shall meet the requirements according to the power class as indicated by the Band NR capability *ue-PowerClass* (hence the per-BC *powerClass* for these BCs should indicate support of the same power class). (Ericsson)**

**Agreement:**

* For UE that is configured in the single carrier mode (1 DL + 1 UL on this band), the power class is determined by ue-PowerClass for this NR band.

**Issue 1-11: The *ue-PowerClassPerBandPerBC-r17* capability can be used for 3Tx band combinations such as UL CA+TxD and UL CA+UL MIMO. (Huawei)**

**Agreement:**

* The RAN4 common understanding is the ue-PowerClassPerBandPerBC-r17 capability can be used for 3Tx band combinations such as UL CA+TxD and UL CA+UL MIMO

[**R4-2401105**](file:///D:\RAN4%23110\Docs\R4-2401105.zip) **Topic summary for [110][146] ITU\_WP5D\_LSReply**

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

**Abstract:**

[110][146] ITU\_WP5D\_LSReply AI 12

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403652**](file:///D:\RAN4%23110\Docs\R4-2403652.zip) **Ad hoc minutes for [110][146] ITU\_WP5D\_LSReply**

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

**Decision: Noted.**

[**R4-2403653**](file:///D:\RAN4%23110\Docs\R4-2403653.zip) **LS reply on parameters of terrestrial component of IMT for sharing and compatibility studies in the frequency bands 4 400-4 800 MHz, 7 125-8 400 MHz and 14.8-15.35 GHz from ITU-R WP5D**

*Type: other For: Approval  
 Source: Ericsson*

**Decision: Return to.**

## 13 RAN task and other topics

[**R4-2401103**](file:///D:\RAN4%23110\Docs\R4-2401103.zip) **Topic summary for [110][144] Release\_indep**

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

**Abstract:**

[110][144] Release\_indep AI 13.1

**Decision: Noted.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/03.Wednesday/08.%5B144%5D_R4-2401103%20draft%20Topic%20summary%20for%20110144%20Release_indep%20v4.docx>

**Issue 1-1: Which releases of 307s are modified when new feature is introduced**

* Proposals
  + Option 1: Only the latest 307s
  + Option 2: Also earlier releases of 307s starting from release from which the feature is release independent
  + Option 3: -When a new feature is introduced only the latest release of release independent spec needs to be updated. The latest release of release independent spec refers to release N, aligned with the release of the related WI (i.e. for the non-category A CR, the <Release> shall be aligned with the <Related\_WIs> mentioned on the CR cover page).
* Recommended WF
  + Option 1 and 3:

**Agreement**:

* Agree on Option 1 and 3.
  + Further improve the wording of Option3

**Issue 1-2: If only latest release is updated what to do with earlier releases**

**Agreement:**

* For earlier release 307 specs, only Cat-F/A CRs are allowed and no Cat-B CRs are allowed.

**Issue 1-3: Release pointers**

**Agreement:**

* [R4-2400608](file:///D:\RAN4%23110\Docs\R4-2400608.zip) replace all release pointers with Rel-P in Rel-18 spec.
  + Rel-P: Represent the present release of this specification.

**Issue 1-4: Introduction of Annexes**

* Proposals
  + Option 1: RAN4 to discuss to simplify the procedure of introducing the common UE RF requirements table from Rel.18 by removing the following rule.
    - 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.
  + Option 2: Do not remove the rule as proposed in option 1. Annexes are introduced in N+1 release

**Agreement:**

* Agree on Option 1.

[**R4-2401104**](file:///D:\RAN4%23110\Docs\R4-2401104.zip) **Topic summary for [110][145] n101\_coexist**

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

**Abstract:**

[110][145] n101\_coexist AI 13.2

**Decision: Noted.**

**Conclusions and newly allocated tdocs in the first round**

[**R4-2403691**](file:///D:\RAN4%23110\Docs\R4-2403691.zip) **Ad hoc minutes on [110][145] n101\_coexist**

*Type: other For: Approval  
 Source: Ericsson*

**Decision: Noted.**

[**R4-2403692**](file:///D:\RAN4%23110\Docs\R4-2403692.zip) **LS on n101 co-existence issue**

*Type: other For: Approval  
 Source: Ericsson*

**Decision: Withdrawn.**

**Minutes and agreements after the first round**

Refer to the following hyperlinks for the details

<https://www.3gpp.org/ftp/tsg_ran/WG4_Radio/TSGR4_110/Inbox/Drafts/%5B110%5D%5B100%5D%20Main%20Session/03.Wednesday/06.%5B145%5D_R4-2403691%20-%20Summary%20%20n101_coexist%20%5B145%5D_adhoc.docx>

**Issue 1-2-1: Band n101 BS additional spurious**

**Agreement:**

* Add a note in the LS to RAN highlighting the n101 additional spurious is important requirement for coexistence.

**Issue 1-3-1: Antenna gain compensation**

**Agreement:**

* RAN4 will highlight in the LS to RAN that UE external antenna gain should be taken into account for some Tx requirements (TS 38.101-1) for bands n101 and n100.
* FFS if RAN4 highlight potential issue for other bands which have EIRP regulatory requirement.

**Issue 1-4-1: Alternative mitigation techniques**

**Agreement:**

* Agreed mitigation techniques will be mentioned in the LS to RAN.

**Issue 2-1-1: BS max output power for bands n100/n101**

**Agreement:**

* Keep current specification and wording on BS max output power for bands n100 and n101.

**Issue 2-1-2: Additional OBUE requirement for band n100**

**Agreement:**

* Remove the additional OBUE requirement for band n100

**Issue 2-1-3: Co-location requirements for bands n100 and n101**

**Agreement:**

* Keep co-location requirements, FFS if/how to clarify they are optional.

### 13.1 Release independency specification (36.307, 38.307)

[**R4-2400054**](file:///D:\RAN4%23110\Docs\R4-2400054.zip) **Discussion on release independent specification improvement**

*Type: other For: Approval  
 Source: CATT*

**Decision: Noted.**

[**R4-2400608**](file:///D:\RAN4%23110\Docs\R4-2400608.zip) **discussion on release independence specs 38.307 and 36.307**

*Type: other For: Approval  
 Source: Nokia, CHTTL, Samsung*

**Decision: Noted.**

[**R4-2401988**](file:///D:\RAN4%23110\Docs\R4-2401988.zip) **Discussion on the updated procedure for introducing release independent features**

*Type: discussion For: Discussion  
 Source: CHTTL, Nokia*

**Decision: Noted.**

[**R4-2402066**](file:///D:\RAN4%23110\Docs\R4-2402066.zip) **(maintenance 38.307) Discussion on potential optimization on TS 38.307 draft rules**

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

**Decision: Noted.**

**CR/Draft CR**

[**R4-2400055**](file:///D:\RAN4%23110\Docs\R4-2400055.zip) **Draft Improvement CR for TS 38.307 R18**

*Type: draftCR For: Endorsement  
 38.307 v18.0.0 CR- rev Cat: F (Rel-18)  
  
 Source: CATT*

**Decision: Not pursued.**

[**R4-2400056**](file:///D:\RAN4%23110\Docs\R4-2400056.zip) **Draft Improvement CR for TS 36.307 R18**

*Type: draftCR For: Endorsement  
 36.307 v18.3.0 CR- rev Cat: F (Rel-18)  
  
 Source: CATT*

*Nokia/CHTTL: do not need remove additional in the title.*

*Samsung: similar view.*

*CHTTL: should be careful to remove the sentences in the other part.*

**Decision: Not pursued.**

[**R4-2400057**](file:///D:\RAN4%23110\Docs\R4-2400057.zip) **Draft CR for TS 38.307 R15 formally closed**

*Type: draftCR For: Endorsement  
 38.307 v15.11.0 CR- rev Cat: F (Rel-15)  
  
 Source: CATT*

**Decision: Not pursued.**

[**R4-2400058**](file:///D:\RAN4%23110\Docs\R4-2400058.zip) **Draft CR for TS 36.307 R8 formally closed**

*Type: draftCR For: Endorsement  
 36.307 v8.17.0 CR- rev Cat: F (Rel-8)  
  
 Source: CATT*

**Decision: Not pursued.**

[**R4-2400220**](file:///D:\RAN4%23110\Docs\R4-2400220.zip) **(NR\_NTN\_LSband-Core) CR on TS 38.307 for NR NTN bands release independent, Rel-18**

*Type: CR For: Agreement  
 38.307 v18.0.0 CR-0148 rev Cat: B (Rel-18)  
  
 Source: Qualcomm Incorporated, CHTTL*

**Decision: Revised to** [**R4-2403706**](file:///D:\RAN4%23110\Docs\R4-2403706.zip) **(from** [**R4-2400220**](file:///D:\RAN4%23110\Docs\R4-2400220.zip)**).**

[**R4-2403706**](file:///D:\RAN4%23110\Docs\R4-2403706.zip) **(NR\_NTN\_LSband-Core) CR on TS 38.307 for NR NTN bands release independent, Rel-18**

*Type: CR For: Agreement  
 38.307 v18.0.0 CR-0148 rev Cat: F (Rel-18)  
  
 Source: Qualcomm Incorporated, CHTTL*

**Decision: Agreed.**

[**R4-2400221**](file:///D:\RAN4%23110\Docs\R4-2400221.zip) **(NR\_NTN\_solutions-Core) CR on TS 38.307 for NR NTN bands release independent, Rel-17**

*Type: CR For: Agreement  
 38.307 v17.11.0 CR-0149 rev Cat: F (Rel-17)  
  
 Source: Qualcomm Incorporated, CHTTL*

**Decision: Agreed.**

[**R4-2400609**](file:///D:\RAN4%23110\Docs\R4-2400609.zip) **CR for 36.307 General enhancement for future proofing R18**

*Type: CR For: Agreement  
 36.307 v18.3.0 CR-4498 rev Cat: F (Rel-18)  
  
 Source: Nokia, CHTTL, Samsung*

**Decision: Revised to** [**R4-2403707**](file:///D:\RAN4%23110\Docs\R4-2403707.zip) **(from** [**R4-2400609**](file:///D:\RAN4%23110\Docs\R4-2400609.zip)**).**

[**R4-2403707**](file:///D:\RAN4%23110\Docs\R4-2403707.zip) **CR for 36.307 General enhancement for future proofing R18**

*Type: CR For: Agreement  
 36.307 v18.3.0 CR-4498 rev Cat: F (Rel-18)  
  
 Source: Nokia, CHTTL, Samsung*

**Decision: Agreed.**

[**R4-2400610**](file:///D:\RAN4%23110\Docs\R4-2400610.zip) **CR for 38.307 General enhancement for future purposes R18**

*Type: CR For: Agreement  
 38.307 v18.0.0 CR-0150 rev Cat: F (Rel-18)  
  
 Source: Nokia, CHTTL, Samsung*

**Decision: Revised to** [**R4-2403708**](file:///D:\RAN4%23110\Docs\R4-2403708.zip) **(from** [**R4-2400610**](file:///D:\RAN4%23110\Docs\R4-2400610.zip)**).**

[**R4-2403708**](file:///D:\RAN4%23110\Docs\R4-2403708.zip) **CR for 38.307 General enhancement for future purposes R18**

*Type: CR For: Agreement  
 38.307 v18.0.0 CR-0150 rev Cat: F (Rel-18)  
  
 Source: Nokia, CHTTL, Samsung*

**Decision: Agreed.**

[**R4-2400611**](file:///D:\RAN4%23110\Docs\R4-2400611.zip) **CR for 38.307 necessary fixes for release pointers R17**

*Type: CR For: Agreement  
 38.307 v17.11.0 CR-0151 rev Cat: F (Rel-17)  
  
 Source: Nokia, CHTTL, Samsung*

**Decision: Agreed.**

[**R4-2400612**](file:///D:\RAN4%23110\Docs\R4-2400612.zip) **CR for 38.307 necessary fix for release pointer R16**

*Type: CR For: Agreement  
 38.307 v16.15.0 CR-0152 rev Cat: F (Rel-16)  
  
 Source: Nokia, CHTTL, Samsung*

**Decision: Agreed.**

[**R4-2400613**](file:///D:\RAN4%23110\Docs\R4-2400613.zip) **CR for 36.307 Removal of Rel18 NTN from Rel17 spec**

*Type: CR For: Agreement  
 36.307 v17.6.0 CR-4499 rev Cat: F (Rel-17)  
  
 Source: Nokia, CHTTL, Qualcomm*

**Decision: Agreed.**

[**R4-2401246**](file:///D:\RAN4%23110\Docs\R4-2401246.zip) **(NR\_CADC\_R16\_2BDL\_xBUL-Core) CR for TS38.307: Update and correct the requirements for inter-band NR-DC configurations**

*Type: CR For: Agreement  
 38.307 v16.15.0 CR-0154 rev Cat: F (Rel-16)  
  
 Source: ZTE Corporation, Samsung, CHTTL*

**Decision: Agreed.**

[**R4-2401247**](file:///D:\RAN4%23110\Docs\R4-2401247.zip) **(NR\_CADC\_R17\_2BDL\_xBUL-Core) CR for TS38.307: Update and correct the requirements for inter-band NR-DC configurations**

*Type: CR For: Agreement  
 38.307 v17.11.0 CR-0155 rev Cat: F (Rel-17)  
  
 Source: ZTE Corporation, Samsung, CHTTL*

**Decision: Agreed.**

[**R4-2401248**](file:///D:\RAN4%23110\Docs\R4-2401248.zip) **(NR\_CADC\_R18\_2BDL\_xBUL-Core) CR for TS38.307: Update and correct the requirements for inter-band NR-DC configurations**

*Type: CR For: Agreement  
 38.307 v18.0.0 CR-0156 rev Cat: F (Rel-18)  
  
 Source: ZTE Corporation, Samsung, CHTTL*

**Decision: Agreed.**

[**R4-2401989**](file:///D:\RAN4%23110\Docs\R4-2401989.zip) **[TEI18] CR to 38.307 for updated procedure for introducing release independent features**

*Type: CR For: Agreement  
 38.307 v18.0.0 CR-0157 rev Cat: B (Rel-18)  
  
 Source: CHTTL, Nokia*

*Huawei/Samsung have the comments.*

**Decision: Revised to** [**R4-2403709**](file:///D:\RAN4%23110\Docs\R4-2403709.zip) **(from** [**R4-2401989**](file:///D:\RAN4%23110\Docs\R4-2401989.zip)**).**

[**R4-2403709**](file:///D:\RAN4%23110\Docs\R4-2403709.zip) **CR to 38.307 for updated procedure for introducing release independent features**

*Type: CR For: Agreement  
 38.307 v18.0.0 CR-0157 rev Cat: F (Rel-18)  
  
 Source: CHTTL, Nokia*

*Huawei/Samsung have the comments.*

**Decision: Agreed.**

[**R4-2401990**](file:///D:\RAN4%23110\Docs\R4-2401990.zip) **[TEI18] CR to 36.307 for updated procedure for introducing release independent features**

*Type: CR For: Agreement  
 36.307 v18.3.0 CR-4501 rev Cat: B (Rel-18)  
  
 Source: CHTTL, Nokia*

**Decision: Revised to** [**R4-2403710**](file:///D:\RAN4%23110\Docs\R4-2403710.zip) **(from** [**R4-2401990**](file:///D:\RAN4%23110\Docs\R4-2401990.zip)**).**

[**R4-2403710**](file:///D:\RAN4%23110\Docs\R4-2403710.zip) **CR to 36.307 for updated procedure for introducing release independent features**

*Type: CR For: Agreement  
 36.307 v18.3.0 CR-4501 rev Cat: F (Rel-18)  
  
 Source: CHTTL, Nokia*

**Decision: Agreed.**

[**R4-2402067**](file:///D:\RAN4%23110\Docs\R4-2402067.zip) **(maintenance 38.307) draft CR for TS 38.307 to improve the wordings for draft rules**

*Type: draftCR For: Endorsement  
 38.307 v18.0.0 CR- rev Cat: (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Decision: Not pursued.**

[**R4-2402069**](file:///D:\RAN4%23110\Docs\R4-2402069.zip) **CR to TS 38.307 on release independence for intra-band NE-DC contiguous configurations**

*Type: CR For: Agreement  
 38.307 v18.0.0 CR-0158 rev Cat: B (Rel-18)  
  
 Source: CHTTL*

**Decision: Revised to** [**R4-2403711**](file:///D:\RAN4%23110\Docs\R4-2403711.zip) **(from** [**R4-2402069**](file:///D:\RAN4%23110\Docs\R4-2402069.zip)**).**

[**R4-2403711**](file:///D:\RAN4%23110\Docs\R4-2403711.zip) **CR to TS 38.307 on release independence for intra-band NE-DC contiguous configurations**

*Type: CR For: Agreement  
 38.307 v18.0.0 CR-0158 rev Cat: B (Rel-18)  
  
 Source: CHTTL, ZTE, Samsung*

**Decision: Agreed.**

[**R4-2402359**](file:///D:\RAN4%23110\Docs\R4-2402359.zip) **(NR\_CA\_R16\_intra-Core) Rel-16 Cat F CR for 38.307 Correct and update the requirements for EN-DC and NR-CA**

*Type: CR For: Agreement  
 38.307 v16.15.0 CR-0159 rev Cat: F (Rel-16)  
  
 Source: Samsung, Nokia, ZTE Corporation, Huawei, HiSilicon, CHTTL*

**Decision: Agreed.**

[**R4-2402360**](file:///D:\RAN4%23110\Docs\R4-2402360.zip) **(NR\_CA\_R17\_Intra-Core) Rel-17 Cat F CR for 38.307 Correct and update the requirements for EN-DC and NR-CA**

*Type: CR For: Agreement  
 38.307 v17.11.0 CR-0160 rev Cat: F (Rel-17)  
  
 Source: Samsung, Nokia, ZTE Corporation, Huawei, HiSilicon, CHTTL*

**Decision: Agreed.**

[**R4-2402361**](file:///D:\RAN4%23110\Docs\R4-2402361.zip) **(NR\_CA\_R18\_Intra-Core) Rel-18 Cat F CR for 38.307 Correct and update the requirements for EN-DC and NR-CA**

*Type: CR For: Agreement  
 38.307 v18.0.0 CR-0161 rev Cat: F (Rel-18)  
  
 Source: Samsung, Nokia, ZTE Corporation, Huawei, HiSilicon, CHTTL*

**Decision: Agreed.**

### 13.2 Co-existence for existing mobile networks caused by band n101

[**R4-2400648**](file:///D:\RAN4%23110\Docs\R4-2400648.zip) **Discussion on coexistence aspects for n101**

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

**Decision: Noted.**

[**R4-2400690**](file:///D:\RAN4%23110\Docs\R4-2400690.zip) **Co-existence for existing mobile networks with band n101**

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

**Abstract:**

This contribution provides a review on what RAN4 and CEPT have studied on co-existence for existing mobile networks with band n101 and draws some observations from the studies.

**Decision: Noted.**

[**R4-2401966**](file:///D:\RAN4%23110\Docs\R4-2401966.zip) **Harm to existing mobile networks caused by band n101**

*Type: discussion For: Approval  
 Source: Vodafone, Telecom Italia, Telefónica, Bouygues Telecom, Deutsche Telekom, Telia Company, Orange, Swisscom, KPN*

**Decision: Noted.**

[**R4-2402236**](file:///D:\RAN4%23110\Docs\R4-2402236.zip) **Discussion on the co-existence for existing mobile networks caused by band n101**

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

**Decision: Noted.**

[**R4-2402320**](file:///D:\RAN4%23110\Docs\R4-2402320.zip) **RAN task for band n101 coexistence**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

This contribution discusses band n101 and the related task requested by RAN on coexistence

**Decision: Noted.**

[**R4-2402391**](file:///D:\RAN4%23110\Docs\R4-2402391.zip) **Co-existence between RMR and MFCN in band n101**

*Type: discussion For: Discussion  
 Source: Union Inter. Chemins de Fer*

**Abstract:**

Co-existence between RMR and MFCN in band n101

**Decision: Noted.**

[**R4-2402583**](file:///D:\RAN4%23110\Docs\R4-2402583.zip) **Analysis of the FRMCS interference issue from band n101 to band n1**

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

**Abstract:**

In this contribution we provide analysis of the n101 implementation status, considering aspects related to band n1 users.

**Decision: Noted.**

[**R4-2402588**](file:///D:\RAN4%23110\Docs\R4-2402588.zip) **Discussion on the handling of FRMCS BS output power requirements for n100 and n101**

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

**Abstract:**

In this contribution we provide analysis of the LS in [R4-2400334](file:///D:\RAN4%23110\Docs\R4-2400334.zip), providing proposals on further handling of n100/n101 output power requirements in RAN4 specifications.

**Decision: Noted.**

[**R4-2402321**](file:///D:\RAN4%23110\Docs\R4-2402321.zip) **(NR\_RAIL\_EU\_900MHz, NR\_RAIL\_EU\_1900MHz\_TDD) further regulatory consideration for bands n100 and n101**

*Type: other For: Approval  
 Source: Ericsson*

**Abstract:**

Following on CEPT LS reply, this contribution reconsiders BS max output power and additional OBUE requirements for bands n100 and n101. Chair: Treat this under email thread [145].

**Decision: Noted.**

**LS out**

[**R4-2400691**](file:///D:\RAN4%23110\Docs\R4-2400691.zip) **Reply LS on co-existence for existing mobile networks with band n101**

*Type: LS out For: Approval  
 to RAN  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Reply LS on co-existence for existing mobile networks with band n101

**Decision: Noted.**

[**R4-2402392**](file:///D:\RAN4%23110\Docs\R4-2402392.zip) **Reply LS on co-existence for existing mobile networks with band n101**

*Type: LS out For: Approval  
 to RAN  
 Source: Union Inter. Chemins de Fer*

**Abstract:**

Reply LS on co-existence for existing mobile networks with band n101

**Decision: Revised to** [**R4-2403675**](file:///D:\RAN4%23110\Docs\R4-2403675.zip) **(from** [**R4-2402392**](file:///D:\RAN4%23110\Docs\R4-2402392.zip)**).**

[**R4-2403675**](file:///D:\RAN4%23110\Docs\R4-2403675.zip) **Reply LS on co-existence for existing mobile networks with band n101**

*Type: LS out For: Approval  
 to RAN  
 Source: Union Inter. Chemins de Fer*

**Abstract:**

Reply LS on co-existence for existing mobile networks with band n101

**Decision: Approved.**

[**R4-2402589**](file:///D:\RAN4%23110\Docs\R4-2402589.zip) **Draft LS to ECC WG FM on in-block output power requirements clarification for bands n100 and n101**

*Type: LS out For: Approval  
 to ECC WG FM, cc ETSI TC ERM, ETSI TC RT, UIC UGFA  
 Source: Huawei, HiSilicon*

**Abstract:**

Draft LS reply to [R4-2400334](file:///D:\RAN4%23110\Docs\R4-2400334.zip), providing clarification on the n100/n101 output power requirements in RAN4 specifications.

**Decision: Noted.**

[**R4-2400687**](file:///D:\RAN4%23110\Docs\R4-2400687.zip) **Reply LS on in-block output power requirements for bands n100 and n101 and on additional unwanted emission limits for band n100**

*Type: LS out For: Approval  
 to CEPT ECC WG FM, cc RAN  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Reply LS on in-block output power requirements for bands n100 and n101 and on additional unwanted emission limits for band n100 Chair: Treat this under email thread [145].

**Decision: Approved.**

**CR/Draft CR**

[**R4-2402446**](file:///D:\RAN4%23110\Docs\R4-2402446.zip) **Compensating for post antenna connector gain impact to unwanted emissions for n101 band**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2163 rev Cat: F (Rel-17)  
  
 Source: Vodafone, Deutsche Telekom, Orange, Telia Company, KPN, Telecom Italia*

**Decision: Revised to** [**R4-2403694**](file:///D:\RAN4%23110\Docs\R4-2403694.zip) **(from** [**R4-2402446**](file:///D:\RAN4%23110\Docs\R4-2402446.zip)**).**

[**R4-2403694**](file:///D:\RAN4%23110\Docs\R4-2403694.zip) **Compensating for post antenna connector gain impact to unwanted emissions for n101 band**

*Type: CR For: Agreement  
 38.101-1 v17.12.0 CR-2163 rev Cat: F (Rel-17)  
  
 Source: Vodafone, Deutsche Telekom, Orange, Telia Company, KPN, Telecom Italia*

**Decision: Agreed.**

[**R4-2402619**](file:///D:\RAN4%23110\Docs\R4-2402619.zip) **Compensating for post antenna connector gain impact to unwanted emissions for n101 band**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1176 rev Cat: A (Rel-18)  
  
 Source: Vodafone, Deutsche Telekom, Orange, Telia Company, KPN, Telecom Italia*

**Decision: Revised to** [**R4-2403701**](file:///D:\RAN4%23110\Docs\R4-2403701.zip) **(from** [**R4-2402619**](file:///D:\RAN4%23110\Docs\R4-2402619.zip)**).**

[**R4-2403701**](file:///D:\RAN4%23110\Docs\R4-2403701.zip) **Compensating for post antenna connector gain impact to unwanted emissions for n101 band**

*Type: CR For: Agreement  
 38.101-3 v18.4.0 CR-1176 rev Cat: A (Rel-18)  
  
 Source: Vodafone, Deutsche Telekom, Orange, Telia Company, KPN, Telecom Italia*

**Decision: Agreed.**

[**R4-2402584**](file:///D:\RAN4%23110\Docs\R4-2402584.zip) **(NR\_RAIL\_EU\_1900MHz\_TDD-Core) CR to TR 38.852: Corrections on FRMCS n101 deployment aspects and related output power limits, Rel-17**

*Type: CR For: Agreement  
 38.852 v17.3.0 CR-0008 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the regulatory ECC feedback received in RAN4 was asked to clarify that both uncoordinated, as well as coordinated FRMCS deployments are considered, with related n101 output power decisions from ECC Decision (20)02.

**Decision: Revised to** [**R4-2403695**](file:///D:\RAN4%23110\Docs\R4-2403695.zip) **(from** [**R4-2402584**](file:///D:\RAN4%23110\Docs\R4-2402584.zip)**).**

[**R4-2403695**](file:///D:\RAN4%23110\Docs\R4-2403695.zip) **(NR\_RAIL\_EU\_1900MHz\_TDD-Core) CR to TR 38.852: Corrections on FRMCS n101 deployment aspects and related output power limits, Rel-17**

*Type: CR For: Agreement  
 38.852 v17.3.0 CR-0008 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the regulatory ECC feedback received in RAN4 was asked to clarify that both uncoordinated, as well as coordinated FRMCS deployments are considered, with related n101 output power decisions from ECC Decision (20)02.

**Decision: Agreed.**

[**R4-2402585**](file:///D:\RAN4%23110\Docs\R4-2402585.zip) **(NR\_RAIL\_EU\_900MHz-Core) CR to TR 38.853: Corrections on FRMCS n100 deployment aspects and related output power limits, Rel-17**

*Type: CR For: Agreement  
 38.853 v17.3.0 CR-0008 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the regulatory ECC feedback received in, RAN4 was asked to clarify that both uncoordinated, as well as coordinated FRMCS deployments are considered, with related n100 output power decisions from ECC Decision (20)02.

**Decision: Revised to** [**R4-2403696**](file:///D:\RAN4%23110\Docs\R4-2403696.zip) **(from** [**R4-2402585**](file:///D:\RAN4%23110\Docs\R4-2402585.zip)**).**

[**R4-2403696**](file:///D:\RAN4%23110\Docs\R4-2403696.zip) **(NR\_RAIL\_EU\_900MHz-Core) CR to TR 38.853: Corrections on FRMCS n100 deployment aspects and related output power limits, Rel-17**

*Type: CR For: Agreement  
 38.853 v17.3.0 CR-0008 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the regulatory ECC feedback received in, RAN4 was asked to clarify that both uncoordinated, as well as coordinated FRMCS deployments are considered, with related n100 output power decisions from ECC Decision (20)02.

**Decision: Agreed.**

[**R4-2402594**](file:///D:\RAN4%23110\Docs\R4-2402594.zip) **(NR\_RAIL\_EU\_900MHz-Core, NR\_RAIL\_EU\_1900MHz\_TDD-Core) CR to TS 38.104: correction on n100/n101 deployment aspects and additional n100 OBUE requirement, Rel-17**

*Type: CR For: Agreement  
 38.104 v17.12.0 CR-0595 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the regulatory ECC WG FM feedback received in LS, RAN4 was asked to clarify that both uncoordinated, as well as coordinated FRMCS deployments are considered in the specification, together with related n100/n101 output power limits,

ZTE: there are some CRs touching the same spec. They have the same affected clause.

**Decision: Revised to** [**R4-2403697**](file:///D:\RAN4%23110\Docs\R4-2403697.zip) **(from** [**R4-2402594**](file:///D:\RAN4%23110\Docs\R4-2402594.zip)**).**

[**R4-2403697**](file:///D:\RAN4%23110\Docs\R4-2403697.zip) **(NR\_RAIL\_EU\_900MHz-Core, NR\_RAIL\_EU\_1900MHz\_TDD-Core) CR to TS 38.104: correction on n100/n101 deployment aspects and additional n100 OBUE requirement, Rel-17**

*Type: CR For: Agreement  
 38.104 v17.12.0 CR-0595 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the regulatory ECC WG FM feedback received in LS, RAN4 was asked to clarify that both uncoordinated, as well as coordinated FRMCS deployments are considered in the specification, together with related n100/n101 output power limits,

ZTE: there are some CRs touching the same spec. They have the same affected clause.

**Decision: Agreed.**

[**R4-2402595**](file:///D:\RAN4%23110\Docs\R4-2402595.zip) **(NR\_RAIL\_EU\_900MHz-Core, NR\_RAIL\_EU\_1900MHz\_TDD-Core) CR to TS 38.104: correction on n100/n101 deployment aspects and additional n100 OBUE requirement, Rel-18**

*Type: CR For: Agreement  
 38.104 v18.4.0 CR-0596 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the regulatory ECC WG FM feedback received in LS, RAN4 was asked to clarify that both uncoordinated, as well as coordinated FRMCS deployments are considered in the specification, together with related n100/n101 output power limits,

**Decision: Revised to** [**R4-2403698**](file:///D:\RAN4%23110\Docs\R4-2403698.zip) **(from** [**R4-2402595**](file:///D:\RAN4%23110\Docs\R4-2402595.zip)**).**

[**R4-2403698**](file:///D:\RAN4%23110\Docs\R4-2403698.zip) **(NR\_RAIL\_EU\_900MHz-Core, NR\_RAIL\_EU\_1900MHz\_TDD-Core) CR to TS 38.104: correction on n100/n101 deployment aspects and additional n100 OBUE requirement, Rel-18**

*Type: CR For: Agreement  
 38.104 v18.4.0 CR-0596 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the regulatory ECC WG FM feedback received in LS, RAN4 was asked to clarify that both uncoordinated, as well as coordinated FRMCS deployments are considered in the specification, together with related n100/n101 output power limits,

**Decision: Agreed.**

[**R4-2402596**](file:///D:\RAN4%23110\Docs\R4-2402596.zip) **(NR\_RAIL\_EU\_900MHz-Perf, NR\_RAIL\_EU\_1900MHz\_TDD-Perf) CR to TS 38.141-1: correction on n100/n101 deployment aspects and additional n100 OBUE requirement, Rel-17**

*Type: CR For: Agreement  
 38.141-1 v17.12.0 CR-0431 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the regulatory ECC WG FM feedback received in LS, RAN4 was asked to clarify that both uncoordinated, as well as coordinated FRMCS deployments are considered in the specification, together with related n100/n101 output power limits,

**Decision: Revised to** [**R4-2403699**](file:///D:\RAN4%23110\Docs\R4-2403699.zip) **(from** [**R4-2402596**](file:///D:\RAN4%23110\Docs\R4-2402596.zip)**).**

[**R4-2403699**](file:///D:\RAN4%23110\Docs\R4-2403699.zip) **(NR\_RAIL\_EU\_900MHz-Perf, NR\_RAIL\_EU\_1900MHz\_TDD-Perf) CR to TS 38.141-1: correction on n100/n101 deployment aspects and additional n100 OBUE requirement, Rel-17**

*Type: CR For: Agreement  
 38.141-1 v17.12.0 CR-0431 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the regulatory ECC WG FM feedback received in LS, RAN4 was asked to clarify that both uncoordinated, as well as coordinated FRMCS deployments are considered in the specification, together with related n100/n101 output power limits,

**Decision: Agreed.**

[**R4-2402597**](file:///D:\RAN4%23110\Docs\R4-2402597.zip) **(NR\_RAIL\_EU\_900MHz-Perf, NR\_RAIL\_EU\_1900MHz\_TDD-Perf) CR to TS 38.141-1: correction on n100/n101 deployment aspects and additional n100 OBUE requirement, Rel-18**

*Type: CR For: Agreement  
 38.141-1 v18.4.0 CR-0432 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the regulatory ECC WG FM feedback received in LS, RAN4 was asked to clarify that both uncoordinated, as well as coordinated FRMCS deployments are considered in the specification, together with related n100/n101 output power limits,

**Decision: Revised to** [**R4-2403700**](file:///D:\RAN4%23110\Docs\R4-2403700.zip) **(from** [**R4-2402597**](file:///D:\RAN4%23110\Docs\R4-2402597.zip)**).**

[**R4-2403700**](file:///D:\RAN4%23110\Docs\R4-2403700.zip) **(NR\_RAIL\_EU\_900MHz-Perf, NR\_RAIL\_EU\_1900MHz\_TDD-Perf) CR to TS 38.141-1: correction on n100/n101 deployment aspects and additional n100 OBUE requirement, Rel-18**

*Type: CR For: Agreement  
 38.141-1 v18.4.0 CR-0432 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the regulatory ECC WG FM feedback received in LS, RAN4 was asked to clarify that both uncoordinated, as well as coordinated FRMCS deployments are considered in the specification, together with related n100/n101 output power limits,

**Decision: Agreed.**

**Following tdocs under AI 5.1.1**

[**R4-2400681**](file:///D:\RAN4%23110\Docs\R4-2400681.zip) **(NR\_RAIL\_EU\_1900MHz\_TDD-Core) CR to TR 38.852 on correction of reference to EU Decision**

*Type: CR For: Agreement  
 38.852 v17.3.0 CR-0007 rev Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Correct the reference to EU Decision. Date formats are also unified. Chair: Treat this under email thread [145].

**Decision: Agreed.**

[**R4-2400682**](file:///D:\RAN4%23110\Docs\R4-2400682.zip) **(NR\_RAIL\_EU\_900MHz-Core) CR to TR 38.853 on correction of reference to EU Decision**

*Type: CR For: Agreement  
 38.853 v17.3.0 CR-0007 rev Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Correct the reference to EU Decision. Date formats are also unified. Chair: Treat this under email thread [145].

**Decision: Agreed.**

[**R4-2400683**](file:///D:\RAN4%23110\Docs\R4-2400683.zip) **(NR\_RAIL\_EU\_900MHz-Core) CR to TS 38.104 on additional unwanted emission limits for band n100**

*Type: CR For: Agreement  
 38.104 v17.12.0 CR-0562 rev Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Void the clause for the additional unwanted emission limits for band n100. Chair: Treat this under email thread [145].

**Decision: Agreed.**

[**R4-2400684**](file:///D:\RAN4%23110\Docs\R4-2400684.zip) **(NR\_RAIL\_EU\_900MHz-Core) CR to TS 38.104 on additional unwanted emission limits for band n100**

*Type: CR For: Agreement  
 38.104 v18.4.0 CR-0563 rev Cat: A (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Void the clause for the additional unwanted emission limits for band n100. Chair: Treat this under email thread [145].

**Decision: Agreed.**

[**R4-2400685**](file:///D:\RAN4%23110\Docs\R4-2400685.zip) **(NR\_RAIL\_EU\_900MHz-Perf) CR to TS 38.141-1 on additional unwanted emission limits for band n100**

*Type: CR For: Agreement  
 38.141-1 v17.12.0 CR-0411 rev Cat: F (Rel-17)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Void the clause for the additional unwanted emission limits for band n100. Chair: Treat this under email thread [145].

**Decision: Agreed.**

[**R4-2400686**](file:///D:\RAN4%23110\Docs\R4-2400686.zip) **(NR\_RAIL\_EU\_900MHz-Perf) CR to TS 38.141-1 on additional unwanted emission limits for band n100**

*Type: CR For: Agreement  
 38.141-1 v18.4.0 CR-0412 rev Cat: A (Rel-18)  
  
 Source: Nokia, Nokia Shanghai Bell*

**Abstract:**

Void the clause for the additional unwanted emission limits for band n100. Chair: Treat this under email thread [145].

**Decision: Agreed.**

[**R4-2402322**](file:///D:\RAN4%23110\Docs\R4-2402322.zip) **(NR\_RAIL\_EU\_900MHz, NR\_RAIL\_EU\_1900MHz\_TDD) CR TS 38.104 - Updates related to LS from CEPT WG FM56**

*Type: CR For: Agreement  
 38.104 v17.12.0 CR-0585 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This CR to TS 38.104 is based on WG FM56 feedback, updating BS max output power and additional OBUE requirement for bands n100 and n101 Chair: Treat this under email thread [145].

**Decision: Not pursued.**

[**R4-2402323**](file:///D:\RAN4%23110\Docs\R4-2402323.zip) **(NR\_RAIL\_EU\_900MHz, NR\_RAIL\_EU\_1900MHz\_TDD) CR TS 38.104 - Updates related to LS from CEPT WG FM56 - Rel18**

*Type: CR For: Agreement  
 38.104 v18.4.0 CR-0586 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This cat A CR to TS 38.104 is based on WG FM56 feedback, updating BS max output power and additional OBUE requirement for bands n100 and n101 Chair: Treat this under email thread [145].

**Decision: Withdrawn.**

[**R4-2402324**](file:///D:\RAN4%23110\Docs\R4-2402324.zip) **(NR\_RAIL\_EU\_900MHz, NR\_RAIL\_EU\_1900MHz\_TDD) CR TS 38.141-1 - Updates related to LS from CEPT WG FM56**

*Type: CR For: Agreement  
 38.141-1 v17.12.0 CR-0423 rev Cat: F (Rel-17)  
  
 Source: Ericsson*

**Abstract:**

This CR to TS 38.141-1 is based on WG FM56 feedback, updating BS max output power and additional OBUE requirement for bands n100 and n101. Chair: Treat this under email thread [145].

**Decision: Not pursued.**

[**R4-2402325**](file:///D:\RAN4%23110\Docs\R4-2402325.zip) **(NR\_RAIL\_EU\_900MHz, NR\_RAIL\_EU\_1900MHz\_TDD) CR TS 38.141-1 - Updates related to LS from CEPT WG FM56 - Rel18**

*Type: CR For: Agreement  
 38.141-1 v18.4.0 CR-0424 rev Cat: A (Rel-18)  
  
 Source: Ericsson*

**Abstract:**

This cat A CR to TS 38.141-1 is based on WG FM56 feedback, updating BS max output power and additional OBUE requirement for bands n100 and n101. Chair: Treat this under email thread [145].

**Decision: Withdrawn.**

[**R4-2402586**](file:///D:\RAN4%23110\Docs\R4-2402586.zip) **(NR\_RAIL\_EU\_1900MHz\_TDD-Core) CR to TR 38.852: complementary update for the n101 cab-radio aspects, Rel-17**

*Type: CR For: Agreement  
 38.852 v17.3.0 CR-0009 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

During Rel-17 band n101 was introduced based on ECC Decision (20)02 for CEPT countries. Based on the same regulatory ECC Decision (20)02, HPUE requirements were introduced for the cab-radio in Rel-18. In this CR we introduce cross-reference to the Rel-18

**Decision: Revised to** [**R4-2403702**](file:///D:\RAN4%23110\Docs\R4-2403702.zip) **(from** [**R4-2402586**](file:///D:\RAN4%23110\Docs\R4-2402586.zip)**).**

[**R4-2403702**](file:///D:\RAN4%23110\Docs\R4-2403702.zip) **(NR\_RAIL\_EU\_1900MHz\_TDD-Core) CR to TR 38.852: complementary update for the n101 cab-radio aspects, Rel-17**

*Type: CR For: Agreement  
 38.852 v17.3.0 CR-0009 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

During Rel-17 band n101 was introduced based on ECC Decision (20)02 for CEPT countries. Based on the same regulatory ECC Decision (20)02, HPUE requirements were introduced for the cab-radio in Rel-18. In this CR we introduce cross-reference to the Rel-18

**Decision: Agreed.**

[**R4-2402587**](file:///D:\RAN4%23110\Docs\R4-2402587.zip) **(NR\_RAIL\_EU\_900MHz-Core) CR to TR 38.853: complementary update for the n100 cab-radio aspects, Rel-17**

*Type: CR For: Agreement  
 38.853 v17.3.0 CR-0009 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

During Rel-17 band n100 was introduced based on ECC Decision (20)02 for CEPT countries. Based on the same regulatory ECC Decision (20)02, HPUE requirements were introduced for the cab-radio in Rel-18. In this CR we introduce cross-reference to the Rel-18

**Decision: Revised to** [**R4-2403703**](file:///D:\RAN4%23110\Docs\R4-2403703.zip) **(from** [**R4-2402587**](file:///D:\RAN4%23110\Docs\R4-2402587.zip)**).**

[**R4-2403703**](file:///D:\RAN4%23110\Docs\R4-2403703.zip) **(NR\_RAIL\_EU\_900MHz-Core) CR to TR 38.853: complementary update for the n100 cab-radio aspects, Rel-17**

*Type: CR For: Agreement  
 38.853 v17.3.0 CR-0009 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

During Rel-17 band n100 was introduced based on ECC Decision (20)02 for CEPT countries. Based on the same regulatory ECC Decision (20)02, HPUE requirements were introduced for the cab-radio in Rel-18. In this CR we introduce cross-reference to the Rel-18

**Decision: Agreed.**

[**R4-2402590**](file:///D:\RAN4%23110\Docs\R4-2402590.zip) **(NR\_RAIL\_EU\_900MHz-Core, NR\_RAIL\_EU\_1900MHz\_TDD-Core) CR to TS 38.104: removal of obsolete co-location requirements for n100/n101 co-located with MFCN BS, Rel-17**

*Type: CR For: Agreement  
 38.104 v17.12.0 CR-0593 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the TR 38.852 and TR 38.853, for derivation of n100/n101 BS RF requirements it was assumed that the FRMCS BS and the MFCN BS are not co-located. In this CR, we propose removal of obsolete co-location requirements (i.e. co-location Tx spurious

**Decision: Revised to** [**R4-2403704**](file:///D:\RAN4%23110\Docs\R4-2403704.zip) **(from** [**R4-2402590**](file:///D:\RAN4%23110\Docs\R4-2402590.zip)**).**

[**R4-2403704**](file:///D:\RAN4%23110\Docs\R4-2403704.zip) **(NR\_RAIL\_EU\_900MHz-Core, NR\_RAIL\_EU\_1900MHz\_TDD-Core) CR to TS 38.104: removal of obsolete co-location requirements for n100/n101 co-located with MFCN BS, Rel-17**

*Type: CR For: Agreement  
 38.104 v17.12.0 CR-0593 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the TR 38.852 and TR 38.853, for derivation of n100/n101 BS RF requirements it was assumed that the FRMCS BS and the MFCN BS are not co-located. In this CR, we propose removal of obsolete co-location requirements (i.e. co-location Tx spurious

**Decision: Not pursued.**

[**R4-2402591**](file:///D:\RAN4%23110\Docs\R4-2402591.zip) **(NR\_RAIL\_EU\_900MHz-Core, NR\_RAIL\_EU\_1900MHz\_TDD-Core) CR to TS 38.104: removal of obsolete co-location requirements for n100/n101 co-located with MFCN BS, Rel-18**

*Type: CR For: Agreement  
 38.104 v18.4.0 CR-0594 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the TR 38.852 and TR 38.853, for derivation of n100/n101 BS RF requirements it was assumed that the FRMCS BS and the MFCN BS are not co-located. In this CR, we propose removal of obsolete co-location requirements (i.e. co-location Tx spurious

**Decision: Withdrawn.**

[**R4-2402592**](file:///D:\RAN4%23110\Docs\R4-2402592.zip) **(NR\_RAIL\_EU\_900MHz-Perf, NR\_RAIL\_EU\_1900MHz\_TDD- Perf) CR to TS 38.1411: removal of obsolete co-location requirements for n100/n101 co-located with MFCN BS, Rel-17**

*Type: CR For: Agreement  
 38.141-1 v17.12.0 CR-0429 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the TR 38.852 and TR 38.853, for derivation of n100/n101 BS RF requirements it was assumed that the FRMCS BS and the MFCN BS are not co-located. In this CR, we propose removal of obsolete co-location requirements (i.e. co-location Tx spurious

**Decision: Revised to** [**R4-2403705**](file:///D:\RAN4%23110\Docs\R4-2403705.zip) **(from** [**R4-2402592**](file:///D:\RAN4%23110\Docs\R4-2402592.zip)**).**

[**R4-2403705**](file:///D:\RAN4%23110\Docs\R4-2403705.zip) **(NR\_RAIL\_EU\_900MHz-Perf, NR\_RAIL\_EU\_1900MHz\_TDD- Perf) CR to TS 38.1411: removal of obsolete co-location requirements for n100/n101 co-located with MFCN BS, Rel-17**

*Type: CR For: Agreement  
 38.141-1 v17.12.0 CR-0429 rev Cat: F (Rel-17)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the TR 38.852 and TR 38.853, for derivation of n100/n101 BS RF requirements it was assumed that the FRMCS BS and the MFCN BS are not co-located. In this CR, we propose removal of obsolete co-location requirements (i.e. co-location Tx spurious

**Decision: Not pursued.**

[**R4-2402593**](file:///D:\RAN4%23110\Docs\R4-2402593.zip) **(NR\_RAIL\_EU\_900MHz-Perf, NR\_RAIL\_EU\_1900MHz\_TDD-Perf) CR to TS 38.141-1: removal of obsolete co-location requirements for n100/n101 co-located with MFCN BS, Rel-18**

*Type: CR For: Agreement  
 38.141-1 v18.4.0 CR-0430 rev Cat: A (Rel-18)  
  
 Source: Huawei, HiSilicon*

**Abstract:**

According to the TR 38.852 and TR 38.853, for derivation of n100/n101 BS RF requirements it was assumed that the FRMCS BS and the MFCN BS are not co-located. In this CR, we propose removal of obsolete co-location requirements (i.e. co-location Tx spurious

**Decision: Withdrawn.**

**Withdrawn**

[**R4-2402449**](file:///D:\RAN4%23110\Docs\R4-2402449.zip) **Compensating for post antenna connector gain impact to unwanted emissions for n101 band**

*Type: CR For: Agreement  
 38.101-1 v18.4.0 CR-2164 rev Cat: A (Rel-18)  
  
 Source: Vodafone, Deutsche Telekom, Orange, Telia Company, KPN, Telecom Italia*

**Abstract:**

Parsing Failure: Change request Work Item wrong on CR cover for TDoc [R4-2402449](file:///D:\RAN4%23110\Docs\R4-2402449.zip). Database value : NR\_RAIL\_EU\_1900MHz\_TDD,NR\_RAIL\_HPUE\_n100\_n101. CR cover value : RAIL\_HPUE\_n100\_n101, NR\_RAIL\_EU\_1900MHz\_TDD. A revision will be required.

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

## 14 Revision of the Work Plan

[**R4-2400232**](file:///D:\RAN4%23110\Docs\R4-2400232.zip) **Motivation for MSD reporting enhancement in Rel-19**

*Type: discussion For: Information  
 Source: Apple*

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

[**R4-2400233**](file:///D:\RAN4%23110\Docs\R4-2400233.zip) **Motivation for UL Tx switching for FR1 intra-band non-contiguous UL CA in Rel-19**

*Type: discussion For: Information  
 Source: Apple*

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

[**R4-2400234**](file:///D:\RAN4%23110\Docs\R4-2400234.zip) **Motivation for OTA enhancements in Rel-19**

*Type: discussion For: Information  
 Source: Apple*

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

[**R4-2400235**](file:///D:\RAN4%23110\Docs\R4-2400235.zip) **Motivation for New WID on High-power classes for NTN NR FR1 bands**

*Type: discussion For: Information  
 Source: Apple, Ligado Networks, Inmarsat, Hughes/Echostar, Globalstar Inc., Skyworks Solutions Inc., Viasat, Thales*

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

[**R4-2400236**](file:///D:\RAN4%23110\Docs\R4-2400236.zip) **Draft new WID on High-power classes for NTN NR FR1 bands**

*Type: WID new For: Information  
 Source: Apple*

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

[**R4-2400237**](file:///D:\RAN4%23110\Docs\R4-2400237.zip) **Motivation for FR2 UL 256QAM with PC3 devices in Rel-19**

*Type: discussion For: Information  
 Source: Apple, Telecom Italia*

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

[**R4-2400238**](file:///D:\RAN4%23110\Docs\R4-2400238.zip) **Motivation for supporting irregular channels with the next larger channel bandwidth in Rel-19**

*Type: discussion For: Information  
 Source: Apple*

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

[**R4-2400257**](file:///D:\RAN4%23110\Docs\R4-2400257.zip) **Further improvements to the block approval process in R19**

*Type: discussion For: Discussion  
 38.101-1 v CR- rev Cat: (Rel-19)  
  
 Source: Skyworks Solutions Inc., Nokia*

**Abstract:**

To improve the quality and the scope of the band combination block approval process we would like to share our plans for extended and improved templates for the TPs. The goal is to start R19 band combination baskets, after their approval in June 2024 RAN#

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

[**R4-2400258**](file:///D:\RAN4%23110\Docs\R4-2400258.zip) **On cross-band isolation MSD analysis**

*Type: other For: Approval  
 Source: Skyworks Solutions Inc., Nokia*

**Abstract:**

In this contribution, we make a proposal for calculation tables to enable more straightforward cross-band isolation MSD analysis in the two DL band coexistence study TPs.

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

[**R4-2400259**](file:///D:\RAN4%23110\Docs\R4-2400259.zip) **On harmonic mixing orders and analysis**

*Type: other For: Approval  
 Source: Skyworks Solutions Inc., Nokia*

**Abstract:**

In this contribution, we provide our proposals to finalize the harmonic mixing orders to be considered and applicable DL frequency ranges where needed and propose a new table template covering UL harmonics and harmonic mixing.

**Decision: Noted.**

[**R4-2400260**](file:///D:\RAN4%23110\Docs\R4-2400260.zip) **On simplifying analysis for 2DL-1 band intra-band ULCA IMD products**

*Type: other For: Approval  
 Source: Skyworks Solutions Inc., Nokia*

**Abstract:**

In this contribution, we revisit the different cases, IMD orders and IMD indexes to provide an updated table for coexistence studies of two band DL and 1 band UL/2CC combinations for use in Release 19. We also provide simplified expressions for the calcul

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

[**R4-2400261**](file:///D:\RAN4%23110\Docs\R4-2400261.zip) **On simplifying analysis for triple beat products**

*Type: other For: Approval  
 Source: Skyworks Solutions Inc., Nokia*

**Abstract:**

In this contribution we provide an update of the triple beat table for analysis that is simplified and only contains the triple beat products of interest to be used for Release 19 TPs.

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

[**R4-2400262**](file:///D:\RAN4%23110\Docs\R4-2400262.zip) **On applicable UL/DL frequency range restrictions for co-existence studies**

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

**Abstract:**

In this contribution we provide clear guidelines for applicable frequency range restriction in UL or DL to be used for co-existence studies when a two band or a three DL band combination can be uniquely identified to a region/country where such restrictio

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

[**R4-2400263**](file:///D:\RAN4%23110\Docs\R4-2400263.zip) **Proposal for extended two DL with one or two UL co-existence study template**

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

**Abstract:**

In this contribution, we provide a new two DL band co-existence study template that cover one UL with one or two CC and two ULs with two or three CCs with calculation tables for all MSD types and associated guidelines. Chair: Treat this under email thread

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

[**R4-2400418**](file:///D:\RAN4%23110\Docs\R4-2400418.zip) **On intra-band non-collocated NR CA/EN-DC in R19**

*Type: discussion For: Discussion  
 Source: Apple*

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

[**R4-2400469**](file:///D:\RAN4%23110\Docs\R4-2400469.zip) **On R19 demod evolution WI**

*Type: discussion For: Information  
 Source: Apple*

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

[**R4-2400489**](file:///D:\RAN4%23110\Docs\R4-2400489.zip) **On RAN4 led RRM Enhancement in Rel-19**

*Type: discussion For: Information  
 Source: Apple*

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

[**R4-2400504**](file:///D:\RAN4%23110\Docs\R4-2400504.zip) **AIML RRM Measurement Enhancement Rel-19**

*Type: discussion For: Discussion  
 Source: Apple*

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

[**R4-2400938**](file:///D:\RAN4%23110\Docs\R4-2400938.zip) **draft WID on NR power class 2 RedCap (Reduced Capability) UE in FR1**

*Type: WID new For: Information  
 Source: China Telecom, MediaTek*

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

[**R4-2401357**](file:///D:\RAN4%23110\Docs\R4-2401357.zip) **On RRM Topics for Rel-19**

*Type: SID new For: Information  
 Source: Huawei, HiSilicon*

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

[**R4-2401720**](file:///D:\RAN4%23110\Docs\R4-2401720.zip) **On Demodulation Evolution and Enhancements Topics for Rel-19**

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

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

[**R4-2401854**](file:///D:\RAN4%23110\Docs\R4-2401854.zip) **Two Rel-19 WIs proposed for UE RF: improved CA MPR for fragmented spectrum and SRS reporting for reciprocity-based DL-MIMO**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

In this contribution we present two Wis proposed for Rel-19.

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

[**R4-2402141**](file:///D:\RAN4%23110\Docs\R4-2402141.zip) **Expected EIRP mask for upper 6GHz**

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

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

[**R4-2402249**](file:///D:\RAN4%23110\Docs\R4-2402249.zip) **Rel-19 New SID proposal: Antenna Models for 5G Macro BS**

*Type: other For: Discussion  
 Source: Spark NZ, Reliance Jio, Nokia*

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

[**R4-2402309**](file:///D:\RAN4%23110\Docs\R4-2402309.zip) **Study on effective utilization of fragmented FR1 carriers in the DL**

*Type: discussion For: Information  
 Source: TELUS*

**Abstract:**

Investigate the feasibility and solutions to dynamically determine the number of RX chains needed per band of a CA combo

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

[**R4-2402317**](file:///D:\RAN4%23110\Docs\R4-2402317.zip) **New WID on Introduction of 1.4 GHz Band**

*Type: WID new For: Information  
 Source: MidWave Wireless*

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

[**R4-2402427**](file:///D:\RAN4%23110\Docs\R4-2402427.zip) **On UE RF\_OTA Topics for Rel-19**

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

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

[**R4-2402428**](file:///D:\RAN4%23110\Docs\R4-2402428.zip) **On BS RF Topics for Rel-19**

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

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

[**R4-2402441**](file:///D:\RAN4%23110\Docs\R4-2402441.zip) **Views on Rel-19 RAN4 scope**

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

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

[**R4-2402442**](file:///D:\RAN4%23110\Docs\R4-2402442.zip) **Views on Rel-19 RAN4 RF and OTA topics**

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

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

[**R4-2402443**](file:///D:\RAN4%23110\Docs\R4-2402443.zip) **Views on Rel-19 RAN4 RRM topics**

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

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

[**R4-2402444**](file:///D:\RAN4%23110\Docs\R4-2402444.zip) **Views on Rel-19 RAN4 Demodulation topics**

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

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

[**R4-2402445**](file:///D:\RAN4%23110\Docs\R4-2402445.zip) **Views on Rel-19 RAN4 cross-area and other topics**

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

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

[**R4-2402475**](file:///D:\RAN4%23110\Docs\R4-2402475.zip) **NR BS RF enhancements in Rel-19**

*Type: discussion For: Information  
 Source: Ericsson*

**Abstract:**

The identified proposed Rel-19 BS RF work packages are independent which suggest the work to be done in 3 separate work items during scheduled Rel-19 RAN4 period of time. In this contribution we provide further technical background information to respecti

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

[**R4-2402484**](file:///D:\RAN4%23110\Docs\R4-2402484.zip) **New SI proposal: Study on IMT parameters for 7 125-8 400 MHz and 14.8-15.35 GHz**

*Type: SID new For: Information  
 Source: Ericsson*

**Abstract:**

WRC-23 (20 November to 15 December 2023) approved the agenda for the 2027 world radio communication conference (Administrative Circular CA/270).

They invited ITU-R to conduct and complete in time for WRC-27 the sharing and compatibility studies, with a v

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

[**R4-2402507**](file:///D:\RAN4%23110\Docs\R4-2402507.zip) **Rel-19 WUR Work item updates for RAN4 specific objective**

*Type: other For: Information  
 Source: Ericsson*

**Abstract:**

prposal for the RAn4 specific objective

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

## 15 Any other business

[**R4-2400045**](file:///D:\RAN4%23110\Docs\R4-2400045.zip) **Motivation for R19 Low-Low band CA basket WI**

*Type: discussion For: Information  
 Source: CATT, China Telecom, Spark*

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

[**R4-2400046**](file:///D:\RAN4%23110\Docs\R4-2400046.zip) **WID for R19 Low-Low band CA basket WI**

*Type: WID new For: Information  
 Source: CATT, China Telecom*

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

[**R4-2400137**](file:///D:\RAN4%23110\Docs\R4-2400137.zip) **Motivation for R19 RRM further enhancement WI**

*Type: discussion For: Information  
 Source: CATT*

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

[**R4-2400138**](file:///D:\RAN4%23110\Docs\R4-2400138.zip) **WID for R19 RRM enhancement**

*Type: WID new For: Information  
 Source: CATT*

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

[**R4-2400335**](file:///D:\RAN4%23110\Docs\R4-2400335.zip) **Motivation for Ku-band VSAT UE Tx Power Increase**

*Type: other For: Information  
 Source: SKY Perfect JSAT Corporation*

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

[**R4-2400356**](file:///D:\RAN4%23110\Docs\R4-2400356.zip) **Addition of new MSS band for NTN NB-IoT**

*Type: discussion For: Information  
 Source: Iridium Satellite LLC*

**Abstract:**

Discussion Paper Requests to consider the definition of a new band (1616-1626.5 MHz) for NTN NB-IoT services as part of the release 19 possibly with an initial study.

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

[**R4-2400925**](file:///D:\RAN4%23110\Docs\R4-2400925.zip) **Considerations on new Rel-19 SI for further band combination simplification**

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

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

[**R4-2400927**](file:///D:\RAN4%23110\Docs\R4-2400927.zip) **Candidate non spectrum related NTN topics for Rel-19 work plan**

*Type: discussion For: Information  
 Source: THALES*

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

[**R4-2401141**](file:///D:\RAN4%23110\Docs\R4-2401141.zip) **Rel-19 proposal for new HPUE scenario with CA/DC**

*Type: other For: Information  
 Source: Samsung, Bell Mobility, China Telecomm, China Unicom, DISH Network, KDDI Corporation, KT Corporation, TELUS, T-Mobile USA, LG Uplus, NTT DoCoMo, Verizon*

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

[**R4-2401143**](file:///D:\RAN4%23110\Docs\R4-2401143.zip) **Rel-19 proposal for FR2 UE with multi-Rx/STxMP**

*Type: other For: Information  
 Source: Samsung*

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

[**R4-2401167**](file:///D:\RAN4%23110\Docs\R4-2401167.zip) **Rel-19 New WID on further NR sidelink evolution**

*Type: WID new For: Information  
 Source: LG Electronics*

**Abstract:**

It is for information on Rel-19 new WID on further NR sidelink evolution.

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

[**R4-2401168**](file:///D:\RAN4%23110\Docs\R4-2401168.zip) **Motivation on Rel-19 further NR sidelink evolution**

*Type: WID new For: Information  
 Source: LG Electronics*

**Abstract:**

It is motivation on Rel-19 new WID on further NR sidelink evolution.

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

[**R4-2401798**](file:///D:\RAN4%23110\Docs\R4-2401798.zip) **R19 NR Sidelink continuation and enhancements in RAN4**

*Type: discussion For: Discussion  
 Source: OPPO*

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

[**R4-2401799**](file:///D:\RAN4%23110\Docs\R4-2401799.zip) **draft WID for Rel-19 UE Tx power enhancements for UL CA/ENDC with 2Tx or 3Tx**

*Type: WID new For: Discussion  
 Source: OPPO*

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

[**R4-2402401**](file:///D:\RAN4%23110\Docs\R4-2402401.zip) **Further complexity reduction for eRedcap devices enabling SAW-less design**

*Type: other For: Discussion  
 Source: Sony, Nordic Semiconductor ASA, Semtech, Sequans Communications*

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

[**R4-2402530**](file:///D:\RAN4%23110\Docs\R4-2402530.zip) **Rel-19 RAN4-led topics**

*Type: other For: Information  
 Source: ZTE Corporation , Sanechips*

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

[**R4-2402531**](file:///D:\RAN4%23110\Docs\R4-2402531.zip) **Motivation of introduction of NR based AeroMacs system**

*Type: other For: Information  
 Source: ZTE Corporation , Sanechips*

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

[**R4-2402532**](file:///D:\RAN4%23110\Docs\R4-2402532.zip) **New WID on NR based AeroMACS**

*Type: other For: Information  
 Source: ZTE Corporation , Sanechips*

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

[**R4-2402533**](file:///D:\RAN4%23110\Docs\R4-2402533.zip) **Discussion on NR EMC combination and draft skeleton**

*Type: other For: Information  
 Source: ZTE Corporation , Sanechips*

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

## 16 Close of the meeting

The RAN4 Chair Xizeng Dai (Huawei) formally closed the RAN4#110 meeting on Friday, 01/03/2024 at 17h30.

Report prepared by: MCC

BACKUP

-------------------------- Constant values for Chair Tool, please keep them in your notes ----------------------------

**R4-24AAACR Draft big CR for**

*Type: draftCR For: Endorsement  
 38.1xx-0y v18.x.0 CR- rev Cat: B (Rel-1x)  
  
 Source:*

**Decision: Return to.**

**R4-24AAASU Topic summary for [108bis][10x] x**

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

**Abstract:**

This contribution provides the summary of topics and recommended summary.

**Decision: Return to.**

**R4-24AAAWF WF on**

*Type: other For: Approval  
 Source:*

**Decision: Return to.**

**R4-24AAATP TP for TR 38.xxx**

*Type: pCR For: Approval  
 38.xxx-0y-0y vx.y.z CR- rev Cat: (Rel-18)  
  
 Source:*

**Decision: Return to.**

**LatestTdocNumber: R4-2403888**

-------------------------- Constant values for Chair Tool, please keep them in your notes ----------------------------

-------------------------- Update the Tdoc status by a batch processing ----------------------------

**Update\_Tdoc\_Status\_By\_Batch:**

[R4-2405003](file:///D:\RAN4%23110\Docs\R4-2405003.zip) agreed

[R4-2415024](file:///D:\RAN4%23110\Docs\R4-2415024.zip) ENDprocessing

-------------------------- Update the Tdoc status by a batch processing ----------------------------