**3GPP TSG-RAN WG4 Meeting #110 R4-240000X**

**Athens, GR, 26 Feb – 01 Mar, 2024**

**Agenda Item: 2**

**Source: RAN4 Chair**

**Title:** **Agenda for RAN4 #110**

**Document for:** **Approval**

1. Opening of the meeting

**Intellectual Property Rights Declaration**

<https://www.3gpp.org/3gpp-calendar/89-call-for-ipr-meetings>

|  |
| --- |
| The attention of the delegates to the meeting of this Technical Specification Group is 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 are asked to take note that they are thereby invited:   * to investigate whether their organization or any other organization owns IPRs which are, or are 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 Statement and the Licensing declaration forms |

**Statement regarding competition law**

<https://www.3gpp.org/about-3gpp/legal-matters/21-3gpp-calendar/1616-statement-of-antitrust-compliance>

|  |
| --- |
| The attention of the delegates to the meeting is drawn to the fact that 3GPP activities are subject to all applicable antitrust and competition laws and that compliance with said laws is therefore required by any participant of the meeting, including the Chairman and Vice-Chairmen and are 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 are reminded that timely submission of work items in advance of TSG/WG meetings is important to allow for full and fair consideration of such matters. |

**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. |

1. Meeting agenda, arrangement and meeting report
2. Incoming LS
3. Up to Rel-16 maintenance for LTE and NR
   1. UE RF requirements [WI code]
   2. BS RF requirements and BS conformance testing [WI code]
   3. UE/BS EMC requirements [WI code]
   4. RRM requirements [WI code]
   5. Demodulation and CSI requirements [WI code]
   6. OTA and TRP/TRS test aspects [WI code]
   7. Rel-15/16 TEI [TEI]
   8. Moderator summary and conclusions (for Agenda 4) [WI code]
4. Rel-17 maintenance for LTE and NR
   1. Rel-17 spectrum related WI maintenance
      1. Bands introduced in Rel-17 and related requirements [WI code]
      2. NR/LTE/MR-DC basket WIs [WI code]
      3. Others [WI code]
   2. Rel-17 non-spectrum related WI maintenance
      1. UE RF requirements [WI code]
      2. BS RF requirements and BS conformance testing [WI code]
      3. RRM requirements [WI code]
      4. Demodulation and CSI requirements [WI code]
      5. OTA and TRP/TRS test aspects [WI code]
   3. Rel-17 TEI [TEI17]
   4. Moderator summary and conclusions (for Agenda 5)
5. Rel-18 maintenance for LTE and NR
   1. Rel-18 spectrum related WI maintenance

---------------------------------------- Basket WIs ----------------------------------------------------------------------------------------

* + 1. Rel-18 band combinations for concurrent operation of NR/LTE Uu bands/band combinations and one NR/LTE V2X PC5 band [NR\_LTE\_V2X\_PC5\_combos\_R18]
    2. High power UE (power class 1.5) for NR TDD bands [HPUE\_NR\_FR1\_TDD\_R18]
    3. Rel-18 downlink interruption for NR and EN-DC band combinations at dynamic Tx switching [DL\_intrpt\_combos\_TxSW\_R18]
    4. Adding new NR FDD bands for RedCap in Rel-18 [NR\_FDD\_bands\_R18\_redcap]
    5. Enhancement for 700/800/900MHz band combinations [NR\_700800900\_combo\_enh]
    6. Additional LTE bands for UE categories M1/M2/NB1/NB2 in Rel-18 [LTE\_bands\_R18\_M1\_M2\_NB1\_NB2]
       1. UE RF requirements [LTE\_bands\_R18\_M1\_M2\_NB1\_NB2-Core]
       2. BS RF and MSR requirements [LTE\_bands\_R18\_M1\_M2\_NB1\_NB2-Core/Perf]

---------------------------------------- Spectrum related WIs ----------------------------------------------------------------------------------------

* + 1. Introduction of evolved shared spectrum bands [NR\_unlic\_enh]
    2. New bands and BW allocation for 5G terrestrial broadcast - part 2 [LTE\_terr\_bcast\_bands\_part2]
    3. New FDD Bands using the uplink from n28 and the downlink of n75 and n76 [NR\_FDD\_ULn28\_DLn75\_n76]
       1. UE RF requirements [NR\_FDD\_ULn28\_DLn75\_n76-Core]
       2. BS RF requirements [NR\_FDD\_ULn28\_DLn75\_n76-Core]
       3. RRM requirements [NR\_FDD\_ULn28\_DLn75\_n76-Core]
    4. Introduction of 900 MHz NR Band in the US [NR\_900MHz\_US]
       1. UE RF requirements [NR\_900MHz\_US-Core]
       2. BS RF requirements (resubmitted CR) [NR\_900MHz\_US-Core]
       3. RRM requirements [NR\_900MHz\_US-Core]
    5. Introduction of 900 MHz LTE Band in the US [LTE\_900MHz\_US]
    6. Introduction of the satellite L-/S-band [NR\_NTN\_LSband]
       1. UE RF requirements [NR\_NTN\_LSband-Core]
       2. SAN RF requirements [NR\_NTN\_LSband-Core]
       3. RRM requirements [NR\_NTN\_LSband-Core]
    7. Introduction of a new FDD band (L+S band) for IoT NTN operation [IoT\_NTN\_FDD\_LS\_band]
       1. UE RF requirements (resubmitted CR) [IoT\_NTN\_FDD\_LS\_band-Core]
       2. SAN RF requirements (resubmitted CR) [IoT\_NTN\_FDD\_LS\_band-Core]
       3. RRM core requirements (resubmitted CR) [IoT\_NTN\_FDD\_LS\_band-Core]
    8. Introduction of NR bands n31 and n72 [NR\_bands\_n31\_n72]
       1. UE RF requirements (resubmitted CR) [NR\_bands\_n31\_n72-Core]
       2. BS RF requirements and conformance testing (resubmitted CR) [NR\_bands\_n31\_n72-Core/Perf]
       3. RRM core and performance requirements [NR\_bands\_n31\_n72-Core/Perf]
    9. Other WIs related to bands introduced in Rel-18 [WI code]
  1. Rel-18 non-spectrum related WI maintenance
     1. NR Channel raster enhancement [NR\_channel\_raster\_enh]
        1. UE and BS channel raster [NR\_channel\_raster\_enh-Core]
           1. Channel raster for TN [NR\_channel\_raster\_enh-Core]
           2. Channel raster for NTN [NR\_channel\_raster\_enh-Core]
        2. UE capability [NR\_channel\_raster\_enh-Core]
     2. NB-IoT/eMTC core & perf. requirements for NTN [LTE\_NBIOT\_eMTC\_NTN\_req]
        1. SAN RF requirement and conformance testing [LTE\_NBIOT\_eMTC\_NTN\_req-Core]
        2. UE RF requirement [LTE\_NBIOT\_eMTC\_NTN\_req-Core]
        3. RRM requirement [LTE\_NBIOT\_eMTC\_NTN\_req-Core]
        4. Demodulation requirements [LTE\_NBIOT\_eMTC\_NTN\_req-Perf]
     3. In-Device Co-existence (IDC) enhancements for NR and MR-DC [NR\_IDC\_enh-Core]
     4. Low NR band 4Rx for handheld UE and 3Tx for inter-band UL CA and EN-DC [4Rx\_low\_NR\_band\_handheld\_3Tx\_NR\_CA\_ENDC]
        1. Enhancements for 4Rx at low frequency band (<1GHz) [4Rx\_low\_NR\_band\_handheld\_3Tx\_NR\_CA\_ENDC-Core]
        2. Enhancements of 3Tx for band combinations with two bands [4Rx\_low\_NR\_band\_handheld\_3Tx\_NR\_CA\_ENDC-Core]
     5. BS and UE EMC enhancements maintenance [NR\_LTE\_EMC\_enh]
        1. BS EMC enhancements [NR\_LTE\_EMC\_enh-Core/Perf]
        2. UE EMC enhancements [NR\_LTE\_EMC\_enh-Core/Perf]
     6. NR Support for UAV [NR\_UAV]
     7. Enhanced LTE Support for UAV [LTE\_UAV\_enh]
     8. Other dedicated Rel-18 WIs
        1. UE RF requirements [WI code]
        2. BS RF requirements [WI code]
        3. RRM requirements [WI code]
        4. OTA aspects [WI code]
  2. Rel-18 TEI [TEI18]
     1. 2Rx non-REDCAP XR devices [TEI18]
     2. Others [TEI18]
  3. Moderator summary and conclusions (for Agenda 6)

1. 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.

---------------------------------------- Baskets for new band combinations ----------------------------------------------------------------------------------------

* 1. Issues arising from basket WIs but not subject to block approval [WI code]
     1. UE RF requirements [WI code]
        1. Band combinations with UL configurations including intra-band ULCA with IMD or triple beat issues [WI code]
        2. Others [WI code]
     2. Moderator summary and conclusions [WI code]
  2. Moderator summary and conclusions (for basket WI AI 7.3 to AI 7.25 ) [WI code]
  3. Rel-18 Dual Connectivity (DC) of 1 band LTE (1DL/1UL) and 1 NR band (1DL/1UL) [DC\_R18\_1BLTE\_1BNR\_2DL2UL]
     1. Rapporteur input (WID/TR/big CR) [DC\_R18\_1BLTE\_1BNR\_2DL2UL-Core]
     2. UE RF requirements without FR2 band [DC\_R18\_1BLTE\_1BNR\_2DL2UL-Core]
     3. UE RF requirements with FR2 band [DC\_R18\_1BLTE\_1BNR\_2DL2UL-Core]
  4. Rel-18 Dual Connectivity (DC) of 2 bands LTE inter-band CA (2DL/1UL) and 1 NR band (1DL/1UL) [DC\_R18\_2BLTE\_1BNR\_3DL2UL]
     1. Rapporteur input (WID/TR/big CR) [DC\_R18\_2BLTE\_1BNR\_3DL2UL-Core]
     2. UE RF requirements without FR2 band [DC\_R18\_2BLTE\_1BNR\_3DL2UL-Core]
     3. UE RF requirements with FR2 band [DC\_R18\_2BLTE\_1BNR\_3DL2UL-Core]
  5. Rel-18 WID on DC of x bands LTE inter-band CA (x=3,4,5) and 1 NR band [DC\_R18\_xBLTE\_1BNR\_yDL2UL]
     1. Rapporteur input (WID/TR/big CR) [DC\_R18\_xBLTE\_1BNR\_yDL2UL-Core]
     2. UE RF requirements without FR2 band [DC\_R18\_xBLTE\_1BNR\_yDL2UL-Core]
     3. UE RF requirements with FR2 band [DC\_R18\_xBLTE\_1BNR\_yDL2UL-Core]
  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) [DC\_R18\_xBLTE\_2BNR\_yDL2UL]
     1. Rapporteur input (WID/TR/big CR) [DC\_R18\_xBLTE\_2BNR\_yDL2UL-Core]
     2. UE RF requirements without FR2 band [DC\_R18\_xBLTE\_2BNR\_yDL2UL-Core]
     3. UE RF requirements with FR2 band [DC\_R18\_xBLTE\_2BNR\_yDL2UL-Core]
  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) [DC\_R18\_xBLTE\_yBNR\_zDL2UL]
     1. Rapporteur input (WID/TR/big CR) [DC\_R18\_xBLTE\_yBNR\_zDL2UL-Core]
     2. UE RF requirements without FR2 band [DC\_R18\_xBLTE\_yBNR\_zDL2UL-Core]
     3. UE RF requirements with FR2 band [DC\_R18\_xBLTE\_yBNR\_zDL2UL-Core]
  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) [DC\_R18\_xBLTE\_yBNR\_zDL3UL]
     1. Rapporteur input (WID/TR/big CR) [DC\_R18\_xBLTE\_yBNR\_zDL3UL-Core]
     2. UE RF requirements without FR2 band [DC\_R18\_xBLTE\_yBNR\_zDL3UL-Core]
     3. UE RF requirements with FR2 band [DC\_R18\_xBLTE\_yBNR\_zDL3UL-Core]
  9. Rel-18 NR intra band Carrier Aggregation for xCC DL/yCC UL including contiguous and non-contiguous spectrum (x>=y) [NR\_CA\_R18\_intra]
     1. Rapporteur input (WID/TR/big CR) [NR\_CA\_R18\_intra-Core]
     2. UE RF requirements for FR1 (resubmitted CR) [NR\_CA\_R18\_intra-Core]
     3. UE RF requirements for FR2 [NR\_CA\_R18\_intra-Core]
  10. Rel-18 NR Inter-band Carrier Aggregation/Dual Connectivity for 2 bands DL with x bands UL (x=1,2) [NR\_CADC\_R18\_2BDL\_xBUL]
      1. Rapporteur input (WID/TR/big CR) [NR\_CADC\_R18\_2BDL\_xBUL-Core]
      2. UE RF requirements without FR2 band [NR\_CADC\_R18\_2BDL\_xBUL-Core]
      3. UE RF requirements with FR2 band [NR\_CADC\_R18\_2BDL\_xBUL-Core]
  11. Rel-18 NR Inter-band Carrier Aggregation/Dual Connectivity for 3 bands DL with x bands UL (x=1,2) [NR\_CADC\_R18\_3BDL\_xBUL]
      1. Rapporteur input (WID/TR/big CR) [NR\_CADC\_R18\_3BDL\_xBUL-Core]
      2. UE RF requirements without FR2 band [NR\_CADC\_R18\_3BDL\_xBUL-Core]
      3. UE RF requirements with FR2 band [NR\_CADC\_R18\_3BDL\_xBUL-Core]
  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) [NR\_CADC\_R18\_yBDL\_xBUL]
      1. Rapporteur input (WID/TR/big CR) [NR\_CADC\_R18\_yBDL\_xBUL-Core]
      2. UE RF requirements without FR2 band [NR\_CADC\_R18\_yBDL\_xBUL-Core]
      3. UE RF requirements with FR2 band [NR\_CADC\_R18\_yBDL\_xBUL-Core]
  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) [NR\_SUL\_combos\_R18]
      1. Rapporteur input (WID/TR/big CR) [NR\_SUL\_combos\_R18-Core]
      2. UE RF requirements [NR\_SUL\_combos\_R18-Core]
  14. NR CA band combinations with two SUL cells in Rel-18 [NR\_2SUL\_cell\_combos\_R18]
      1. Rapporteur input (WID/TR/big CR) [NR\_2SUL\_cell\_combos\_R18-Core]
      2. UE RF requirements [NR\_2SUL\_cell\_combos\_R18-Core]

---------------------------------------- Baskets for high power UE ----------------------------------------------------------------------------------------

* 1. High-power UE operation for fixed-wireless/vehicle-mounted use cases in LTE bands and NR bands [LTE\_NR\_HPUE\_FWVM\_R18]
     1. Rapporteur input (WID/TR/big CR) [LTE\_NR\_HPUE\_FWVM\_R18-Core]
     2. UE RF requirements [LTE\_NR\_HPUE\_FWVM\_R18-Core]
  2. High power for FR1 for DC\_R18\_xBLTE\_yBNR\_zDLnUL with power class PC2 and PC1.5 [HPUE\_FR1\_DC\_LTE\_NR\_R18]
     1. Rapporteur input (WID/TR/big CR) [HPUE\_FR1\_DC\_LTE\_NR\_R18-Core]
     2. UE RF requirements [HPUE\_FR1\_DC\_LTE\_NR\_R18- Core]
  3. High power UE for FR1 for NR\_CA\_R18\_intra with power class 2 and 1.5 on TDD band(s) [HPUE\_NR\_FR1\_TDD\_intra\_CA\_R18]
     1. Rapporteur input (WID/TR/big CR) [HPUE\_NR\_FR1\_TDD\_intra\_CA\_R18]
     2. UE RF requirements with PC2 and PC1.5 [HPUE\_NR\_FR1\_TDD\_intra\_CA\_R18]
  4. 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 [HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18]
     1. Rapporteur input (WID/TR/big CR) [HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18]
     2. UE RF requirements with PC2 and PC1.5 [HPUE\_FR1\_TDD\_NR\_CADC\_SUL\_R18]
  5. High power UE for FR1 for inter-band NR\_CADC\_R18\_yBDL\_xBUL with power class 2 on single carrier uplink on FDD band [HPUE\_FR1\_FDD\_NR\_CADC\_R18]
     1. Rapporteur input (WID/TR/big CR) [HPUE\_FR1\_FDD\_NR\_CADC\_R18]
     2. UE RF requirements [HPUE\_FR1\_FDD\_NR\_CADC\_R18]
  6. High power UE for FR1 for FDD single band(s) with PC2 [HPUE\_NR\_FR1\_FDD\_R18]
     1. Rapporteur input (WID/TR/big CR) [HPUE\_NR\_FR1\_FDD\_R18]
     2. UE RF requirements (resubmitted CR) [HPUE\_NR\_FR1\_FDD\_R18]

---------------------------------------- Baskets for other aspects ----------------------------------------------------------------------------------------

* 1. Additional NR bands for UL-MIMO in Rel-18 [NR\_bands\_UL\_MIMO\_R18]
     1. Rapporteur input (WID/TR/big CR) [NR\_bands\_UL\_MIMO\_R18-Core]
     2. UE RF requirements [NR\_bands\_UL\_MIMO\_R18-Core]
  2. Adding new channel bandwidth(s) support to existing NR bands [NR\_bands\_R18\_BWs]
     1. Rapporteur input (WID/TR/big CR) [NR\_bands\_R18\_BWs-Core]
     2. UE RF requirements [NR\_bands\_R18\_BWs-Core]
     3. BS RF requirements [NR\_bands\_R18\_BWs-Core]
  3. Simultaneous Rx/Tx inter-band combinations for NR CA/DC, NR SUL and LTE/NR DC in Rel-18 [LTE\_NR\_Simult\_RxTx\_R18]
     1. Rapporteur input (WID/TR/big CR) [LTE\_NR\_Simult\_RxTx\_R18-Core]
     2. Identification of simultaneous Rx/Tx capability for band combinations and UE RF requirements [LTE\_NR\_Simult\_RxTx\_R18-Core]
  4. 4Rx support for NR FR1 bands (<2.6GHz) in Rel-18 [4Rx\_NR\_bands\_R18]
     1. Rapporteur input (WID/TR/big CR) [4Rx\_NR\_bands\_R18-Core]
     2. UE RF requirements [4Rx\_NR\_bands\_R18-Core]
  5. 3Tx NR inter-band UL Carrier Aggregation (CA) and EN-DC [R18\_3Tx\_NR\_CA\_ENDC-Core]
     1. Rapporteur input (WID/TR/big CR) [R18\_3Tx\_NR\_CA\_ENDC-Core]
     2. UE RF requirements with PC2 and PC1.5 [R18\_3Tx\_NR\_CA\_ENDC-Core]

---------------------------------------- New bands -------------------------------------------------------------------------------------------

1. Rel-18 on-going non-spectrum related work items for NR

-------------------------------------- Items led by RAN4 ----------------------------------------------------------------------------------

* 1. Further RF requirements enhancement for NR and EN-DC in FR1 [NR\_ENDC\_RF\_FR1\_enh2]
     1. UE RF requirements maintenance [NR\_ENDC\_RF\_FR1\_enh2-Core]
        1. 4Tx UE RF requirements [NR\_ENDC\_RF\_FR1\_enh2-Core]
        2. 8Rx UE RF requirements (resubmitted CR) [NR\_ENDC\_RF\_FR1\_enh2-Core]
        3. Lower MSD for inter-band CA/EN-DC/DC combinations [NR\_ENDC\_RF\_FR1\_enh2-Core]
     2. RRM performance requirements [NR\_ENDC\_RF\_FR1\_enh2-Perf]
        1. RLM test cases to support 8Rx [NR\_ENDC\_RF\_FR1\_enh2-Perf]
     3. Demodulation and CSI requirements [NR\_ENDC\_RF\_FR1\_enh2-Perf]
        1. 8Rx UE demodulation and CSI [NR\_ENDC\_RF\_FR1\_enh2-Perf]
           1. General aspects [NR\_ENDC\_RF\_FR1\_enh2-Perf]
           2. PDSCH requirements [NR\_ENDC\_RF\_FR1\_enh2-Perf]
           3. SDR requirements [NR\_ENDC\_RF\_FR1\_enh2-Perf]
           4. CQI reporting requirements [NR\_ENDC\_RF\_FR1\_enh2-Perf]
        2. 4Tx BS demodulation [NR\_ENDC\_RF\_FR1\_enh2-Perf]
     4. Moderator summary and conclusions [NR\_ENDC\_RF\_FR1\_enh2]
  2. NR RF requirements enhancement for FR2, Phase 3 [NR\_RF\_FR2\_req\_Ph3]
     1. UL 256QAM core requirements maintenance [NR\_RF\_FR2\_req\_Ph3-Core]
     2. Beam correspondence requirements maintenance for RRC\_INACTIVE and initial access [NR\_RF\_FR2\_req\_Ph3-Core]
        1. Beam correspondence requirement applicability [NR\_RF\_FR2\_req\_Ph3-Core]
        2. UE beam type and DRX implications [NR\_RF\_FR2\_req\_Ph3-Core]
        3. Beam correspondence test issues [NR\_RF\_FR2\_req\_Ph3-Core]
     3. BS demodulation requirements [NR\_RF\_FR2\_req\_Ph3-Perf]
        1. UL 256QAM performance requirements [NR\_RF\_FR2\_req\_Ph3-Perf]
     4. Moderator summary and conclusions [NR\_RF\_FR2\_req\_Ph3]
  3. Requirement for NR FR2 multi-Rx chain DL reception [NR\_FR2\_multiRX\_DL]
     1. UE RF requirements maintenance for simultaneous DL reception with up to 4 layer MIMO [NR\_FR2\_multiRX\_DL-Core]
     2. RRM core requirements maintenance for simultaneous DL reception from different directions [NR\_FR2\_multiRX\_DL-Core]
        1. General aspects [NR\_FR2\_multiRX\_DL-Core]
        2. L1-RSRP measurement delay [NR\_FR2\_multiRX\_DL-Core]
        3. RLM and BFD/CBD requirements [NR\_FR2\_multiRX\_DL-Core]
        4. Scheduling/measurement restrictions [NR\_FR2\_multiRX\_DL-Core]
        5. TCI state switching delay with dual TCI [NR\_FR2\_multiRX\_DL-Core]
        6. Receive timing difference between different directions [NR\_FR2\_multiRX\_DL-Core]
     3. RRM performance requirements [NR\_FR2\_multiRX\_DL-Perf]
     4. Demodulation performance and CSI requirements [NR\_FR2\_multiRX\_DL-Perf]
        1. General aspects [NR\_FR2\_multiRX\_DL-Perf]
        2. PDSCH requirements [NR\_FR2\_multiRX\_DL-Perf]
        3. PMI reporting requirements [NR\_FR2\_multiRX\_DL-Perf]
     5. Moderator summary and conclusions [NR\_FR2\_multiRX\_DL]
  4. Even Further RRM enhancement for NR and MR-DC [NR\_RRM\_enh3]
     1. RRM core requirements maintenance for FR2 SCell activation delay reduction [NR\_RRM\_enh3-Core]
     2. RRM core requirements maintenance for FR1-FR1 NR-DC [NR\_RRM\_enh3-Core]
     3. RRM performance requirements for FR2 SCell activation delay reduction [NR\_RRM\_enh3-Perf]
     4. RRM performance requirements for FR1-FR1 NR DC [NR\_RRM\_enh3-Perf]
     5. Moderator summary and conclusions [NR\_RRM\_enh3]
  5. Further enhancements on NR and MR-DC measurement gaps and measurements without gaps [NR\_MG\_enh2]
     1. RRM core requirements maintenance for pre-configured MGs, multiple concurrent MGs and NCSG [NR\_MG\_enh2-Core]
        1. Case 1 requirements (Pre-configured MG and concurrent MG) [NR\_MG\_enh2-Core]
        2. Case 2 requirements (NCSG and concurrent MG) [NR\_MG\_enh2-Core]
     2. RRM core requirements maintenance for measurements without gaps [NR\_MG\_enh2-Core]
        1. Measurement without gaps for UEs reporting NeedForGapsInfoNR [NR\_MG\_enh2-Core]
        2. Inter-RAT measurement without gap [NR\_MG\_enh2-Core]
     3. RRM performance requirements for pre-configured MGs, multiple concurrent MGs and NCSG [NR\_MG\_enh2-Perf]
     4. RRM performance requirements for measurements without gaps [NR\_MG\_enh2-Perf]
     5. Moderator summary and conclusions [NR\_MG\_enh2]
  6. Completion of specification support for bandwidth part operation without restriction in NR [NR\_BWP\_wor]
     1. RRM core requirements maintenance [NR\_BWP\_wor-Core]
     2. RRM performance requirements [NR\_BWP\_wor-Perf]
     3. Moderator summary and conclusions [NR\_BWP\_wor-Core]
  7. Support of intra-band non-collocated EN-DC/NR-CA deployment [NonCol\_intraB\_ENDC\_NR\_CA]
     1. UE RF requirements maintenance [NonCol\_intraB\_ENDC\_NR\_CA-Core]
     2. RRM Core requirements maintenance [NonCol\_intraB\_ENDC\_NR\_CA-Core]
     3. RRM performance requirements [NonCol\_intraB\_ENDC\_NR\_CA-Perf]
     4. Demodulation performance requirements [NonCol\_intraB\_ENDC\_NR\_CA-Perf]
     5. Moderator summary and conclusions [NonCol\_intraB\_ENDC\_NR\_CA]
  8. Enhanced NR support for high speed train scenario in frequency range 2 [NR\_HST\_FR2\_enh]
     1. RRM core requirement maintenance [NR\_HST\_FR2\_enh-Core]
     2. RRM performance requirements [NR\_HST\_FR2\_enh-Perf]
     3. Demodulation performance requirements [NR\_HST\_FR2\_enh-Perf]
        1. General and channel modelling [NR\_HST\_FR2\_enh-Perf]
        2. PDSCH requirements with CA [NR\_HST\_FR2\_enh-Perf]
        3. PDSCH requirements with multi-Rx Chain DL reception [NR\_HST\_FR2\_enh-Perf]
     4. Moderator summary and conclusions [NR\_HST\_FR2\_enh]
  9. Air-to-ground network for NR [NR\_ATG]
     1. FR1 co-existence requirements maintenance for ATG network [NR\_ATG-Core]
     2. UE RF requirements maintenance [NR\_ATG-Core]
        1. Tx requirements [NR\_ATG-Core]
        2. Rx requirements [NR\_ATG-Core]
     3. BS RF requirements maintenance [NR\_ATG-Core]
     4. BS RF conformance testing requirements [NR\_ATG-Perf]
     5. RRM core requirements maintenance [NR\_ATG-Core]
     6. RRM performance requirements [NR\_ATG-Perf]
     7. Demodulation performance requirements [NR\_ATG-Perf]
        1. General aspects [NR\_ATG-Perf]
        2. UE demodulation performance and CSI requirements [NR\_ATG-Perf]
        3. BS demodulation performance requirements [NR\_ATG-Perf]
     8. Moderator summary and conclusions [NR\_ATG]
  10. NR support for dedicated spectrum less than 5MHz for FR1 [NR\_FR1\_lessthan\_5MHz\_BW]
      1. System parameter maintenance [NR\_FR1\_lessthan\_5MHz\_BW-Core]
      2. UE RF requirement maintenance [NR\_FR1\_lessthan\_5MHz\_BW-Core]
      3. BS RF requirement maintenance [NR\_FR1\_lessthan\_5MHz\_BW-Core]
      4. RRM core requirement maintenance [NR\_FR1\_lessthan\_5MHz\_BW-Core]
      5. RRM performance requirements [NR\_FR1\_lessthan\_5MHz\_BW-Perf]
      6. Demodulation performance requirements [NR\_FR1\_lessthan\_5MHz\_BW-Perf]
         1. UE demodulation performance and CSI requirements [NR\_FR1\_lessthan\_5MHz\_BW-Perf]
         2. BS demodulation performance requirements [NR\_FR1\_lessthan\_5MHz\_BW-Perf]
      7. Moderator summary and conclusions [NR\_FR1\_lessthan\_5MHz\_BW]
  11. Enhancement of TRP and TRS requirements and test methodologies [NR\_FR1\_TRP\_TRS\_Enh]
      1. Enhancement maintenance of test methodology [NR\_FR1\_TRP\_TRS\_enh-Core]
         1. Anechoic chamber test methodology [NR\_FR1\_TRP\_TRS\_enh-Core]
         2. Reverberation chamber test methodology [NR\_FR1\_TRP\_TRS\_enh-Core]
         3. MU assessment [NR\_FR1\_TRP\_TRS\_enh-Core]
         4. Testing time reduction [NR\_FR1\_TRP\_TRS\_enh-Core]
      2. Performance requirements [NR\_FR1\_TRP\_TRS\_enh-Perf]
      3. Moderator summary and conclusions [NR\_FR1\_TRP\_TRS\_enh]
  12. Enhancement of Multiple Input Multiple Output Over-the-Air test methodology and requirements for NR UEs [NR\_MIMO\_OTA\_enh]
      1. FR2 MIMO OTA test methodology enhancement maintenance [NR\_MIMO\_OTA\_enh-Core]
      2. FR1 MIMO OTA test methodology enhancement maintenance [NR\_MIMO\_OTA\_enh-Core]
      3. Performance requirements [NR\_MIMO\_OTA\_enh-Perf]
      4. Moderator summary and conclusions [NR\_MIMO\_OTA\_enh]
  13. NR demodulation performance evolution [NR\_demod\_enh3-Core/Perf]
      1. General aspects [NR\_demod\_enh3-Core/Perf]
      2. Advanced receiver to cancel inter-user interference for MU-MIMO [NR\_demod\_enh3-Perf]
         1. Receiver assumption and NWA signaling [NR\_demod\_enh3-Core]
         2. Test parameters and simulation results [NR\_demod\_enh3-Perf]
      3. Absolute physical layer throughput requirements with link adaptation [NR\_demod\_enh3-Perf]
      4. Moderator summary and conclusions [NR\_demod\_enh3]

---------------------------------------- Items led by other WGs ----------------------------------------------------------------------------------------

* 1. Expanded and improved NR positioning [NR\_pos\_enh2]
     1. RF requirements maintenance [NR\_pos\_enh2-Core]
     2. RRM core requirements maintenance [NR\_pos\_enh2-Core]
        1. General aspects [NR\_pos\_enh2-Core]
        2. SL Positioning [NR\_pos\_enh2-Core]
        3. LPHAP use case [NR\_pos\_enh2-Core]
        4. RedCap Positioning [NR\_pos\_enh2-Core]
        5. PRS/SRS bandwidth aggregation [NR\_pos\_enh2-Core]
        6. Carrier Phase Positioning [NR\_pos\_enh2-Core]
     3. RRM performance requirements [NR\_pos\_enh2-Perf]
        1. SL Positioning [NR\_pos\_enh2-Perf]
        2. LPHAP use case [NR\_pos\_enh2-Perf]
        3. RedCap Positioning [NR\_pos\_enh2-Perf]
        4. PRS/SRS bandwidth aggregation [NR\_pos\_enh2-Perf]
        5. Carrier Phase Positioning [NR\_pos\_enh2-Perf]
     4. Moderator summary and conclusions [NR\_pos\_enh2]
  2. Multi-carrier enhancements for NR [NR\_MC\_enh]
     1. Maintenance for switching time and other RF aspects up to 3 or 4 bands [NR\_MC\_enh-Core]
        1. UL Tx switching with single TAG [NR\_MC\_enh-Core]
        2. UL Tx switching with multiple TAGs (CRs corresponding to RAN discussion can be submitted in this agenda) [NR\_MC\_enh-Core]
     2. RRM core requirements maintenance [NR\_MC\_enh-Core]
     3. RRM performance requirements [NR\_MC\_enh-Perf]
     4. Moderator summary and conclusions [NR\_MC\_enh]
  3. Further NR mobility enhancements [NR\_Mob\_enh2]
     1. RRM Core requirements maintenance [NR\_Mob\_enh2-Core]
        1. L1/L2 based inter-cell mobility [NR\_Mob\_enh2-Core]
           1. General aspects and scenarios [NR\_Mob\_enh2-Core]
           2. L1-RSRP measurement requirements [NR\_Mob\_enh2-Core]
           3. L1/L2 inter-cell mobility delay requirements [NR\_Mob\_enh2-Core]
           4. Others [NR\_Mob\_enh2-Core]
        2. NR-DC with selective activation of cell groups via L3 enhancements [NR\_Mob\_enh2-Core]
        3. Improvement on SCell/SCG setup delay [NR\_Mob\_enh2-Core]
        4. Enhanced CHO configurations [NR\_Mob\_enh2-Core]
     2. RRM performance requirements [NR\_Mob\_enh2-Perf]
        1. L1/L2 based inter-cell mobility [NR\_Mob\_enh2-Perf]
        2. Other RRM performance requirements [NR\_Mob\_enh2-Perf]

\* Include RRM performance requirements for NR-DC with selective activation of cell groups via L3 enhancements, Improvement on SCell/SCG setup delay, Enhanced CHO configurations.

* + 1. Moderator summary and conclusions [NR\_Mob\_enh2]
  1. Dual Tx/Rx Multi-SIM for NR [NR\_DualTxRx\_MUSIM]
     1. RRM requirements maintenance for Rel-17 MUSIM gaps [NR\_DualTxRx\_MUSIM-Core]
        1. General aspects [NR\_DualTxRx\_MUSIM-Core]
        2. Collisions handling and others [NR\_DualTxRx\_MUSIM-Core]
     2. RRM performance requirements [NR\_DualTxRx\_MUSIM-Perf]
     3. Moderator summary and conclusions [NR\_DualTxRx\_MUSIM]
  2. NR NTN enhancement [NR\_NTN\_enh]
     1. General aspects [NR\_NTN\_enh-Core]
        1. System parameters [NR\_NTN\_enh-Core]

\* Include band definition

* + - 1. Regulatory information [NR\_NTN\_enh-Core]
      2. Others [NR\_NTN\_enh-Core]
    1. Co-existence study for above 10GHz bands [NR\_NTN\_enh-Core]
    2. SAN RF requirements [NR\_NTN\_enh-Core]
    3. SAN RF conformance testing requirements [NR\_NTN\_enh-Perf]
    4. UE RF requirements [NR\_NTN\_enh-Core]
       1. Tx RF requirements [NR\_NTN\_enh-Core]
       2. Rx RF requirements [NR\_NTN\_enh-Core]
       3. PUSCH DMRS bundling requirements and others
    5. RRM core requirements [NR\_NTN\_enh-Core]
       1. NR-NTN RRM requirements in above 10 GHz bands [NR\_NTN\_enh-Core]

\* submit some general discussions if needed under this agenda. Submit the proposals for Type 1 and Type 2 UEs in the same contribution.

* + - 1. Network verified UE location [NR\_NTN\_enh-Core]
      2. NTN-TN and NTN-NTN mobility and service continuity enhancements [NR\_NTN\_enh-Core]
    1. RRM performance requirements [NR\_NTN\_enh-Perf]
    2. Demodulation performance requirements [NR\_NTN\_enh-Perf]
       1. SAN demodulation performance requirements [NR\_NTN\_enh-Perf]
       2. UE demodulation performance and CSI requirements [NR\_NTN\_enh-Perf]
    3. Moderator summary and conclusions [NR\_NTN\_enh]
  1. Further NR coverage enhancements [NR\_cov\_enh2]
     1. UE RF requirements maintenance [NR\_cov\_enh2-Core]
        1. Enhancement of increasing UE power high limit for CA and DC [NR\_cov\_enh2-Core]
        2. Enhancement to reduce MPR/PAR [NR\_cov\_enh2-Core]
     2. BS demodulation performance requirements [NR\_cov\_enh2-Perf]
     3. Moderator summary and conclusions [NR\_cov\_enh2]
  2. NR Network-controlled Repeaters [NR\_netcon\_repeater]
     1. RF core requirements maintenance [NR\_netcon\_repeater-Core]
        1. RF requirements for NCR-Fwd [NR\_netcon\_repeater-Core]
        2. RF requirements for NCR-MT [NR\_netcon\_repeater-Core]
     2. EMC core requirements maintenance [NR\_netcon\_repeater-Core]
     3. RF conformance testing [NR\_netcon\_repeater-Perf]
     4. RRM core requirements maintenance [NR\_netcon\_repeater-Core]
     5. RRM performance requirements [NR\_netcon\_repeater-Perf]
     6. Demodulation performance requirements [NR\_netcon\_repeater-Perf]
     7. Moderator summary and conclusions [NR\_netcon\_repeater]
  3. NR MIMO evolution for downlink and uplink [NR\_MIMO\_evo\_DL\_UL]
     1. UE RF requirements maintenance for simultaneous transmission with multi-panel (STxMP) [NR\_MIMO\_evo\_DL\_UL-Core]
        1. Configured transmitted power [NR\_MIMO\_evo\_DL\_UL-Core]
        2. Other UE RF requirements [NR\_MIMO\_evo\_DL\_UL-Core]
     2. RRM core requirements maintenance [NR\_MIMO\_evo\_DL\_UL-Core]
        1. RRM requirements impacts [NR\_MIMO\_evo\_DL\_UL-Core]
        2. Timing requirements for UL multi-DCI multi-TRP with two TAs [NR\_MIMO\_evo\_DL\_UL-Core]
        3. Unified TCI framework [NR\_MIMO\_evo\_DL\_UL-Core]
     3. RRM performance requirements [NR\_MIMO\_evo\_DL\_UL-Perf]
     4. Demodulation performance requirements [NR\_MIMO\_evo\_DL\_UL-Perf]
        1. UE demodulation performance and CSI requirements [NR\_MIMO\_evo\_DL\_UL-Perf]
        2. BS demodulation performance requirements [NR\_MIMO\_evo\_DL\_UL-Perf]
     5. Moderator summary and conclusions [NR\_MIMO\_evo\_DL\_UL]
  4. NR sidelink evolution [NR\_SL\_enh2]
     1. UE RF requirements maintenance [NR\_SL\_enh2-Core]
        1. Sidelink on a single unlicensed spectrum [NR\_SL\_enh2-Core]
           1. System parameters (channel bandwidth, channel arrangement) [NR\_SL\_enh2-Core]
           2. Tx requirements [NR\_SL\_enh2-Core]
           3. Rx requirements [NR\_SL\_enh2-Core]
        2. Con-current operation on Uu and sidelink [NR\_SL\_enh2-Core]
        3. Sidelink CA [NR\_SL\_enh2-Core]
        4. Co-channel coexistence for LTE sidelink and NR sidelink [NR\_SL\_enh2-Core]
     2. RRM core requirements maintenance [NR\_SL\_enh2-Core]
        1. Sidelink CA [NR\_SL\_enh2-Core]
        2. SL unlicensed operation and others [NR\_SL\_enh2-Core]
     3. RRM performance requirements [NR\_SL\_enh2-Perf]
     4. UE demodulation performance requirements [NR\_SL\_enh2-Perf]
     5. Moderator summary and conclusions [NR\_SL\_enh2]
  5. Enhanced support of reduced capability NR devices [NR\_redcap\_enh]
     1. UE RF requirements maintenance [NR\_redcap\_enh-Core]
     2. RRM core requirements maintenance [NR\_redcap\_enh-Core]
     3. RRM performance requirements [NR\_redcap\_enh-Perf]
     4. Demodulation performance requirements [NR\_redcap\_enh-Perf]
        1. UE demodulation performance and CSI requirements [NR\_redcap\_enh-Perf]
        2. BS demodulation performance requirements [NR\_redcap\_enh-Perf]
     5. Moderator summary and conclusions [NR\_redcap\_enh]
  6. Enhanced NR Sidelink Relay [NR\_SL\_relay\_enh]
     1. RRM core requirements maintenance [NR\_SL\_relay\_enh-Core]
     2. RRM performance requirements [NR\_SL\_relay\_enh-Perf]
     3. Moderator summary and conclusions [NR\_SL\_relay\_enh]
  7. Mobile IAB (Integrated Access and Backhaul) for NR [NR\_mobile\_IAB]
     1. Co-existence requirements maintenance [NR\_mobile\_IAB-Core]
     2. RF core requirements maintenance [NR\_mobile\_IAB-Core]
     3. RF conformance testing [NR\_mobile\_IAB-Perf]
     4. RRM core requirements maintenance [NR\_mobile\_IAB-Core]
     5. RRM performance requirements [NR\_mobile\_IAB-Perf]
     6. Demodulation performance requirements [NR\_mobile\_IAB-Perf]
     7. Moderator summary and conclusions [NR\_mobile\_IAB]
  8. Network energy saving for NR [Netw\_Energy\_NR]
     1. BS conformance testing requirements [Netw\_Energy\_NR-Perf]
     2. RRM core requirements maintenance [Netw\_Energy\_NR-Core]
        1. RRM requirements impacts [Netw\_Energy\_NR-Core]

\* Include proposals on RRM impacts for objectives except for SSB-less SCell operation.

* + - 1. SSB-less SCell operation [Netw\_Energy\_NR-Core]
    1. RRM performance requirements [Netw\_Energy\_NR-Perf]
    2. UE demodulation performance and CSI requirements [Netw\_Energy\_NR-Perf]
    3. Moderator summary and conclusions [Netw\_Energy\_NR]
  1. Enhancement of NR dynamic spectrum sharing [NR\_DSS\_enh]
     1. General aspects [NR\_DSS\_enh-Perf]
     2. UE demodulation performance requirements [NR\_DSS\_enh-Perf]
     3. Moderator summary and conclusions [NR\_DSS\_enh-Perf]

1. Rel-18 on-going work Items for LTE

-------------------------------------- Spectrum related ----------------------------------------------------------------------------------

* 1. Rel-18 LTE-Advanced Carrier Aggregation for x bands (2<=x<= 6) DL with y bands (y=1, 2) UL [LTE\_CA\_R18\_xBDL\_yBUL]
     1. Rapporteur input (WID/TR/big CR) [LTE\_CA\_R18\_xBDL\_yBUL-Core]
     2. UE RF requirements for 1 UL [LTE\_CA\_R18\_xBDL\_yBUL-Core]
        1. Requirements with specific issues [LTE\_CA\_R18\_xBDL\_yBUL-Core]
        2. Requirements without specific issues [LTE\_CA\_R18\_xBDL\_yBUL-Core]
     3. UE RF requirements for 2UL [LTE\_CA\_R18\_xBDL\_yBUL-Core]
        1. Requirements with specific issues [LTE\_CA\_R18\_xBDL\_yBUL-Core]
        2. Requirements without specific issues [LTE\_CA\_R18\_xBDL\_yBUL-Core]
     4. Moderator summary and conclusions [LTE\_CA\_R18\_xBDL\_yBUL]
  2. Introduction of the Extended L-band (UL 1668-1675, DL 1518-1525) for IoT NTN [IoT\_NTN\_extLband]
     1. General aspects (TR) [IoT\_NTN\_extLband-Core]
     2. Band definition and system parameters [IoT\_NTN\_extLband-Core]
     3. UE RF requirements (resubmitted CR) [IoT\_NTN\_extLband-Core]
     4. SAN RF requirements (resubmitted CR) [IoT\_NTN\_extLband-Core]
     5. RRM core requirements (resubmitted CR) [IoT\_NTN\_extLband-Core]
     6. Moderator summary and conclusions [IoT\_NTN\_extLband]
  3. High Power UE (Power Class 2) for LTE FDD Band 14 [HPUE\_LTE\_FDD\_B14]
     1. General aspects (TR/big CR) [HPUE\_LTE\_FDD\_B14-Core]
     2. UE RF requirements [HPUE\_LTE\_FDD\_B14-Core]
        1. Tx requirements [HPUE\_LTE\_FDD\_B14-Core]
        2. Rx requirements [HPUE\_LTE\_FDD\_B14-Core]
     3. Release independency [HPUE\_LTE\_FDD\_B14-Perf]
     4. Moderator summary and conclusions [HPUE\_LTE\_FDD\_B14]

-------------------------------------- Non-spectrum related Items ----------------------------------------------------------------------------------

* 1. IoT (Internet of Things) NTN (non-terrestrial network) enhancements [IoT\_NTN\_enh]
     1. UE RF requirements maintenance [IoT\_NTN\_enh-Core]
     2. SAN RF requirements maintenance [IoT\_NTN\_enh-Core]
     3. RRM core requirements maintenance [IoT\_NTN\_enh-Core]
     4. RRM performance requirements [IoT\_NTN\_enh-Perf]
     5. Demodulation performance requirements [IoT\_NTN\_enh-Perf]
     6. Moderator summary and conclusions [IoT\_NTN\_enh]

1. Rel-18 feature list
2. Rel-19 on-going non-spectrum related work items for NR
   1. Artificial Intelligence (AI)/Machine Learning (ML) for NR Air Interface [NR\_AIML\_air]
      1. General aspects [NR\_AIML\_air-Core]
      2. Testability and interoperability issues for beam management [NR\_AIML\_air-Core]
      3. Testability and interoperability issues for positioning accuracy enhancement [NR\_AIML\_air-Core]
      4. Testability and interoperability issues for CSI compression and CSI prediction [NR\_AIML\_air-Core]
      5. Moderator summary and conclusions [[NR\_AIML\_air-Core]
3. Liaison output to other groups and related issues
   1. R18 related

\* Submit contributions if there is no dedicated AI for the corresponding WIs

* + 1. LS on combination of HST and RRM relaxation (R2-2311435)
    2. Others
  1. R17 related
     1. Power class related topics [Power\_Limit\_CA\_DC]

\* 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

* + 1. Others
  1. R15, R16 related
     1. Reply LS on update for “interBandMRDC-WithOverlapDL-Bands-r16” in 38.306 (R2-2309218) [TEI16]
     2. Reply LS on power scaling and PHR in 38.213 (R1-2310555) [NR\_newRAT-Core, NR\_eMIMO-Core, NR\_ENDC\_RF\_FR1\_enh2-Core]
     3. Others
  2. Moderator summary and conclusions

1. RAN task and other topics
   1. Release independency specification (36.307, 38.307)
   2. Co-existence for existing mobile networks caused by band n101
2. Revision of the Work Plan
3. Any other business
4. Close of the meeting