3GPP TSG-RAN WG2 Meeting #117- electronic [R2-2203511](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203511.zip)

Online, February 21st - March 3rd, 2022

**Agenda item: 10.1**

**Source: Vice Chairman (Nokia)**

**Title: Report on LTE legacy, 71 GHz, DCCA, Multi-SIM and RAN slicing**

**Document for: Approval**

# Organizational

Instructions – UE capabilities

There is no specific coordination for EUTRA UE capabilities. WI specific CRs shall be developed.

For Rel17 NR UE capabilities the following applies:

1: Aim to Work on mega CRs (one mega CR for TS 38.306 and one for TS 38.331). This work is done under Agenda Item AI 8.0.2

2: Coordinate centrally incorporation in CRs of RAN1 / RAN4 features for all Rel17 WIs. This work is done under Agenda Item AI 8.0.2 and changes are done directly to the mega CRs. There could be exceptions, case by case, where RAN1 / RAN4 features are treated under a WI-specific Agenda Item instead.

3: RAN2 should only implement in the CRs the features / feature groups from the RAN1 and RAN4 feature list without any FFS (no highlighted yellow, [] and/or marked as FFS/TBD). Also UE Capabilities that are dependent on such FFS features should not be implemented.

4: R2 Features and capabilities developed only in R2, are developed individually per WI, under WI-specific Agenda Items. Draft CRs (running CRs) for 38.331 and 38.306 are produced. The 306 CRs shall include an annex containing the RAN2 determined UE capabilities in the feature list format (similar to annex containing RAN2 agreements) for easy compilation into the TR38.822 in the later stage.

5. At the end of R2 117 (Feb meeting), endorsed WI specific UE capability CRs will be merged into the mega CRs, and the mega CRs will be provided to TSG RAN. Any exception to this need to be decided case by case.

Tdoc Limitations

RAN2#117-e focuses on closing of Rel-17. A common tdoc limitation has been imposed on AI5 + AI6. It is expected that companies will need to prioritize.

Tdoc limitations – instructions (reminder)

Tdoc limitations doesn’t apply to Rapporteur Input, i.e.

- Assigned summary rapporteur input of the summary.

- Email / offline discussions outcomes by discussion rapporteur,

- WI rapporteurs input for WI planning etc,

- TS rapporteur input for TS maintenance

- Assigned Editor of Running CRs input to update the running CR and input of one tdoc to facilitate addressing of CR open issues.

- Contact Company of a LSin that triggers RAN2 action may submit one tdoc to facilitate the LS reply. This only applies to one of the contact companies in case there are several (default the first).

Tdoc limitations doesn’t apply to Input created at the meeting, revisions, assigned documents etc.

Tdoc limitations doesn’t apply to shadow / mirror CRs (Cat A).

Tdoc limitations applies to all other submitted tdocs.

**List of offline email discussions:**

**NOTE: the email discussion deadlines are meant to allow at least all regions to have one day to comment (other than weekend) and also give rapporteurs time to update their proposals before the meeting)**

**Email discussion deadlines**

**Deadline 0 (Summary documents)**

* **Summary document available:** Thursday W0 1800 UTC (i.e. Feb 17th 1800 UTC)

**Deadline 1 (discussions for Thu online)**

* **Comment deadline, 1st phase:** Wednesday W1, 1000 UTC (for collecting views)
* **Rapporteur proposals, 1st phase:** Wednesday W1, 1400 UTC (proposed outcome)
* **Document deadline, 1st phase:** Thursday W1, 0430 UTC (discussion report)
  + Discussion may continue to 2nd phase (using Deadline 3) based on online decisions

**Deadline 2 (discussions for Fri online):**

* **Comment deadline, 1st phase:** Thursday W1, 0900 UTC (for collecting views)
* **Rapporteur proposals, 1st phase:** Thursday W1, 1200 UTC (proposed resolution of issues)
* **Document deadline, 1st phase:** Friday W1, 0430 UTC (report, agreed CRs, final approved LS, etc.)
  + Discussion may continue to 2nd phase (using Deadline 4) based on online decisions

**Deadline 3 (discussions for 2nd week Tue online):**

* **Comment deadline:** FridayW1, 0800 UTC (for collecting views)
* **Rapporteur proposals:** Friday W1, 0900 UTC (proposed resolution of issues)
* **Document deadline:** Monday W2, 1200 UTC (report or agreed CRs)
  + No extensions to this deadline for regular discussions. Discussions handling CRs may continue to short post-meeting email (based on chair decision).

**Deadline 4 (discussions for 2nd week Wed online):**

* **Comment deadline:** MondayW2, 1200 UTC (for collecting views)
* **Rapporteur proposals:** Tuesday W2, 1200 UTC (proposed resolution of issues)
* **Document deadline:** Tuesday W2, 1600 UTC (report or agreed CRs)
  + No extensions to this deadline for regular discussions. Discussions handling CRs may continue to short post-meeting email (based on chair decision).

**Deadline 4bis (discussions for 2nd week Thursday online):**

* **Comment deadline:** Wednesday W2, 0400 UTC (for collecting views)
* **Rapporteur proposals:** Wednesday W2, 0800 UTC (proposed resolution of issues)
* **Document deadline:** Wednesday W2, 1600 UTC (report or agreed CRs)

**Deadline 5 (CR/LS approval via email):**

* **Comment deadline:** WednesdayW2, 0900 UTC (for collecting views)
* **Rapporteur proposals:** Wednesday W2, 1300 UTC (proposed final document versions)
* **Document deadline:** EOM (LS and/or agreed CRs)
  + If not agreeable, may continue to short post-meeting email (based on chair decision).

**Organizational**

* [AT117e][200] Organizational – LTE legacy, 71 GHz, DCCA, Multi-SIM and RAN slicing (RAN2 VC)

Scope:

* + - Share plans for the meetings and list of ongoing email discussions for the sessions
    - Share meetings notes and agreements for review and endorsement
    - Flag LSs and in-principle agreed CRs for discussion

      Intended outcome (for LS discussion):

* + - General information sharing about the sessions

      Deadline for providing comments to LSs:

* + - Deadline: 2nd week Mon, UTC 1000

**Inclusive language (started immediately at meeting start)**

* [AT117-e][201][IncLang] Inclusive language CR review (Nokia)

Scope: Review CRs for inclusive language provided to this meeting.

Intended outcome: Agreed CRs for inclusive language.

Deadline: Deadline 5

**LTE legacy (started immediately at meeting start)**

* [AT117-e][202][LTE] Miscellaneous LTE CRs (Lenovo)

Scope: 1st phase: Discuss LTE CRs marked for this discussion (under AI 4.5 and 7.4). 2nd phase: Provided updated CRs based on online agreements.

Intended outcome: 1st phase: Discussion report in [R2-2203631](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203631.zip). 2nd phase: Agreeable CRs (by proponents) based on online agreements.

Deadline: Deadline 1 / Deadline 5

**LTE legacy (started after 1st week online)**

* [AT117-e][209][LTE] QoE configuration and fullConfig (Google)

Scope: Discuss CRs for based on online decisions for [R2-2203238](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203238.zip).

Intended outcome: Agreeable CRs in [R2-2203661](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203661.zip) (36.331, R15) and [R2-2203662](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203662.zip) (36.331, R16). If 36.306 CRs are needed, those can be provided in [R2-2203669](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203669.zip) (36.331, R15) and [R2-2203670](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203670.zip) (36.331, R16)

Deadline: Deadline 4

**LTE Rel-17 (started immediately at meeting start)**

* [AT117-e][203][UPIP] LTE UPIP configuration and capabilities (Vodafone)

Scope: 1st phase: Discuss what is needed to finalize the WI and identify any open issues that require online discussion. 2nd phase: Provided updated CRs based on online agreements. Can discuss whether/how it should be possible to allow release of UPIP at handover (to legacy eNB), and how the UPINt key derivation works in handover and whether there should be something said about that in RRC.

Intended outcome: First phase discussion report in [R2-2203632](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203632.zip). Revised CRs provided in second phase.

Deadline: Deadline 1 (first phase) / Deadline 4 (second phase)

* [AT117-e][204][LTE] CRs LTE-based 5G terrestrial broadcast (Qualcomm)

Scope: Review CRs for LTE-based 5G terrestrial broadcast. In case critical issues are found, those can be raised also online prior to the discussion deadline.

Intended outcome: Agreeable CRs in [R2-2203633](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203633.zip) (36.331) and [R2-2203634](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203634.zip) (36.306) (to be submitted to RANP approval).

Deadline: Deadline 4

* [AT117-e][205][LTE] TEI17 CRs for event-triggered LTE MDT (KDDI)

Scope: Collect comments (if any) to the updated (previously in-principle agreed) TEI17 LTE CRs marked for this discussion.

Intended outcome: Agreeable CRs.

Deadline: Deadline 1

* [AT117-e][206][LTE] TEI17 CRs for NR-U RSSI/CO measurement UE capability (Apple)

Scope: Collect comments (if any) to the updated (previously in-principle agreed) TEI17 LTE CRs marked for this discussion.

Intended outcome: Agreeable CRs.

Deadline: Deadline 1

* [AT117-e][207][LTE] TEI17 UE height reporting (Ericsson)

Scope: 1st phase: Collect comments UE height reporting CRs marked for this discussion. 2nd phase: Provide agreeable CRs based on online agreements (based on QC inputs in [R2-2203653](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203653.zip), [R2-2203654](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203654.zip) and [R2-2203655](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203655.zip)).

Intended outcome: Agreeable CRs in [R2-2203666](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203666.zip) (36.331), [R2-2203667](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203667.zip) (37.320) and [R2-2203668](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203668.zip) (36.306).

Deadline: Deadline 1 / Deadline 4

**LTE Rel-17 (started after 1st week online)**

* [AT117-e][208][UPIP] Reply LS to SA3 on LTE UPIP (Vodafone)

Scope: Provide reply LS to SA3 based on [R2-2203369](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203369.zip) based on RAN2 agreements.

Intended outcome: Approved LS in [R2-2203663](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203663.zip).

Deadline: Deadline 5

**NR Rel-17 DCCA (started immediately at meeting start)**

* [AT117-e][222][DCCA] Actions at SCG activation and deactivation (Huawei)

Scope: Discuss remaining critical open issues (MAC aspects, SCG deactivation UE preference) for actions at SCG de/activation that were not yet handled as part of [Pre117-e][220].

Intended outcome: Discussion report in [R2-2203639](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203639.zip).

Deadline: Deadline 2

* [AT117-e][223][DCCA] CPAC procedures from network perspective (Samsung)

Scope: Attempt to resolve critical open issues for CPAC procedures from network perspective based on contributions to 8.2.3.1

Intended outcome: Discussion report in [R2-2203637](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203637.zip).

NOTE: CR rappporteur (CATT) is allowed to submit updated CRs based on the report proposal to illustrate the impacts of the proposals

Deadline: Deadline 3

* [AT117-e][224][DCCA] CPAC procedures from UE perspective (Nokia)

Scope: Attempt to resolve critical open issues for CPAC procedures from UE perspective based on contributions to 8.2.3.2

Intended outcome: Discussion report in [R2-2203638](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203638.zip).

NOTE: CR rappporteur (CATT) is allowed to submit updated CRs based on the report proposal to illustrate the impacts of the proposals

Deadline: Deadline 3

**NR Rel-17 DCCA (started after 1st week Friday)**

* [AT117-e][221][DCCA] RRC CR update for deactivated SCG (Huawei)

Scope: Provide updated RRC CR SCG deactivation.

Intended outcome: Running RRC CRs for SCG deactivation in [R2-2203641](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203641.zip)(36.331) and [R2-2203642](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203642.zip) (38.331).

Deadline: Deadline 5

* [AT117-e][225][DCCA] DCCA UE capabilities (Intel)

Scope: Finalize RAN2 parts of UE capabilities of the DCCA WI based on contributions to 8.2.5.

Intended outcome: Discussion report in [R2-2203640](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203640.zip).

Deadline: Deadline 4

**NR Rel-17 DCCA (started after 2nd week Tuesday)**

* [AT117-e][226][DCCA] Running CR updates CPAC (CATT)

Scope: Provide updated running CRs (36.331, 37.340 and 38.331) for CPAC based on [R2-2204002](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204002.zip), [R2-2204003](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204003.zip) and [R2-2204004](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204004.zip).

Intended outcome: Running CRs for CPAC in [R2-2203796](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203796.zip) (36.331), [R2-2203797](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203797.zip) (37.340) and [R2-2203798](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203798.zip) (38.331).

Deadline: EOM

**NR Rel-17 Multi-SIM (started after 1st week Thu)**

* [AT117-e][231][MUSIM] Updated 36.304 CR (China Telecom)

Scope: Provided updated 36.304 taking the online agreement on alternative IMSI into account.

Intended outcome: Agreeable CR in [R2-2203651](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203651.zip).

Deadline: Deadline 5

* [AT117-e][232][MUSIM] Remaining details of MUSIM network switching (Samsung)

Scope: Discuss MUSIM network switching based on [R2-2202240](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202240.zip). Discuss the value ranges of MUSIM UAI prohibit timer and musim-LeaveWithoutResponseTimer. Can also discuss other remaining critical open issues for MUSIM NW switching.

Intended outcome: Discussion report in [R2-2203664](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203664.zip).

Deadline: Deadline 4

* [AT117-e][233][MUSIM] MUSIM UE capabilities (Huawei)

Scope: Discuss MUSIM gap pattern capabilities and other capabilities. Provide updated capability descriptions (to be merged to the general capability CR).

Intended outcome: Discussion report in [R2-2203665](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203665.zip).

Deadline: Deadline 4

**NR Rel-17 RAN Slicing (started immediately at meeting start)**

* [AT117-e][241][Slicing] Closing slice-specific reselection open issues (CMCC)

      Scope: Discuss and attempt to resolve remaining open issues for slice-specific cell reselection (as per previous open issue discussion). Can discuss further details of key aspects from [240] that require additional discussion.

Intended outcome: Discussion report in [R2-2203650](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203650.zip).

Deadline: Deadline 2

* [AT117-e][242][Slicing] Slice-specific RACH prioritization (OPPO)

Scope: Discuss RAN slicing-specific RACH prioritization aspects from selected contributions indicated in the minutes.

Intended outcome: 1st phase discussion report in [R2-2203636](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203636.zip). 2nd phase discussion report in [R2-2203787](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203787.zip)

Deadline: Deadline 2 (1st phase) / Deadline 3 (2nd phase)

**NR Rel-17 RAN Slicing (started after 1st week Friday)**

* [AT117-e][243][Slicing] Updated CR for 38.304 (Ericsson)

      Scope: Updated 38.304 based on online agreements.

Intended outcome: Agreeable CR in [R2-2203781](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203781.zip).

Deadline: Deadline 5

* [AT117-e][244][Slicing] Frequency sorting and equal frequency priorities (Lenovo)

      Scope: Discuss how the frequency sorting and equal priority is handled and provide TPs for each alternative. Should discuss how each option works and provides consistent UE behaviour

Intended outcome: Discussion report in [R2-2203782](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203782.zip).

Deadline: Deadline 4

* [AT117-e][245][Slicing] Updated CR for 38.331 (Huawei)

      Scope: Updated 38.331 and 36.331 based on online agreements. Can discuss also open issues related to RRC.

Intended outcome: Discussion report in [R2-2203783](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203783.zip). Agreeable RRC CR in [R2-2203784](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203784.zip).

Deadline: Deadline 5

**NR Extension to 71 GHz (started after 1st week online)**

* [AT117-e][211][71 GHz] RRC CR finalization for 71 GHz (Ericsson)

Scope: Attempt to finalize the RRC CR for 71 GHz based on online decisions.

Intended outcome: Agreeable RRC CR in [R2-2203644](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203644.zip).

Deadline: Deadline 5

* [AT117-e][212][71 GHz] MAC CR finalization for 71 GHz (LGE)

Scope: Create MAC CR for 71 GHz based on online decisions.

Intended outcome: Agreeable MAC CR in [R2-2203645](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203645.zip).

Deadline: Deadline 5

* [AT117-e][213][71 GHz] UE capability CR finalization for 71 GHz (Intel)

Scope: Attempt to finalize the UE capability CRs for 71 GHz based on online decisions.

Intended outcome: Agreeable CRs in [R2-2203646](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203646.zip) (38.331) and [R2-2203647](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203647.zip) (38.306).

Deadline: Deadline 5

* [AT117-e][214][71 GHz] LTE UE capability CR finalization for 71 GHz (Apple)

Scope: Attempt to finalize the LTE UE capability CRs for 71 GHz based on online decisions.

Intended outcome: Agreeable CRs for 36.306 and 36.331.

Deadline: Deadline 5

**Summary documents**

* [Pre117-e][220][DCCA] Summary of UE behaviour while SCG is deactivated (Huawei)

Scope: Provide summary of UE behaviour while SCG is deactivated according to open issue list.

Intended outcome: Discussion report in [R2-2203374](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203374.zip).

Deadline: Deadline 0

* [Pre117-e][230][MUSIM] Summary Stage-3 details of MUSIM (vivo)

Scope: Provide summary of Stage-3 aspects of MUSIM configuration according to open issue list.

Intended outcome: Summary document in [R2-2203635](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203635.zip).

Deadline: Deadline 0

* [Pre117-e][240][Slicing] Summary of slice-specific cell reselection (CMCC)

Scope: Provide summary of Stage-3 aspects of MUSIM configuration according to open issue list.

Intended outcome: Summary document in [R2-2203509](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203509.zip).

Deadline: Deadline 0

* [Pre117-e][210][71 GHz] Summary of UE capabilities for 71 GHz (Intel)

Scope: summarize contributions to 71 GHz UE capabilities and provide proposals for discussion.

Intended outcome: Summary document in [R2-2203711](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203711.zip).

Deadline: Deadline 0

**Dates and deadlines – Technical Meeting**

Feb 9th Start of Pre-discussions that collects structured company Input.

Feb 14th, 1800 UTC. **General Tdoc Submission Deadline**. Tdoc number allocation deadline. Kick off, summaries. Stop of Pre-discussions that collects structured company Input (rapporteurs to provide report at earliest convenient time, within 24h if possible).

Feb 17th 1800 UTC Tdocs submission deadline for Summaries

Feb 21th 0700 UTC **e-Meeting Start** (by email), Week 1  
Rapporteurs in non-favourable time zones may kick off AT meeting offline / email discussions before meeting start (at most 12h before). It is assumed that participants starts paying attention to offline / email discussions after meeting start.

Feb 25th 1800 Local Time **Weekend break**, Suspend decision making in email discussions (= no deadlines etc) from Feb 25th 1000 UTC. It should be possible for a delegate to take the weekend off, rejoin and not miss decisions.

Feb 28th 0800 Local Time Resume after weekend. Resume decision making in email discussions, Week 2.

March 3rd 1000 UTC **e-Meeting Stop**, no more email comments for AT-meeting email discussions. Decision confirmations announced within 24h. Session notes for email checking.

March 10th Deadline Short Post117-e email discussions. For this short meeting Short Post email discussions can be started before the meeting has ended.

**Web Conference Schedule, WEEK 1**

Note that this schedule is indicative and can change. After Week 1 the schedule for Week 2 will be updated.

|  |  |  |  |
| --- | --- | --- | --- |
| **Time Zone UTC** | **Web Conference R2 - Main** | **Web Conference R2 - BO1** | **Web Conference R2 - BO2** |
| **Monday** |  |  |  |
| 12:50-13:00 | R2 117-e planning Q&A  [8.0.2] R17 NR UE cap planning |
| 13:00-13:45 | Start 13.10 :  NR17 IoT NTN (Johan) | NR17 Multi-SIM (Tero)  - 8.3.3: [R2-2203635](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203635.zip) (Report of [Pre117-e][230]).  IF time allows:  - 8.3.5: [R2-2202518](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202518.zip) (UE capabilities)  - 8.3.3: [R2-2202645](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202645.zip) and [R2-2202254](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202254.zip) (gap release, wait timer, etc.) | NR17 SL enh (Kyeongin)   * 8.15.1   [POST116bis-e][705], 8.15.2 |
| 13:45-14:30 | NR17 IoT NTN (Johan) | NR17 Small Data Enh (Diana)  - 8.6.1 General (LS/CRs)  - 8.6.2 UP | NR17 SL enh (Kyeongin)   * [POST116bis-e][705], 8.15.2 * [POST116bis-e][706], 8.15.3 * [POST116bis-e][707], 8.15.3   Set offline discussion, 6.2 |
| 14:30-15:15 | NR17 feMIMO (Johan) | NR17 Small Data Enh (Diana)  - 8.6.3 CP | NR17 SL Relay (Nathan)  - 8.7.2.1 Control plane  - Start 8.7.2.2 Service continuity |
| 15:15-16:00 | NR17 MGE (Johan) | NR17 RACH indication / partitioning (Diana)  - Open issues email discussion | NR17 SL Relay (Nathan)  - 8.7.2.2 Service continuity  - 8.7.2.3 SRAP |
| **Tuesday** |  |  |  |
| 13:00-13:45 | NR17 eIAB (Johan) | NR17 SONMDT (HuNan) | LTE17 IoT (Brian)  9.1.1  9.1.2 – [301] |
| 13:45-14:30 | NR17 eIAB (Johan) | NR17 IIOT (Diana)  - 8.5.1 – General (Including email discussions 512/513) | NR17 NTN (Sergio)  [8.10.1]  [8.10.2] offline 103  [8.10.3] offline 102 |
| 14:30-15:15 | NR17 ePowSav (Johan) | NR17 Pos (Nathan)  - 8.11.2.1 Latency enhancements  - Start 8.11.2.2 RRC\_INACTIVE | NR17 NTN (Sergio)  [8.10.3] offline 101, 108  [8.10.4] offline 104 |
| 15:15-16:00 | 15 :40: NR17 [8.0.1] ASN.1 review, [8.0.4] MAC CE coordination, Q&A R17 conclusion etc.(Johan) | NR17 Pos (Nathan)  - 8.11.2.2 RRC\_INACTIVE  - ?Start 8.11.2.3 OD-PRS | NR17 CovEnh (Sergio)  [8.19.1]  [8.19.2] |
| **Wednesday** |  |  |  |
| 05:00-06:00 | 05:00 – 06:00 NR17 feMIMO  06:00 – 06:30 NR17 ePowSav (Johan) | NR17 up to 71 GHz (Tero)  - 8.20.1: [R2-2202479](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202479.zip) (Open issue list), organizational  - 8.20.3: [R2-2203711](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203711.zip) (Report of [Pre117-e][210])  IF time allows:  - 8.20.2: [R2-2203419](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203419.zip) (differentiaton of the "no-LBT" mode), [R2-2202710](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202710.zip) (L2 buffer size scaling), [R2-2202920](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202920.zip) (UAI details) | NR17 Pos (Nathan)  - 8.11.2.3 OD-PRS  - 8.11.2.4 Integrity |
| **Thursday** |  |  |  |
| 04:30-05:30 | NR17 QoE (Johan) | NR17 Multi-SIM (Tero)  - 8.3.2: [R2-2203751](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203751.zip) (LS from SA2 on alternative IMSI)  - 8.3.3: Remaining parts of [R2-2203635](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203635.zip) (Report of [Pre117-e][230]).  - 8.3.3: [R2-2202645](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202645.zip) and [R2-2202254](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202254.zip) (gap release, wait timer, etc.)  - 8.3.5: [R2-2202518](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202518.zip) (UE capabilities, mainly P1) | NR17 RedCap (Sergio)  [8.12.1]  [8.12.2] offline 105 |
| 05:30-06:30 | NR17 MBS (Johan) | LTE17 UPIP (Tero)  - [R2-2203632](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203632.zip) (Report of [AT117-e][203])  - [R2-2202722](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202722.zip) (SMC details), [R2-2202717](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202717.zip)- [R2-2202721](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202721.zip) (CRs)  LTE legacy (Tero)  - 4.5: [R2-2203631](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203631.zip)(Report of [202])  IF time allows:  LTE17 Other (Tero)  - Outcome of [205]-[207] (if needed) | NR17 RedCap (Sergio)  [8.12.4]  [8.12.3] offline 106  [8.12.5] offline 107 |
| **Friday** |  |  |  |
| 04:30-05:30 | NR17 MBS (Johan) | NR17 RAN Slicing (Tero)  - 8.8.1: Organizational, [R2-2203021](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203021.zip) (open issue list)  - 8.8.1: [R2-2203650](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203650.zip) (Report of [AT117-e][241])  - 8.8.2: [R2-2203509](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203509.zip) (Report of [Pre117-e][240])  - 8.8.3: [R2-2203636](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203636.zip) (Report of [AT117-e][242])  IF time allows:  - 8.8.4: [R2-2202641](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202641.zip) (UE capabilities) | NR17 SL Relay (Nathan)  - 8.7.2.4 QoS  - 8.7.2.5 Discovery and (re)selection  - 8.7.2.6 UE capabilities |
| 05:30-06:30 | MR17 MBS (Johan) | NR17 DCCA (Tero) - SCG (de)activation  - 8.2.1: Organizational (running CRs, RAN3 Stage-2), [R2-2202170](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202170.zip)/[R2-2203389](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203389.zip) (RAN4 LS on measCycle for deactivated PSCell)  - 8.2.2.1: [R2-2203374](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203374.zip) (Report of [Pre117-e][220]), [R2-2203639](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203639.zip). (Report of [AT117-e][222])  - 8.2.2.3: [R2-2202923](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202923.zip) (TCI state indication)  - 8.2.5: [R2-2202480](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202480.zip)  IF time allows:  - 8.2.2.1/.2/.3: Other contributions related to open issues | EUTRA legacy IoT (Emre/Brian)  4.1 – [304]  7.3 – [305], [306], [312] |

**Web Conference Schedule, WEEK 2**

Note that this schedule is indicative and can change. After Week 1 the schedule for Week 2 will be updated.

|  |  |  |  |
| --- | --- | --- | --- |
| **Time Zone UTC** | **Web Conference R2 - Main** | **Web Conference R2 - BO1** | **Web Conference R2 - BO2** |
| **Monday** |  |  |  |
| 13:00-13:45 | NR17 UDC (Johan)  NR17 eNPN (Johan) | NR17 SONMDT (HuNan) | LTE17 IoT (Brian)  9.1.2 - [301] (if needed, TBD), [302], [303] |
| 13:45-14:30 | CB QoE (Johan) | NR17 IIOT (Diana)  - Untreated proposals from week1 and/or Open issues email discussions on Tsynch and QoS 503/504 | NR17 Pos (Nathan)  - 8.11.2.6 Accuracy enhancements  - 8.11.2.7 UE capabilities |
| 14:30-15:15 | NR17 TEI (Johan) | NR17 RACH indication / partitioning  - Remaining open issues email discussions 505/506 (Diana) | CB Nathan NR17 Pos |
| 15:15-16:00 | NR17 AI 8.0.x [039] CB on LS out  MBS UE Cap [8.1.4] | CB Diana – Small Data remaining open issues email discussions 501/592 | CB Nathan NR17 Pos |
| **Tuesday** |  |  |  |
| 13:00-13:45 | CB MGE Johan  [020], [019], [018] | CB Sergio  CB NR NTN  - UE location aspects (based on reply LSs)  - offline 103 | NR17 SL enh (Kyeongin)  - 6.2 |
| 13:45-14:30 | CB TEI17: [050]  CB NR17 Other: [061], ..  IF time :  CB ePowSav  [024], [006] .. | CB Sergio  CB NR NTN  - offline 102, 101, 104 | NR17 SL enh (Kyeongin)  - Leftovers from 1st week, 8.15.2, 8.15.3 |
| 14:30-15:15 | CB IoT NTN Johan  [064], [015], [013], [011] | CB Tero  RAN slicing  - 8.8.2: [R2-2203933](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203933.zip) (LS from SA2 on slice groups for reselection)  - 8.8.3: [R2-2203787](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203787.zip) (Updated Report of [AT117-e][242])  IF time allows:  NR17 DCCA (Tero) - SCG (de)activation  - 8.2.2.1: Remainder of [R2-2203639](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203639.zip). (Report of [AT117-e][222])  - 8.2.2.3: [R2-2202923](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202923.zip) (TCI state indication) | CB RedCap (Sergio)  - offline 107, 113, 114 |
| 15:15-16:00 | CB MGE Johan  [020], [019], [018] | NR17 DCCA (Tero) - CPAC.  **30 minutes overtime possible**  - 8.2.3.2: [R2-2203638](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203638.zip) (Report of [AT117-e][224])  - 8.2.3.1: [R2-2203637](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203637.zip) (Report of [AT117-e][223])  IF time allows:  - 8.2.2.1: Remainder of [R2-2203639](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203639.zip). (Report of [AT117-e][222])  - 8.2.2.3: [R2-2202923](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202923.zip) (TCI state indication)  - 8.2.3.3: [R2-2202579](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202579.zip) (CHO+CPAC)  - 8.2.2.3: [R2-2203703](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203703.zip) - [R2-2203705](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203705.zip) (MCG failure recovery via deactivated SCG) | NR17 SL enh (Kyeongin)  - 6.2 |
| **Wednesday** |  |  |  |
| 13:00-13:45 | NR17 feMIMO | CB HuNan | CB Brian Emre |
| 13:45-14:30 | NR17 feMIMO | CB Diana | CB Nathan NR17 SL Relay |
| 14:30-15:15 | CB MBS Johan | CB Sergio  RedCap  - offline 105  CovEnh (if needed) | CB Nathan NR17 SL Relay |
| 15:15-16:00 | CB eIAB Johan | CB Tero  **20 minutes overtime possible**  71 GHz  - 8.20.1: [R2-2203786](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203786.zip) (Report of [AT117-e][211])  - 71 GHz WI status  MUSIM  - 8.3.3: [R2-2203664](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203664.zip) (Report of [AT117-e][232])  - 8.3.5: [R2-2203665](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203665.zip) (Report of [AT117-e][233])  - MUSIM WI status  IF time allows  NR17 DCCA  - 8.2.2.1: Remainder of [R2-2203639](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203639.zip). (Report of [AT117-e][222])  - 8.2.2.3: [R2-2202923](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202923.zip) (TCI state indication)  - 8.2.2.3: [R2-2203703](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203703.zip) - [R2-2203705](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203705.zip) (MCG failure recovery via deactivated SCG) | CB or Other Kyeongin  - Comeback issues in 8.15.2, 8.15.3 |
| **Thursday** |  |  |  |
| 04:30-05:30 | CB Johan | CB Tero  RAN slicing  -8.8.1: [R2-2203782](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203782.zip) (Report of [AT117-e][244])  -**IF NEEDED**: 8.8.1: [R2-2203783](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203783.zip) (Report of [AT117-e][245])  - RAN slicing WI status  NR17 DCCA  -8.2.5: [R2-2203640](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203640.zip) (Report of [AT117-e][225])  - DCCA WI status  LTE Legacy  - 4.5: Outcome of [209] (if not possible to converge via email)  LTE17  - 9.3: Outcome of [204] (if not possible to converge via email)  - 9.4: Outcome of [203] (if not possible to converge via email)  - LTE Rel-17 WI statuses | CB Nathan  - Positioning CRs and any emergencies |
| 05:30-06:30 | CB Johan | CB Sergio | CB Diana |

# 4 EUTRA corrections Rel-15 and earlier

Only essential corrections. No documents should be submitted to 4. Please submit to 4.x

## 4.5 Other LTE corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session.

Purely editorial corrections should be avoided, text enhancements may be deprioritized. Corrections should be taken up with the specification editor before submitting to avoid CR duplication. If this is not done, the contribution may not be treated.

By Email [202] (2+2+1)

[R2-2202218](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202218.zip) Dummify empty sequence in FlightPathInfoReport-r15 and other corrections Lenovo, Motorola Mobility CR Rel-15 36.331 15.16.0 4753 - F LTE\_Aerial-Core, TEI15

* Add definitions of FR1 and FR2 in clause 3.1 as follows:

FR1: Frequency range 1 as defined in clause 5.1 of TS 38.101-1 [85].

FR2: Frequency range 2 as defined in clause 5.1 of TS 38.101-2 [100].

* [202] Revised in [R2-2203656](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203656.zip)

[R2-2203656](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203656.zip) Dummify empty sequence in FlightPathInfoReport-r15 and other corrections Lenovo, Motorola Mobility CR Rel-15 36.331 15.16.0 4753 1 F LTE\_Aerial-Core, TEI15 [R2-2202218](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202218.zip)

* [202] Expected to be agreed via email

[R2-2202219](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202219.zip) Dummify empty sequence in FlightPathInfoReport-r15 and other corrections Lenovo, Motorola Mobility CR Rel-16 36.331 16.7.0 4754 - A LTE\_Aerial-Core, TEI16

* Add definitions of FR1 and FR2 in clause 3.1 as follows:

FR1: Frequency range 1 as defined in clause 5.1 of TS 38.101-1 [85].

FR2: Frequency range 2 as defined in clause 5.1 of TS 38.101-2 [100].

* [202] Revised in [R2-2203657](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203657.zip)

[R2-2203657](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203657.zip) Dummify empty sequence in FlightPathInfoReport-r15 and other corrections Lenovo, Motorola Mobility CR Rel-16 36.331 16.7.0 4754 1 A LTE\_Aerial-Core, TEI16 [R2-2202219](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202219.zip)

* [202] Expected to be agreed via email

[R2-2203295](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203295.zip) Clarification of RSRP measurement triggering for number of cells for UAVs Ericsson CR Rel-15 36.331 15.16.0 4772 - F NR\_UAV-Core

*(moved from 4)*

* Wrong WI code, should be LTE\_Aerial-Core
* Wrong specification, should be 36.300
* [202] Change cover page:

o For the R15 CR correct spec version to “15.12.0”.

o Correct CR numbers.

o In “Other specs affected” tick the box “N” in the first row.

o Update Impact analysis by adding

Impacted functionalities: RSRP reporting for UAV

Interoperability issues: None

* [202] In subclause 23.17.4 replace the proposed text by “Once such condition is met and a measurement report is sent, the list of triggered cells is updated when subsequent cell(s) fulfil the event, however further measurement reports are not sent while the list of triggered cells remains larger than the configured number of cells.”
* Revised in [R2-2203658](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203658.zip)

[R2-2203658](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203658.zip) Clarification of RSRP measurement triggering for number of cells for UAVs Ericsson CR Rel-15 36.300 15.16.0 XXXX - F LTE\_Aerial-Core

* [202] Expected to be agreed via email

[R2-2203297](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203297.zip) Clarification of RSRP measurement triggering for number of cells for UAVs Ericsson CR Rel-16 36.331 16.7.0 4773 - A NR\_UAV-Core

*(moved from 4)*

* Wrong WI code, should be LTE\_Aerial-Core
* Wrong specification, should be 36.300
* [202] Change cover page:

o For the R15 CR correct spec version to “15.12.0”.

o Correct CR numbers.

o In “Other specs affected” tick the box “N” in the first row.

o Update Impact analysis by adding

Impacted functionalities: RSRP reporting for UAV

Interoperability issues: None

* [202] In subclause 23.17.4 replace the proposed text by “Once such condition is met and a measurement report is sent, the list of triggered cells is updated when subsequent cell(s) fulfil the event, however further measurement reports are not sent while the list of triggered cells remains larger than the configured number of cells.”
* Revised in [R2-2203659](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203659.zip)

[R2-2203659](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203659.zip) Clarification of RSRP measurement triggering for number of cells for UAVs Ericsson CR Rel-16 36.300 16.7.0 XXXX - A LTE\_Aerial-Core

* [202] Expected to be agreed via email

[R2-2203238](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203238.zip) Discussion on handling QoE configuration in full configuration Google Inc. discussion Rel-15 36.331 LTE\_QMC\_Streaming-Core [R2-2201532](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2201532.zip)

* When full config is used, NW includes QoE config if it wants the measurements to continue. Otherwise UE releases and notifies the upper layers (which needs specification change). Provide CRs from Rel-15 onwards. Can discuss whether to define also UE capability for this correction.
* Noted (CRs provided via offline [209])

Email discussions ([202])

* [AT117-e][202][LTE] Miscellaneous LTE CRs (Lenovo)

Scope: 1st phase: Discuss LTE CRs marked for this discussion (under AI 4.5 and 7.4). 2nd phase: Provided updated CRs based on online agreements.

Intended outcome: 1st phase: Discussion report in [R2-2203631](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203631.zip). 2nd phase: Agreeable CRs (by proponents) based on online agreements.

Deadline: Deadline 1 / Deadline 5

By Web Conf (1st Week Thursday) (1)

[R2-2203631](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203631.zip) Report of [AT117-e][202][LTE] Miscellaneous LTE CRs (Lenovo) Lenovo discussion Rel-16 LTE\_Aerial-Core, TEI15, LTE\_QMC\_Streaming-Core, NB\_IOTenh3-Core Late

* Proposal 1: The CRs in [R2-2202218](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202218.zip) and [R2-2202219](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202219.zip) will be revised and agreed with the following modification:

• Add definitions of FR1 and FR2 in clause 3.1 as follows:

FR1: Frequency range 1 as defined in clause 5.1 of TS 38.101-1 [85].

FR2: Frequency range 2 as defined in clause 5.1 of TS 38.101-2 [100].

* Proposal 2: The CRs in [R2-2203295](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203295.zip) and [R2-2203297](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203297.zip) will be revised and agreed with the following modifications:

• Cover page:

o For the R15 CR correct spec version to “15.12.0”.

o Correct CR numbers.

o In “Other specs affected” tick the box “N” in the first row.

o Update Impact analysis by adding

Impacted functionalities: RSRP reporting for UAV

Interoperability issues: None

• In subclause 23.17.4 replace the proposed text by “Once such condition is met and a measurement report is sent, the list of triggered cells is updated when subsequent cell(s) fulfil the event, however further measurement reports are not sent while the list of triggered cells remains larger than the configured number of cells.”

* Proposal 4: The CR in [R2-2202929](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202929.zip) will be revised and agreed with the following modification:

• Change pur-ResponseWindowSize to pur-ResponseWindowTimer in the description of pur-ResponseWindowTimer.

- QC is fine with P1,2 and 4.

*Proposal 3: Discuss online the handling of QoE configuration in case of full configuration for clarifying the following issues:*

*• Whether/how to address the different UE behaviours with regards to handling of QoE configuration in case of full configuration (i.e. release / not release) in TS 36.331?*

*• Whether/when to align the different UE behaviours with regards to handling of QoE configuration in case of full configuration (i.e. either release or not release) in TS 36.331?*

- Lenovo clarifies that based on the discussion, there may be different UE implementations of the feature.

- QC is not sure if there can be different implementations. If the configuration is not listed in kept configurations at full configuration, it is released. The only thing missing was notification to upper layers, but that was rejected.

- Ericsson thinks NW can re-send the AS part if upper layers are not notified. Can align with NR.

- Lenovo agrees with Ericsson and thinks that SRB4 can be maintained at full configuration.

- QC thinks when full config is used, NW includes QoE config if it wants the measurements to continue. Otherwise UE releases and notifies the upper layers. Huawei agrees.

- Lenovo thinks OtherConfig is Need ON so UE maintains it. QC agrees but we need to consider also procedural text of full configuration.

- Ericsson wonders if we need a UE capability for Rel-15?

* When full config is used, NW includes QoE config if it wants the measurements to continue. Otherwise UE releases and notifies the upper layers (which needs specification change).
* Provide CRs from Rel-15 onwards. Can discuss whether to define also UE capability for this correction.
* Offline [209] (Google): Provide CRs for this. Deadline 4.

Email discussion [209] (2nd week Wednesday)

* [AT117-e][209][LTE] QoE configuration and fullConfig (Google)

Scope: Provide CRs for based on online decisions for [R2-2203238](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203238.zip).

Intended outcome: Agreeable CRs in [R2-2203661](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203661.zip) (36.331, R15) and [R2-2203662](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203662.zip) (36.331, R16). If 36.306 CRs are needed, those can be provided in [R2-2203669](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203669.zip) (36.331, R15) and [R2-2203670](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203670.zip) (36.331, R16)

Deadline: Deadline 4

Web Conf (2nd week Wednesday) or By Email [209] (4)

[R2-2203661](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203661.zip) Correction to application layer measurement and reporting Google Inc. CR Rel-15 36.331 15.16.0 4775 - F LTE\_QMC\_Streaming-Core

* [209] Expected to be agreed via email (if this is not possible, can treat online)

[R2-2203662](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203662.zip) Correction to application layer measurement and reporting Google Inc. CR Rel-16 36.331 16.7.0 4776 - A LTE\_QMC\_Streaming-Core

* [209] Expected to be agreed via email (if this is not possible, can treat online)

[R2-2203669](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203669.zip) Correction to application layer measurement and reporting Google Inc. CR Rel-15 36.306 15.11.0 1842 - F LTE\_QMC\_Streaming-Core

* [209] Expected to be agreed via email (if this is not possible, can treat online)

[R2-2203670](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203670.zip) Correction to application layer measurement and reporting Google Inc. CR Rel-16 36.306 16.7.0 1843 - A LTE\_QMC\_Streaming-Core

* [209] Expected to be agreed via email (if this is not possible, can treat online)

# 7 Rel-16 EUTRA Work Items

Only essential corrections. No documents should be submitted to 7. Please submit to 7.x

## 7.1 EUTRA Rel-16 General

No documents should be submitted to 7.1. Please submit to.7.1.x

Purely editorial corrections should be avoided, text enhancements may be deprioritized. Corrections should be taken up with the specification editor before submitting to avoid CR duplication. If this is not done, the contribution may not be treated.

### 7.1.1 Cross WI RRC corrections

Including RRC corrections that impact multiple WIs and require discussion in the common session.

### 7.1.2 Feature Lists and UE capabilities

Corrections to UE capabilities should be taken up with the 36.331 and 36.306 specification editors before submitting to avoid CR duplication. If this is not done, the contribution may not be treated.

## 7.4 LTE Other WIs

(LTE\_feMob-Core; leading WG: RAN2; REL-16; started: Jun 18; Completed: June 20; WID: RP-190921)

(LTE\_terr\_bcast-Core, LTE\_DL\_MIMO\_EE-Core, LTE\_high\_speed\_enh2-Core; LTE TEI16 Non-positioning)

(Documents relating to Rel-16 LTE but for which there is no existing RAN WI/SI, e.g. LSs from CT/SA requesting RAN2 action)

Including TEI16 corrections and issues that do not fit under any other topic.

Purely editorial corrections should be avoided, text enhancements may be deprioritized. Corrections should be taken up with the specification editor before submitting to avoid CR duplication. If this is not done, the contribution may not be treated.

For LTE mobility enhancements, only corrections that are LTE-specific should be submitted to this AI. Corrections that impact or are common with NR mobility enhancements should be submitted to 6.1.X instead.

By Email [200] (1)

[R2-2202122](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202122.zip) Reply LS on Bearer pre-emption rate limit issue for GBR bearer establishment in MC systems (R3-216196; contact: Nokia) RAN3 LS in Rel-16 To:SA6 Cc:RAN, RAN2

* Noted (RAN2 in CC)

By Email [202] (1)

[R2-2202929](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202929.zip) Minor changes collected by Rapporteur Samsung CR Rel-16 36.331 16.7.0 4766 - F NB\_IOTenh3-Core

* Change pur-ResponseWindowSize to pur-ResponseWindowTimer in the description of pur-ResponseWindowTimer.
* [202] Revised in [R2-2203660](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203660.zip)

[R2-2203660](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203660.zip) Minor changes collected by Rapporteur Samsung CR Rel-16 36.331 16.7.0 4766 1 F NB\_IOTenh3-Core [R2-2202929](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202929.zip)

* [202] Expected to be agreed via email

# 8 Rel-17 NR Work Items

No documents should be submitted to 8. Please submit to 8.x

## 8.2 MR DC/CA further enhancements

(LTE\_NR\_DC\_enh2-Core; leading WG: RAN2; REL-17; WID: RP-201040)

Time budget: 1 TU

Tdoc Limitation: 5 tdocs

No documents should be submitted to 8.2. Please submit to.8.2.x

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs). If a contribution does not provide TP, it may be deprioritized.

Contributions should focus on remaining open issues needed to close the WI from RAN2 perspective (e.g. as discussed in [201])

### 8.2.1 Organizational, Requirements and Scope

Including LSs, any rapporteur inputs and results of the (informative) running CR email discussions [210]-[215]

Including rapporteur input on remaining open issues needed to close the WI.

By Email [200] (1)

[R2-2202129](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202129.zip) Reply LS on inter-MN RRC resume without SN change (R3-221290; contact: Ericsson) RAN3 LS in Rel-17 To:RAN2

* Noted (no RAN2 actions required)

Web Conf (1st week Thursday) (1+1)

[R2-2202170](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202170.zip) LS on Measurement requirement for deactivated SCG (R4-2202781; contact: Ericsson) RAN4 LS in Rel-17 To:RAN2

* Noted (discussed together with [R2-2203389](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203389.zip))

[R2-2203389](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203389.zip) Discussion on the LS from RAN4 on measurement requirements Ericsson discussion LTE\_NR\_DC\_enh2-Core

* 1 The PSCell measurement cycle when in deactivated SCG state is configured by RRC (e.g. using a field measCyclePSCell).

*Proposal 2 Send a reply LS response to RAN4 to acknowledge that RAN2 will specify an RRC parameter for the measurement cycle for the PSCell when SCG is deactivated and to ask them to provide min value and range for this parameter.*

- Apple doesn't think we need LS. Huawei and MTK agrees.

*Proposal 3 Provide additional input to RAN4 in the reply LS, to facilitate them to determine the RRM relaxations requirements, such as RAN2's understanding of what a "fast SCG activation" typically means.*

- Apple thinks RAN4 is aware of this so we don't need to indicate anything. Huawei and MTK agrees.

* No reply LS sent now, wait for RAN4 further information.

By Email [200] (1+2+2+2+2+1)

Outcome of [210]:

[R2-2203094](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203094.zip) Introduction of CPA and inter-SN CPC CATT CATT CR Rel-17 37.340 16.8.0 0297 - B LTE\_NR\_DC\_enh2-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed
* RAN3 Stage-2 CR are going to be merged via post-meeting email discussion.

Outcome of [211]:

[R2-2203095](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203095.zip) Introduction of CPA and inter-SN CPC CATT CATT CR Rel-17 38.331 16.7.0 2926 - B LTE\_NR\_DC\_enh2-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

[R2-2203096](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203096.zip) Introduction of CPA and inter-SN CPC CATT CATT CR Rel-17 36.331 16.7.0 4770 - B LTE\_NR\_DC\_enh2-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

Outcome of [212]:

[R2-2203370](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203370.zip) Introduction of efficient SCG activation/deactivation Huawei, HiSilicon draftCR Rel-17 36.331 16.7.0 LTE\_NR\_DC\_enh2-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed
* [221] Revised in [R2-2203641](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203641.zip)

[R2-2203641](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203641.zip) Introduction of efficient SCG activation/deactivation Huawei, HiSilicon draftCR Rel-17 36.331 16.7.0 LTE\_NR\_DC\_enh2-Core [R2-2203370](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203370.zip)

[R2-2203371](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203371.zip) Introduction of efficient SCG activation/deactivation Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 LTE\_NR\_DC\_enh2-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed
* [221] Revised in [R2-2203642](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203642.zip)

[R2-2203642](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203642.zip) Introduction of efficient SCG activation/deactivation Huawei, HiSilicon draftCR Rel-17 38.331 16.7.0 LTE\_NR\_DC\_enh2-Core [R2-2203371](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203371.zip)

Outcome of [213]:

[R2-2202794](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202794.zip) Introduction of SCG activation and deactivation vivo CR Rel-17 38.321 16.7.0 1203 - B LTE\_NR\_DC\_enh2-Core Late

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

[R2-2203195](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203195.zip) Introduction of eCADC vivo CR Rel-17 38.321 16.7.0 1210 - B LTE\_NR\_DC\_enh2-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

Outcome of [214]:

[R2-2202481](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202481.zip) Draft 331 CR for DCCA UE capabilities Intel Corporation draftCR Rel-17 38.331 16.7.0 B LTE\_NR\_DC\_enh2-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

[R2-2202482](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202482.zip) Draft 306 CR for DCCA UE capabilities Intel Corporation draftCR Rel-17 38.306 16.7.0 B LTE\_NR\_DC\_enh2-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

Outcome of [215]:

[R2-2202651](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202651.zip) Introduction of SCG activation and deactivation ZTE Corporation, Sanechips CR Rel-17 37.340 16.8.0 0293 - B LTE\_NR\_DC\_enh2-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

Web Conf (1st week Thursday) (2)

Merged RRC CRs:

[R2-2203372](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203372.zip) Introduction of further multi-RAT dual-connectivity enhancements Huawei, HiSilicon CR Rel-17 36.331 16.7.0 4774 - B LTE\_NR\_DC\_enh2-Core

[R2-2203373](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203373.zip) Introduction of further multi-RAT dual-connectivity enhancements Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2954 - B LTE\_NR\_DC\_enh2-Core Late

* Revised in [R2-2203828](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203828.zip)

[R2-2203828](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203828.zip) Introduction of further multi-RAT dual-connectivity enhancements Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2954 1 B LTE\_NR\_DC\_enh2-Core Late

* Negligible overlap with SCG deactivation and CPAC, can be merged in post-meeting email

Email discussion [221] (started 1st week Friday)

* [AT117-e][221][DCCA] RRC CR update for deactivated SCG (Huawei)

Scope: Provide updated RRC CR SCG deactivation.

Intended outcome: Running RRC CRs for SCG deactivation in [R2-2203641](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203641.zip)(36.331) and [R2-2203642](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203642.zip) (38.331).

Deadline: Deadline 5

Web Conf (2nd week Tuesday) (3)

[R2-2204002](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204002.zip) Introduction of CPA and inter-SN CPC CATT draftCR Rel-17 37.340 16.8.0 - B LTE\_NR\_DC\_enh2-Core

* Offline 226 (CATT, Deadline 5) to capture agreements from online

[R2-2204003](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204003.zip) Introduction of CPA and inter-SN CPC CATT draftCR Rel-17 38.331 16.7.0 - B LTE\_NR\_DC\_enh2-Core

* Offline 226 (CATT, Deadline 5) to capture agreements from online

[R2-2204004](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204004.zip) Introduction of CPA and inter-SN CPC CATT draftCR Rel-17 36.331 16.7.0 - B LTE\_NR\_DC\_enh2-Core

* Offline 226 (CATT, Deadline 5) to capture agreements from online

Email discussion [226] (started 2nd week Tuesday)

* [AT117-e][226][DCCA] Running CR updates CPAC (CATT)

Scope: Provide updated running CRs (36.331, 37.340 and 38.331) for CPAC based on [R2-2204002](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204002.zip), [R2-2204003](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204003.zip) and [R2-2204004](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204004.zip).

Intended outcome: Running CRs for CPAC in [R2-2203796](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203796.zip) (36.331), [R2-2203797](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203797.zip) (37.340) and [R2-2203798](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203798.zip) (38.331).

Deadline: EOM

### 8.2.2 Efficient activation / deactivation mechanism for one SCG and SCells

No documents should be submitted to 8.2.2. Please submit to.8.2.2.x

#### 8.2.2.1 UE behaviour while SCG is deactivated

This agenda item may use a summary document (decision to be made based on submitted tdocs) focusing on essential open issues in UE behaviour while SCG is deactivated (as per open issue list).

Including discussion on UE behaviour while SCG is deactivated (e.g. TA timer and RLM/BFD, MCG power limitation and PDCCH blind decoding limitations)

Summary document discussion [220] (1)

* [Pre117-e][220][DCCA] Summary of UE behaviour while SCG is deactivated (Huawei)

Scope: Provide summary of UE behaviour while SCG is deactivated according to open issue list.

Intended outcome: Discussion report in [R2-2203374](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203374.zip).

Deadline: Deadline 0

Web Conf (1st week Thursday) (1)

[R2-2203374](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203374.zip) [Pre117-e][220][DCCA] Summary of UE behaviour while SCG is deactivated (Huawei) Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

RLM/BFD

* 1: Agree UE behaviours for SCG RLF while the SCG is deactivated:

a) at SCG RLF, SCG MAC is reset (like in Rel-16, this will stop the TA timer)

b) at SCG RLF, stop RLM and BFD (not captured in Rel-16, but probably UEs do that)

c) Network can resume RLM and BFD as with legacy S-RLF (e.g. reconfiguration with sync)

- LGE agrees with intent of b/c but they do not need any specification changes.

- QC agrees with a/b but wonders why c is not similar as BFD where we resume this upon reconfiguration of BFD-RS? Huawei clarifies this would involve specification changes. For BFD-RS reconfiguration there is a large chance RRC resync is anyway needed, so no need to change specs for RLM. ZTE agrees with QC and thinks RRC resync means activating the SCG. Huawei thinks this is up to network to decide whether SCG is activated.

- Apple thinks c may not be needed as it's just legacy behaviour.

* 3: While the SCG is deactivated and the UE is configured to perform RLM/BFD, the UE continues RLM after TA timer expiry.
* 5: If the UE is not configured to perform RLM/BFD while the SCG is deactivated, the UE always performs RACH upon receiving an SCG activation command.

- Apple thinks this should be left up to network. In small cell deployments TA may not need to be updated. Nokia and ZTE agrees. MTK thinks NW doesn't know if PSCell is suitable without RLM/BFD.

* 2: Agree UE behaviours for PSCell beam failure while the SCG is deactivated:

a) at PSCell beam failure, TA timer is not stopped

b) at PSCell beam failure, stop BFD

c) resume BFD upon reconfiguration of BFD RS (RadioLinkMonitoringConfig or tci-Info)

- Apple thinks a may not be valid. We should stop so RACH is done. Huawei clarifies that if NW reconfigures BFD-RS after the report, TAT should continue running. Ericsson, CATT, Huawei and Intel agree.

* 4: While the SCG is deactivated and the UE is configured to perform RLM/BFD, the UE continues BFD after TA timer expiry.

Blind decoding and UL power

*Proposal 6: MCG power limitation and PDCCH blind decoding limitations are not affected by SCG deactivation. If needed, RAN1 can clarify their specifications.*

*Proposal 7: Discuss whether there is the need for an LS to inform RAN1.*

- Samsung wonders if MCG cannot use the SCG UL power even when SCG is deactivated? Nokia also thinks this is RAN1 topic. 38.213 might already allow using SCG power when deactivated.

* 6: RAN2 doesn't intend to specify new behaviours for MCG power limitation and PDCCH blind decoding limitations when SCG is deactivated. Companies can raise this up in RAN1 if needed.

Split bearers

* 8: The network ensures by explicit signalling (that exists in Rel-16 already) that, while the SCG is deactivated, for each UL split bearer:

a) primaryPath is set to an MCG RLC entity

b) ul-DataSplitThreshold is set to infinity

c) PDCP duplication is only allowed to be activated for MCG RLC entities (i.e. not for both MCG and SCG RLC entities)

* Can discuss what (if anything) we capture on these in Stage-2, RRC and/or PDCP/MAC

- Nokia doesn't think we need to capture these but they are OK. QC wonders if c requires disabling cross-CG PDCP duplication? Couldn't we just deactivate the PDCP duplication via MAC CE for the SCG part? Huawei clarifies intent is to allow MCG duplication but not MCG+SCG duplication.

BWP handling

*Proposal 9:* *There is an active DL BWP while the SCG is deactivated.*

- Huawei clarifies this means we don't deactivate BWP. Nokia wonders what this means - will UE perform PDCCH monitoring etc. since BWP is active? Intel thinks dormant BWP could be used. Huawei thinks dormant BWP is one specific BWP but this can be used with any BWP. Nokia thinks dormant BWP is for SCells only and CSI reporting is not for deactivated PSCell. Thinks we could deactivate BWP and say BFD/RLM are performed according to agreed rules. Huawei thinks this could impact RRM requirements.

* 9: Discuss in MAC CR discussion how to model the handling BWP while the SCG is deactivated.
* 10: The PSCell DL BWP used for BFD/RLM/RRM is handled as follows:

at SCG deactivation:

if the network includes firstActiveDownlinkBWP-Id in the SCG deactivation command, the UE switches the DL BWP to the indicated firstActiveDownlinkBWP-Id

- while the SCG is deactivated:

- if the network includes firstActiveDownlinkBWP-Id in an RRC reconfiguration, the UE switches the DL BWP to the indicated firstActiveDownlinkBWP-Id

- If configured the UE performs RLM/BFD on the DL BWP

at SCG activation:

- if the network includes firstActiveDownlinkBWP-Id in the SCG activation command, the UE switches the DL BWP to the indicated firstActiveDownlinkBWP-Id

- bwp-Id is not needed in tci-Info (since it is controlled by firstActiveDownlinkBWP-Id)

* UL BWP can be changed by RRC reconfiguration in the same way (but it doesn't impact BFD/RLM/RRM)

- Apple supports P10. Nokia this we shouldn't use "active BWP". Ericsson this we could clarify this is for PSCell. Thinks we have problem with bwp-Id - can NW only switch to first active BWP id? Huawei clarifies that if NW wishes to change BWP, NW just includes both TCI state and BWP ID. Intent was not to have two fields doing the same thing.

SDAP

*Proposal 11: If time allows, discuss the issues on SDAP end-marker at QoS flow remapping [3] and PDCP status report at key change [19] while the SCG is deactivated. From the description, the network could avoid the problem.*

- Chair wonders if this is needed now? Fujitsu would like an email discussion on this.

* Can discuss in next meeting based on contributions whether there are any issues with SDAP/PDCP.

[R2-2202919](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202919.zip) TA timer and RLM/BFD while the SCG is deactivated MediaTek Inc. discussion

[R2-2202248](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202248.zip) How to model the PSCell in SCG deactivation? OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202250](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202250.zip) SCG deactivation indication when resuming from RRC\_INACTIVE due to MO data OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202280](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202280.zip) QoS flow remapping during SCG deactivation Fujitsu discussion Rel-17 LTE\_NR\_DC\_enh2-Core [R2-2200308](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2200308.zip)

[R2-2202575](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202575.zip) Discussion on UE behavior with SCG deactivated Lenovo, Motorola Mobility discussion Rel-17

[R2-2202649](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202649.zip) Discussion on UE behaviour when SCG is deactivated ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202679](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202679.zip) Views on several issues Samsung Electronics discussion LTE\_NR\_DC\_enh2-Core

[R2-2202680](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202680.zip) DC power sharing for deactivated SCG Samsung Electronics discussion LTE\_NR\_DC\_enh2-Core [R2-2200583](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2200583.zip)

[R2-2202705](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202705.zip) UE behaviour while SCG is deactivated Qualcomm Incorporated discussion Rel-17

[R2-2202756](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202756.zip) UE behavior while the SCG is deactivated InterDigital, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202767](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202767.zip) Deactivation of SCG LG Electronics Finland discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202795](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202795.zip) Discussion on UE behaviour while SCG is deactivated vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203097](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203097.zip) Discussions on UE Behavior in Deactivated SCG CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203176](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203176.zip) Open Issues on UE Behavior NTT DOCOMO INC. discussion Rel-17

[R2-2203184](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203184.zip) UE behaviour while SCG is deactivated Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

[R2-2203375](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203375.zip) Open issues on UE behaviours while the SCG is deactivated Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203390](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203390.zip) UE behaviour while SCG is deactivated Ericsson discussion LTE\_NR\_DC\_enh2-Core

#### 8.2.2.2 Actions at SCG activation and deactivation

Including discussion on actions that occur at SCG activation or deactivation (e.g. UL split bearer handling, MAC actions, BWP used when SCG (de)activation is triggered)

Email discussion [222] (1st Week Friday)

* [AT117-e][222][DCCA] Actions at SCG activation and deactivation (Huawei)

Scope: Discuss remaining critical open issues (MAC aspects, SCG deactivation UE preference) for actions at SCG de/activation that were not yet handled as part of [Pre117-e][220].

Intended outcome: Discussion report in [R2-2203639](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203639.zip).

Deadline: Deadline 2

Web Conf (1st Week Friday) (1)

[R2-2203639](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203639.zip) Report of [AT117-e][222][DCCA] Actions at SCG activation and deactivation (Huawei) Huawei discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

*Proposal 4: Support UE indication that the UE prefers the SCG to be deactivated, or not.*

*Proposal 5: This indication is independent from the indication, when the SCG is deactivated, that the UE has uplink data to transmit for an SCG bearer.*

- Nokia wonders when UE triggers this? How can network use the information? Ericsson agrees and thinks cause value could be added to this. For example low batter, traffic load could be used.

- Huawei thinks we could complete the WI even without this. Apple thinks we already discussed this and UE knows this based on applications running.

- QC thinks we already agreed indication for activation.

* 4: Support UE indication that the UE prefers the SCG to be deactivated. Network can configure whether UE is allowed to indicate this. FFS if we need cause values in the report.

Web Conf (2nd Week Tuesday) (1)

*Proposal 1: Bj are initialized to zero and remain to zero while the SCG is deactivated. Companies thinking this is not ok can propose corrections.*

*Proposal 2: Whether a clarification is needed for rach-ConfigDedicated can be discussed as part of corrections / ASN.1 review.*

*Proposal 3: The UE discards explicitly signalled contention-free Random Access Resources for 4-step RA type and 2-step RA type, if any, upon SCG deactivation as a part of partial MAC reset.*

*(if there is time to discuss the proposal to support fast MCG link recovery via the deactivated SCG is discussed, the discussion can include an exception for fast MCG link recovery).*

*Proposal 6: Implement this indication according to the TP in* [*R2-2202767*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202767.zip) *(as it is the most aligned with Rel-16). Note that this does not prevent discussing corrections.*

By Email [222] (27)

[R2-2203177](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203177.zip) Open Issues on SCG Activation and Deactivation NTT DOCOMO INC. discussion Rel-17

[R2-2203186](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203186.zip) Actions at SCG activation and deactivation Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

[R2-2202247](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202247.zip) L2 based SCG activation and SCG RRM OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202281](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202281.zip) Proposal for releasing statusReportRequired for SCG bearers at SCG deactivation Fujitsu discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202282](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202282.zip) Remaining issues on UL data arrival for SCG Fujitsu discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202351](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202351.zip) Futher discussion on actions at SCG activation or deactivation Transsion Holdings discussion Rel-17

[R2-2202413](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202413.zip) Discussion on activation and deactivation of SCG Spreadtrum Communications discussion Rel-17

[R2-2202576](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202576.zip) MAC related issues upon SCG activation and deactivation Lenovo, Motorola Mobility discussion Rel-17

[R2-2202650](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202650.zip) Activation of deactivated SCG ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202701](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202701.zip) Actions at SCG activation and deactivation Qualcomm Incorporated discussion Rel-17

[R2-2202757](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202757.zip) Deactivation of SCG InterDigital, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202758](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202758.zip) Activation of SCG InterDigital, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202796](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202796.zip) Discussion on actions at SCG activation and deactivation vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202809](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202809.zip) Remaining issues on SCG deactivation NEC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203039](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203039.zip) Remaining issues for MAC procedure in deactivated SCG SHARP Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core [R2-2201319](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2201319.zip)

[R2-2203061](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203061.zip) split bearer handling upon SCG deactivation Sharp discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203087](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203087.zip) Open issues on SCG deactivation DENSO CORPORATION discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203092](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203092.zip) Discussion on partial MAC reset upon SCG deactivation LG Electronics Inc. discussion LTE\_NR\_DC\_enh2-Core

[R2-2203098](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203098.zip) Remaining Issues on Actions at SCG Activation and Deactivation CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203099](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203099.zip) Discussion on RRC Aspects of SCG Deactivation CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203166](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203166.zip) Discussion on data transmission to MN for split bearer LG Electronics Inc. discussion LTE\_NR\_DC\_enh2-Core

[R2-2203185](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203185.zip) UL data handling at SCG deactivation Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

[R2-2203376](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203376.zip) Handling of uplink split bearers and BWP when the SCG deactivated Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203377](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203377.zip) MAC CE based SCG activation Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203391](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203391.zip) Actions at SCG activation and deactivation Ericsson discussion LTE\_NR\_DC\_enh2-Core

[R2-2203414](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203414.zip) Remaining Issues related to SCG Activation LG Electronics discussion Rel-17 LTE\_NR\_DC\_enh2-Core

*Draft LS to RAN4:*

[R2-2203378](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203378.zip) Draft Reply LS on efficient activation de-activation mechanism for one SCG Huawei, HiSilicon LS out Rel-17 LTE\_NR\_DC\_enh2-Core To:RAN4

#### 8.2.2.3 Other aspects of SCG activation/deactivation

Including essential parts of SCG activation/deactivation that do not fit under other AIs. For any proposals provided in this AI, TPs are required to be provided to illustrate the necessity and impacts of the topic. Proposals that do not provide Stage-3 details will not be treated.

This agenda item may be deprioritized in this meeting .

Web Conf (2nd week Tuesday) (1)

TCI state indication (already agreed?)

[R2-2202923](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202923.zip) Further discussion on TCI State indication in RRC MediaTek Inc. discussion [R2-2201295](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2201295.zip)

*Proposal 1: Add TCI State information in NR RRC IE ServingCellConfig. The network could use this indication for RACH-less PSCell activation and direct SCell activation.*

*Proposal 2: RAN2 to adopt the TP in Annex for TCI state indication in RRC configuration.*

Only treated if time allows (2nd week) (1+1+5+3)

RRM measurements:

[R2-2203040](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203040.zip) Remaining issues for RRM measurement in deactivated SCG SHARP Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

UE-requested SCG activation:

[R2-2202780](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202780.zip) Open issues on UE-requested SCG (de)activation CMCC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

MCG failure recovery via deactivated SCG:

[R2-2202249](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202249.zip) Fast MCG recovery via deactivated SCG OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203062](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203062.zip) Fast MCG link recovery via deactivated SCG Sharp discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203085](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203085.zip) Consideration on MCG link recovery with deactivated SCG CMCC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202800](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202800.zip) Discussion on MCG failure recovery via deactivated SCG Futurewei discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202703](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202703.zip) Other aspects of SCG activation and deactivation Qualcomm Incorporated discussion Rel-17

CRs for MCG failure recovery via deactivated SCG:

[R2-2202531](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202531.zip) CR TP for 38.331 on MCG Failure Recovery in deactivated SCG Apple, Vivo, ZTE Corporation, LG Electronics, NTT DOCOMO, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

* Revised in [R2-2203703](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203703.zip)

[R2-2203703](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203703.zip) CR TP for 38.331 on MCG Failure Recovery in deactivated SCG Apple, Vivo, ZTE Corporation, LG Electronics, NTT DOCOMO, Inc., Lenovo, Motorola Mobility discussion Rel-17 LTE\_NR\_DC\_enh2-Core [R2-2202531](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202531.zip)

[R2-2202532](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202532.zip) CR TP for 36.331 on MCG Failure Recovery in deactivated SCG Apple, Vivo, ZTE Corporation, LG Electronics, NTT DOCOMO, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

* Revised in [R2-2203704](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203704.zip)

[R2-2203704](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203704.zip) CR TP for 36.331 on MCG Failure Recovery in deactivated SCG Apple, Vivo, ZTE Corporation, LG Electronics, NTT DOCOMO, Inc., Lenovo, Motorola Mobility discussion Rel-17 LTE\_NR\_DC\_enh2-Core [R2-2202532](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202532.zip)

[R2-2202533](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202533.zip) CR TP for 38.321 on MCG Failure Recovery in deactivated SCG Apple, Vivo, ZTE Corporation, NTT DOCOMO, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

* Revised in [R2-2203705](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203705.zip)

[R2-2203705](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203705.zip) CR TP for 38.321 on MCG Failure Recovery in deactivated SCG Apple, Vivo, ZTE Corporation, NTT DOCOMO, Inc., Lenovo, Motorola Mobility discussion Rel-17 LTE\_NR\_DC\_enh2-Core [R2-2202533](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202533.zip)

### 8.2.3 Conditional PSCell change / addition

No documents should be submitted to 8.2.3. Please submit to.8.2.3.x

#### 8.2.3.1 CPAC procedures from network perspective

Including discussion on network aspects of CPAC (e.g. inter-node messages, coexistence of Rel-16 and Rel-17 procedures)

By Email [223] (11)

[R2-2203045](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203045.zip) Discussion on support for coexistence of Rel-16 and Rel-17 CPC NTT DOCOMO INC. discussion

[R2-2202468](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202468.zip) Open issues on Rel-17 CPAC procedures from NW perspective Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202824](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202824.zip) Remaining issues on CPAC from NW perspective ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203100](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203100.zip) Remaining issues on CPAC from NW perspective CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203170](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203170.zip) Remaining issues for CPAC in network perspective Samsung R&D Institute UK discussion

[R2-2203432](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203432.zip) CPAC network procedures Ericsson discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202304](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202304.zip) Discussion on CPAC procedures from NW perspective vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202577](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202577.zip) On support of CPAC replace Lenovo, Motorola Mobility discussion Rel-17

[R2-2202702](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202702.zip) CPAC procedures from network perspective Qualcomm Incorporated discussion Rel-17

[R2-2202914](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202914.zip) Discussion on the CG-CandidateList Google Inc. discussion LTE\_NR\_DC\_enh2-Core [R2-2200361](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2200361.zip)

[R2-2202916](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202916.zip) Support modification and cancellation of C-PSCells in the CG-CandidateList Google Inc. draftCR Rel-17 38.331 16.7.0 B LTE\_NR\_DC\_enh2-Core [R2-2200362](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2200362.zip)

Email discussion [223] (2nd Week Tuesday)

* [AT117-e][223][DCCA] CPAC procedures from network perspective (Samsung)

Scope: Discuss remaining open issues for CPAC procedures from network perspective

Intended outcome: Discussion report in [R2-2203637](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203637.zip).

NOTE: CPAC RRC CR rapporteur (CATT) is allowed to submit updated CRs based on the report proposal to illustrate the impacts of the proposals

Deadline: Deadline 3

Web Conf (2nd week Tuesday) (1)

[R2-2203637](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203637.zip) Report of [AT117-e][223][DCCA] CPAC procedures from network perspective (Samsung) Samsung discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

Bulk easy-agreement:

* 14: (resolving running CR) RAN2 agree on the following with TP in [R2-2202468](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202468.zip):

“Source SN should always include the CPC execution condition for the suggested PSCell in SN Change Required message to MN. FFS whether the Optional flag is to be removed from condExecutionConditionSN-r17 in stage 3 CR for NR.”

* 15: (resolving running CR) RAN2 agree on the following proposal with the TP in [R2-2202468](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202468.zip):

“Capture in stage-2 CR that source SN can update the CPC execution conditions (for the accepted PSCells) after being informed about the accepted candidate PSCells.”

* 16: (resolving running CR) RAN2 agree on the following proposal with the TP in [R2-2202468](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202468.zip):

“Capture in stage-2 CR that the CPAC configuration may contain MCG and SCG reconfigurations.”

* 17: (resolving running CR) RAN2 agree on the following proposal with the TP in [R2-2202468](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202468.zip):

“Consider the FFS in stage 2 CR (TS 37.340) on what defines a successful reconfiguration procedure to be already addressed by the current wording (i.e. FFS to be deleted).”

* 20: (resolving running CR) RAN2 agree on the following proposal with the TP in [R2-2203100](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203100.zip):

“The following Editor’s Note for MN initiated CPA in the stage 2 running CR is removed.

Editor’s Note: it is FFS how to capture the following agreement: The message carrying ‎conditionalReconfiguration for CPA/CPC is in MN format (i.e. contains ‎both MCG and SCG re-configurations).”

* 21: (resolving running CR) RAN2 agree on the following proposal with the TP in [R2-2203100](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203100.zip):

“The following Editor’s Note for MN initiated CPA in the stage 2 running CR is removed.

Editor’s Note: it is FFS what defines a successful reconfiguration procedure.”

Need discussion:

* 18: (resolving running CR) RAN2 agrees that target SN provides the prepared PSCell configurations using add/mod/release list instead of always providing a full list. Further work on the CR implementation (follow related RAN3 agreement that target SN can add cells even when not requested, can discuss how this works e.g. whether to capture in field description that toRelease list is not used in CPAC preparation).

- Huawei clarifies this is due to RAN3 agreement for target SN requesting a PSCell change. But this doesn't impact CPAC preparation. Lenovo thinks AddMod applies to preparation.

- QC thought this was related to CPAC modification. Nokia agrees.

*Proposal 19-1: (resolving running CR) RAN2 discuss on the following proposal with the related RAN3 agreement (Single SN Change procedure is used during preparation phase for SN-initiated inter-SN CPC to prepare multiple T-SNs. A list of multiple target SN IDs will be added to SN CHANGE REQUIRED message meanwhile the legacy target SN ID is ignored. More stage-3 details will be finalized in second round. ):*

*RAN2 confirms the new inter-node RRC message that includes the full list of CG-Config(s) is only used from the target SN to the MN, i.e. not used from the source SN to the MN (because source SN does not determined accepted candidate cells)*

- Ericsson thinks this is quite complicated and difficult to understand. This is about single SN change procedure.

- ZTE thinks that the intent was just that the new INM is used only from T-SN to MN because the list is accepted candidate cells. Lenovo agrees.

- CATT wonders if this impacts any RAN2 specifications?

2. For R17 CPAC functionality completion:

Bulk easy-agreement:

* 2. (For R17 CPAC completion) RAN2 agree that R17 CPA and R17 CPC cannot coexist.
* 13: (For R17 CPAC completion) RAN2 agree that CPAC is not supported for NGEN-DC in Rel-17.

Need discussion:

*Proposal 1-1. (For R17 CPAC completion) RAN2 agree that there is a new specification further expected for co-existence of R17 MI-CPC and SI-CPC, i.e., signalling for maximum number of conditional reconfigurations for each node.*

*Proposal 1-2. (For R17 CPAC completion) RAN2 determine if the co-existence of R17 MI-CPC and SI-CPC is allowed or not based on the estimated specification impact to current CPAC designed so far.*

- CATT has concerns on doing the coexistence. We don't have the time for it. Huawei, MTK, Intel, Ericsson and Futurewei agree. Nokia disagrees and thinks this will make the feature useless. Samsung and Qualcomm agrees.

- ZTE thinks we can only specify coordination of the number CPAC candidates between MN and SN.

- Ericsson thinks MN and SN-initiated procedures are not needed in the end.

- QC thinks P12 is all that is needed from UE behaviour.

- LGE thinks for intra-SN CPC there is coexistence issue between CHO and CPC.

- Interdigital wonders what happens if two conditionals trigger at the same time?

**Working assumption (can revisit in next meeting if complications are found)**

* 1-1. (For R17 CPAC completion) RAN2 agree to have MN-SN coordination for maximum number of conditional reconfigurations allowed for each node. MN can indicate how many conditional reconfigurations SN is allowed to have.
* 12: (R16/R17 CHO/CPAC coex) If one conditional reconfiguration is executed, the other conditional reconfigurations should be released. Everything else is up to UE implementation.
* No other specification efforts in Rel-17 on CPAC/CHO coexistence.

3. Coex of R16/17 CPC:

*Proposal 3: (R16/17 CPC coex) RAN2 agree on the co-existence of R16 CPC and R17 SI-CPC.*

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| *Options* | *Configuration release upon other type CPC’s successful execution (aligned with legacy):Q4* | *Intra-SN execution indication (new): Q5* | *Either new UE variable (aligned with legacy) or MN/SN signalling on cond reconfig ID space (new):Q8* | *MN/SN signalling for max # of candidate pscells allowed at S-SN (new):Q9* |
| *R16 CPC+R17 MI-CPC(Opt3)* | *v* | *v* | *v* | *v* |
| *R16 CPC+R17 SI-CPC(Opt2)* | *v* |  | *v* | *v* |
| *R16 CPC+R17 CPC(Opt 4)* | *v* | *v* | *v* | *v* |

*Component proposals for the each solutions:*

*Proposal 4. (R16/17 CPC coex) If supporting of coexistence between R16 CPC and R17 CPC, RAN2 agree that UE releases R17 CPC configurations after successful R16 CPC execution, and vice-versa.*

*Proposal 5. (R16/17 CPC coex) If supporting the coexistence of R16 CPC and R17 MI-CPC or the coexistence of R16 CPC and R17 (whole) CPC, RAN2 agree that there is the intra-SN execution indication between MN and SN.*

*Proposal 7: (R16/17 CPC coex) If supporting the any form of coexistence between R16 CPC and R17 CPC, RAN2 agree that maximum number of candidate PSCells for R16 CPC and R17 CPAC is 8.*

*Proposal 8: (R16/17 CPC coex) If supporting any type of coexistence between R16 CPC and R17 CPC, RAN2 agree that either new UE variable for conditional reconfiguration or new MN/SN signaling for conditional reconfiguration ID space indication needs to be specified.*

*Proposal 9: (R16/17 CPC coex) RAN2 agree that there is no need of introduction of new signalling for coordination of max number of candidate pscells assigned to S-SN only specific to R16/R17CPC co-existence case.*

*Proposal 10: (R16/17 CPC coex) RAN2 agree that no modification of R16 intra-SN CPC procedure for the usage of R17 CPC.*

*Proposal 19-2: (co-ex) RAN2 discuss the proposed TP in* [*R2-2202824*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202824.zip) *if RAN2 agrees that the MN/SN coordination on the number of candidate PSCells or/and conditional reconfiguration ID space is needed.*

4. Coex of CHO/CPC

*Proposal 11: (CHO/CPC coex) RAN2 determine on which co-existence option in CHO/CPC can be supported in R17 based on the estimated specification impact.*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| *Options (R16/17 CPC)* | *Configuration release upon other type CPC’s successful execution (aligned with legacy):Q4* | *Intra-SN execution indication (new): Q5* | *Either new UE variable (aligned with legacy) or MN/SN signalling on cond reconfig ID space (new):Q8* | *MN/SN signalling for max # of candidate pscells allowed at S-SN (new):Q9* |  |
| *R16 CPC+R17 MI-CPC* | *v* | *v* | *v* | *v* |  |
| *R16 CPC+R17 SI-CPC* | *v* |  | *v* | *v* |  |
| *R16 CPC+R17 CPC* | *v* | *v* | *v* | *v* |  |
| *Options (CHO/CPC)* | *Other cond Config released upon one cond Reconfig’s successful execution. (aligned in legacy):Q12/13* |  |  |  | *Other UE behaviour such as abort of other type execution, suspend of evaluation of other type (new):Q12* |
| *R16 CPC+R17 MI-CPC+CHO(Opt3)* | *v* | *v* | *v* | *v* |  |
| *R16 CPC+R17 SI-CPC+CHO(Opt3)* | *v* | *v* | *v* | *v* |  |
| *R16 CPC+R17 CPC+CHO(Opt4)* | *v* | *v* | *v* | *v* |  |

*Component proposal:*

*Proposal 12: (CHO/CPC coex) If one conditional reconfiguration is executed, the other conditional reconfigurations should be released. Everything else is up to UE implementation.*

#### 8.2.3.2 CPAC procedures from UE perspective

Including discussion on relation with deactivated SCG (e.g. is CPC triggered even if the SCG is deactivated SCG, can the CPC command include deactivated SCG, maximum number of CPC configurations, unsynchronized update of MCG configuration at CPC execution, full configuration changes)

By Email [224] (12)

[R2-2202924](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202924.zip) Discussion on UE behaviour upon CPC execution MediaTek Inc. discussion

*Observation 1: Additional round trip delay is introduced if the UE has to informed the MN upon CPAC execution.*

*Proposal 1: The NW ensures that the executed CPAC configuration still allow SRB reception in MN. There is no need to have additional UE indication (using old configuration) upon CPAC execution.*

[R2-2202305](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202305.zip) Discussion on CPAC procedures from UE perspective vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

*Proposal 1： Up to 8 candidate cells for CPAC and up to 8 candidate cells for CHO can be simultaneously configured.*

*Proposal 2： Negotiation and control of the total number of CHO and CPAC candidate cells for conditional mobility is up to NW implementation*

*Proposal 3： If MCG configuration is updated before CPAC execution, UE sends the CPAC complete message with the new configuration*

*Proposal 4： If MCG configuration is updated at CPAC execution, and CPAC will be useless after MCG reconfiguration, UE aborts the ongoing CPAC.*

*Proposal 5： Support Rel-17 CPAC for NGEN-DC with NR PSCell\*

*Proposal 6： Target SNs provide full RRC reconfiguration for CPAC.*

*Proposal 7： CPC is not triggered when the SCG is deactivated. the CPC command does not include deactivated SCG.*

[R2-2202469](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202469.zip) Open issues on Rel-17 CPAC procedures from UE perspective Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

*Observation 1: Using ULInformationTransferMRDC to indicate the CPAC execution condition has been met and then subsequently sending the RRCReconfigurationComplete introduces additional signalling step at Uu interface and delays the completion of RRC Reconfiguration procedure.*

*Observation 2: If the UE confirms the CPC execution before actually applying the target configuration (including MCG and SCG part) and in case of a subsequent reconfiguration failure there is no alignment between the network and the UE in terms of the UE’s configuration.*

*Observation 3: The WID in RP-201040 does not provide a direct answer if NG-EN-DC for CPAC shall be supported. Scenarios not addressed in Rel-16 are to be addressed.*

*Observation 4: If T-SN acknowledges all suggested PSCells, delta configuration can be safely used as subsequent S-SN reconfiguration is not likely to happen.*

*Observation 5: T-SN may always use full configuration to avoid potential configuration mismatch in case the S-SN decides to reconfigure the UE prior to CPC execution.*

*Observation 6: There are numerous conditional cell change procedures the UE may be configured for: CHO, intra-SN CPC, inter-SN CPC (both SN- and MN-initiated) and CPA.*

*Observation 7: There might be a need for inter-node coordination regarding conditional cell change procedures in order not to exceed the maximum allowed number of such configurations per UE.*

*Proposal 1: RAN2 does not specify the relationship between deactivated SCG and CPAC as a part of Rel-17 work.*

*Proposal 2: UE sends ULInformationTransferMRDC using the old configuration. It contains Conditional Reconfiguration ID and embedded RRCReconfigurationComplete.*

*Proposal 3: If Proposal 2 is agreed, RAN2 shall decide whether the same behavior is specified for the case when CPAC configuration does not contain a new MCG config.*

*Proposal 4: If the unsynchronized update of MCG configuration at CPC execution is addressed, RAN2 is also asked to consider what happens in case of a UE’s failure to comply with MCG configuration.*

*Proposal 5: Rel-17 CPAC functionalities can be supported also for NG-EN-DC. This should be confirmed with RAN3.*

*Proposal 6: S-SN may inform under which circumstances S-SN configuration will not be changed after T-SN preparation is done.*

*Proposal 7: How the S-SN informs the MN and T-SN about the use of delta-configuration for candidate PSCells is defined in the standard (e.g. as a part of SN Change Required message).*

*Proposal 8: MN informs the SN how many conditional configurations SN can initiate, considering planned/pending MN-initiated conditional reconfigurations (including CHO and MN-initiated CPC).*

*Proposal 9: RAN2 is asked to consider increasing the maximum number of conditional reconfigurations the UE*

[R2-2203101](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203101.zip) Remaining issues on CPAC from UE perspective CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

*Observation 1: RAN3 already agreed not to support SCG deactivation during CPAC procedures.*

*Observation 2: Unsynchronized update of MCG configuration between UE and MN may occur upon CPAC execution.*

*Observation 3: The Unsynchronized update of MCG configuration between UE and MN upon CPAC execution is avoidable, since when MN reconfigure the MCG configuration for CPAC candidates, network can guarantee that the MN can receive the RRC Reconfiguration Complete message upon CPAC execution.*

*Observation 4: Due to delta configuration, the unsynchronized may occur for SN initiated inter-SN CPC, i.e., the measurement configurations of S-SN may be updated after the S-SN obtains the candidate cells accepted by T-SN, while the CPAC candidate cell configuration is based on the S-SN configuration before updating.*

*Observation 5: The updating of the measurement gap of S-SN may cause inconsistency between NW and UE.*

*Proposal 1: Do not support the configuration of coexist of CPAC and deactivated SCG, i.e.*

*- CPAC command cannot include deactivation SCG*

*- NW shall not configure the SCG to be deactivation if CPC is configured for UE*

*Proposal 2: For MN initiated CPA, MN initiated CPC, or SN initiated CPC, the maximum number of candidate configurations is 8 respectively.*

*Proposal 3: NW ensures that the MCG configuration associated with the CPAC configuration does not include configuration which is unnecessary for PSCell change/addition. MCG configuration intended only for MN configuration is only updated separately from CPAC.*

*Proposal 4: The T-SN shall configure the measConfig based on the assumption that UE will remove all the CPC related measIds, measObjects and reportConfig configurations configured by S-SN to ensure the consistency of the measConfig between UE and T-SN.*

*Proposal 5: RAN2 to agree that when generating the measurement gap related configurations during SN initiated CPC configuration, only full configuration can be adopted by T-SN.*

[R2-2203171](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203171.zip) Remaining issues for CPAC in UE perspective Samsung R&D Institute UK discussion

*Proposal 1-1. RAN2 agree that CPC is not executed on deactivated SCG.*

*Proposal 1-2. RAN2 agree that CPC configuration does not include SCG deactivation indication.*

*Proposal 2-1. RAN2 agree on the support of coexistence between R16 CHO and R16 CPC, and between R16 CHO and R17 CPAC.*

*Proposal 2-2. RAN2 agree on that UE stops the condition evaluation for other remaining conditional reconfigurations once a conditional reconfiguration across R16/17 CPAC and R16 CHO is executed.*

*Proposal 2-3. RAN2 agree on that UE autonomously release all the remaining conditional reconfigurations including CHO and R16/17 CPAC configurations once UE executes the CHO successfully.*

*Proposal 2-4. RAN2 agree on that UE autonomously release the remaining conditional reconfigurations only for R16/17 CPAC configurations once UE executes the CPC successfully.*

*Proposal 3-1. MN can handle the unsynchronized update of MCG configuration at CPC execution.*

[R2-2203379](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203379.zip) Remaining issues for CPAC Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

*Proposal 1: CPAC with SCG (de)activation is not supported in R17.*

*Proposal 2: The maximum number of CPA or CPC is 8.*

*Proposal 3: If the co-existence between CHO and CPAC does not have impacts on RAN2&3 specifications, it can be supported in R17, Otherwise, it is not supported.*

*Proposal 4: It is the MN to ensure that it can decode an RRCConnectionReconfigurationComplete message at CPAC execution with the new MCG configuration of any conditional configurations.*

[R2-2202516](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202516.zip) Text proposal to Uu siganling in CPAC Apple discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202578](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202578.zip) Discussion on CPAC with deactivated SCG Lenovo, Motorola Mobility discussion Rel-17

[R2-2202777](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202777.zip) Discussion on CPAC related open issues LG Electronics discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202825](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202825.zip) Remaining issues on CPAC from UE perspective ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203433](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203433.zip) UE procedures and signalling for CPAC Ericsson discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203476](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203476.zip) CPC and SCG deactivation Sharp discussion Rel-17 LTE\_NR\_DC\_enh2-Core

Email discussion [224] (2nd Week Tuesday)

* [AT117-e][224][DCCA] CPAC procedures from UE perspective (Nokia)

Scope: Attempt to resolve critical open issues for CPAC procedures from UE perspective based on contributions to 8.2.3.2

Intended outcome: Discussion report in [R2-2203638](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203638.zip).

NOTE: CPAC RRC CR rapporteur (CATT) is allowed to submit updated CRs based on the report proposal to illustrate the impacts of the proposals

Deadline: Deadline 3

Web Conf (2nd week Tuesday) (1)

[R2-2203638](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203638.zip) Report of [AT117-e][224][DCCA] CPAC procedures from UE perspective (Nokia) Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

*Proposals for agreement:*

*????1: CPC cannot be configured when SCG is deactivated and SCG cannot be deactivated when CPC is configured. Adopt the corresponding text proposal from* [*R2-2203101*](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203101.zip)*.*

* 1: RAN2 will not optimize using CPC with deactivated SCG in Rel-17. UEs are not required to support the joint configuration in Rel-17 (i.e. UE behaviour is not specified). FFS how to capture this in specifications.
* 2: It is up to NW implementation how to handle the “unsynchronized update of MCG configuration” issue.
* 4: The maximum supported number of CPAC configurations in Rel-17 is equal to 8.

- Ericsson thinks in P1 it's not good to prevent certain configurations. Could just say we don't optimize how these feature work together in this release. Nokia indicates this could also work. Huawei points out that UEs should not be expected to support the joint configuration. Interdigital agrees with Ericsson. CATT thinks this could still cause issues if we don't capture it.

- Ericsson thinks that for P2, only UE vendors wanted this and thought MCG lower layers wouldn't change.

*Proposals for discussion:*

*Proposal 3: Further discuss and decide how the use of delta-config in T-SN PSCell preparation is ensured, at least for the “non-CPC part” of the configuration. Discuss if this potentially applies to MN- and/or SN-initiated CPC.*

* 3: The use of delta-config in T-SN PSCell preparation is up to NW implementation. RAN2 will not specify additional UE behaviour for this in Rel-17.

- Huawei wonders if this is related to UE behaviour. Nokia clarifies this was from contributions. Samsung clarifies this was not discussed in the 223.

- Nokia thinks not specifying anything makes NW inefficient. Ericsson agrees but thinks we don't have much time to specify it.

*Proposal 5: Assuming different CPC types can co-exist, discuss further if:*

*a) the number of configurations to be initiated by MN or SN should be statically split*

*b) each node (i.e. MN or SN) can indicate to the other node how many configurations it has already initiated*

#### 8.2.3.3 Other CPAC aspects

Including essential parts of CPAC that do not fit under other AIs. For any proposals provided in this AI, TPs are required to be provided to illustrate the necessity and impacts of the topic. Proposals that do not provide Stage-3 details will not be treated.

This agenda item may be deprioritized in this meeting .

Only treated if time allows (2nd week) (1)

[R2-2202579](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202579.zip) Coexistence of CHO and CPAC Lenovo, Motorola Mobility discussion Rel-17

[R2-2202826](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202826.zip) Discussion on coexistence of CHO and CPAC ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202759](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202759.zip) Coexistence of CHO and CPC InterDigital, Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202760](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202760.zip) SCG failure recovery with CPAC InterDigital, Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

### 8.2.4 Temporary RS for SCell activation

Including discussion on any essential aspects that were not yet covered by endorsed CRs

This agenda item may be deprioritized in this meeting.

Previously endorsed CRs for TRS-based SCell activation:

[R2-2202252](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202252.zip) Introduction of TRS based SCell activation in 38.321 OPPO CR Rel-17 38.321 16.7.0 1185 - B LTE\_NR\_DC\_enh2-Core

* To be merged to running CRs (cover page should cite these Tdoc numbers)

[R2-2202253](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202253.zip) Introduction of TRS based SCell activation in 38.331 OPPO CR Rel-17 38.331 16.7.0 2882 - B LTE\_NR\_DC\_enh2-Core

* To be merged to running CRs (coverage should cite these Tdoc numbers)

Text enhancement for MAC CR:

[R2-2202251](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202251.zip) TP correction for TRS ID in 38321 OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

* [200] Can be considered in running CR discussion

Only treated if time allows (2nd week) (2)

Finalization of temporary RS for SCell activation:

[R2-2202681](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202681.zip) Leftover issues for TRS based SCell activation Samsung Electronics discussion LTE\_NR\_DC\_enh2-Core

*Proposal 1. Rel-15 SCell activation/deactivation MAC CE is not used if a SCell is configured with TRS.*

*Proposal 2. To support TRS based SCell activation by RRC message.*

*Proposal 3. If Proposal 2 is not agreeable, sCellState of a SCell is not configured with activated if the SCell is configured with TRS.*

[R2-2202797](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202797.zip) Discussion on Temporary RS activation for fast SCell activation vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

*Observation 1 There is no functionality impact if an R15 SCell Activation/Deactivation MAC CE or an R17 Enhanced SCell Activation/Deactivation MAC CE is received by the UE after the transmitted TRS burst(s) indicated by a former R17 Enhanced SCell Activation/Deactivation MAC CE.*

*Observation 2 There is no functionality impact if an R15 SCell Activation/Deactivation MAC CE is received by the UE before the transmitted TRS burst(s) indicated by a former R17 Enhanced SCell Activation/Deactivation MAC CE.*

*Observation 3 When the network does not use the TRS for fast SCell activation, R15 MAC CE can be used for SCell activation/deactivation to save some bits.*

*Observation 4 Clarification is needed for the case when the UE receives a second R17 MAC CE before the TRS burst(s) indicated by a first R17 MAC CE where the second R17 MAC CE indicates Ci=1 & “TRS ID for Ci”=0 for the SCell Ci.*

*Proposal 1 Either R15 SCell Activation/Deactivation MAC CE or R17 Enhanced SCell Activation/Deactivation MAC CE can be used for SCell activation/deactivation when TRS configuration is configured for any SCell, i.e. no spec impact for the legacy R15 SCell Activation/Deactivation MAC CE.*

*Proposal 2 Adopt the TP in the Annex to keep aligned comprehension for the network and the UE when the UE receives a second R17 MAC CE before the TRS burst(s) indicated by a first R17 MAC CE where the second R17 MAC CE indicates Ci=1 & “TRS ID for Ci”=0 for the SCell Ci.*

### 8.2.5 UE capabilities

Including finalization of RAN2 feature list input on SCG deactivation, CPAC and efficient SCell activation needed to create UE capability CRs.

If changes are proposed against the baseline endorsed in previous meeting, the proposals should illustrate the differences to the baseline illustrated in [R2-2109676](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_116-e/Docs/R2-2109676.zip).

[R2-2202480](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202480.zip) Discussion on remaining issues on DCCA UE capabilities Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

*Proposal 1: For (NG)EN-DC case, define per band UE capabilities for SCG activation/deactivation, i.e., support of activation/deactivation of SCG and RACH-less SCG activation, in extended supportedBandListEN-DC of IE UE-EUTRA-Capability.*

*Proposal 2: If P1 is agreed, RAN2 to confirm that UE can only support activation/deactivation of one SCG when UE supports SCG activation/deactivation in all bands of this SCG.*

*Proposal 3: For both (NG)EN-DC and NR-DC, have separate capabilities for Activation/Deactivation of SCG in Resume and Reconfiguration cases.*

*Proposal 4: Add new capability for SN Initiated inter-SN CPC in (NG)EN-DC and NR-DC respectively.*

*Proposal 5: For (NG)EN-DC case, define per band UE capabilities for CPC, i.e., MN initiated CPC and SN Initiated inter-SN CPC, in extended supportedBandListEN-DC of IE UE-EUTRA-Capability.*

*Proposal 6: CPA UE capabilities are defined in per BC signaling.*

[R2-2203380](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203380.zip) UE capability for CPAC and SCG (de)activation Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2203392](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203392.zip) UE capabilities for Rel-17 MR-DC enhancements Ericsson discussion LTE\_NR\_DC\_enh2-Core

[R2-2202483](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202483.zip) CR TP for 38.331 on DCCA UE capabilities Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202484](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202484.zip) CR TP for 38.306 on DCCA UE capabilities Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202485](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202485.zip) CR TP for 36.331 on DCCA UE capabilities Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

[R2-2202486](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202486.zip) CR TP for 36.306 on DCCA UE capabilities Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

Email discussion [225] (2nd Week)

* [AT117-e][225][DCCA] DCCA UE capabilities (Intel)

Scope: Finalize RAN2 parts of UE capabilities of the DCCA WI based on contributions to 8.2.5.

Intended outcome: Discussion report in [R2-2203640](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203640.zip).

Deadline: Deadline 4bis

Web Conf (2nd week) (1)

[R2-2203640](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203640.zip) Report of [AT117-e][225][DCCA] DCCA UE capabilities (Intel) Intel discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

## 8.3 Multi SIM

(LTE\_NR\_MUSIM-Core; leading WG: RAN2; REL-17; WID: RP-212610)

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs). If a contribution does not provide TP, it may be deprioritized.

Contributions should focus on remaining open issues needed to close the WI from RAN2 perspective (e.g. as discussed in [202])

### 8.3.1 Organizational, Requirements and Scope

Including LSs, any rapporteur inputs and results of the (informative) running CR email discussions [235]-[239]

Web Conf (1st week Monday) (1)

Outcome of [202]:

[R2-2202963](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202963.zip) [Post116bis-e][202][MUSIM] Open issues for MUSIM (vivo) vivo discussion Rel-17 LTE\_NR\_MUSIM-Core

*Cat1: Discussion after RAN4 feedback*

*OI 1-1 and QI 1-2: Whether we can add more additional MGL/MGRP for periodic MUSIM gap and aperiodic MUSIM GAP?*

* Wait for RAN4 LS reply

*Cat2: pre117 -e offline*

*OI1-3: Whether Adopt the list with ToAddModList/ToReleaseList in RRCReconfiguration for the scheduling gap configuration and Introduce gap ID in RRCReconfiguration message for MUSIM to identify each configured gap, and support modification or release of gaps via gap ID.*

*OI1-5: what is the maximum value of the prohibit timer for MUSIM UAI without leaving RRC\_CONNECTED state?*

*OI2-1: whether the configuration of “configured time” is mandatory when network configures UE to report the preference of leaving RRC\_CONNECTED state*

*OI2-2: what is the value range of the waiting timer for leaving RRC Connection state?*

*OI2-3: which alt is for the preferred RRC state indicator for switching notification with leaving RRC Connected state:*

*Alt1: RRC\_IDLE or RRC\_INACTIVE*

*Alt2: RRC\_IDLE, RRC\_INACTIVE, outOfConnected*

*OI2-4: Reconfiguration (including HO) and RLF during the wait time.*

*OI3-1 : whether there is something to address ” Upon receiving the indication to erase any IMSI Offset value from upper layers, the UE shall set the IMSI Offset value to 0” in TS 36.304?*

*OI3-2 : whether there is something to address” RAN2 do not introduce extra mechanisms for PO collision on SI change indication reception or ETWS/CMAS receptions.” in TS 36.304?*

*OI5-2: Whether in TS 38.306 and TS 36.306 that paging cause feature is optional feature without UE radio access capability parameters?*

*OI5-3: Whether to store MUSIM assistance configuration (e.g. musim-AssistanceConfig) and MUSIM gap configuration (e.g. musim-GapConfig) in the UE Inactive AS context. If stored, when to release or any need to restore during RRC connection resume procedure.*

*OI5-4: When to release MUSIM assistance configuration (e.g. musim-AssistanceConfig) and MUSIM gap configuration (e.g. musim-GapConfig) during RRC connection re-establishment procedure.*

* Discussed via email discussions in this meeting

*Cat3: Contributions are invited and treated*

*OI1-4: How does the UE indicate MUSIM gap release?*

*OI5-1: Whether to indicate which MUSIM gap patterns are supported by UE (similar with UE capability supportedGapPattern in 38.306 ) based CR in RAN4 R4-2202760*

* Discussed online in this meeting

*Cat4: Contributions are ok however they can be treated best effort*

*OI1-6: FFS indication from UE in UAI on the criticality or need for the gap location to be maintained at the same position as requested.*

*OI1-7: FFS UE behavior until it received Network configuration related to gaps after requesting for gaps.*

*OI1-8: FFS UE behavior during the gap duration that requested to be released in the UAI message*

*OI2-5: FFS UE behavior when request of leaving RRC Connected is triggered for MUSIM or Power saving, but there is an ongoing procedure for Power saving or MUSIM.*

*OI2-6: Whether busy indication is supported by network or not should be indicated to UE?*

*OI4-1: whether Paging cause capability can be applied to MUSIM UEs and single USIM UEs. Send an LS to SA2 to indicate RAN2’s preference?*

**NR Rel-17 Multi-SIM (TBD, started only after online decisions)**

* [AT117-e][231][MUSIM] Closing MUSIM open issue (vivo)

Scope: Discuss remaining minor open issues based on online decisions and attempt to resolve them.

Intended outcome: Discussion report in [R2-220xxxx](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-220xxxx.zip).

Deadline: Deadline 5

By Email [200] (1+1+1+2+2)

Outcome of [235]:

[R2-2202962](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202962.zip) Capture RAN2 agreements on RRC for MUSIM vivo(Rapporteur) CR Rel-17 38.331 16.7.0 2919 - B LTE\_NR\_MUSIM-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

Outcome of [236]:

[R2-2203013](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203013.zip) Introduction of MUSIM for LTE Samsung Electronics Co., Ltd CR Rel-17 36.331 16.7.0 4769 - B LTE\_NR\_MUSIM-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

Outcome of [237]:

[R2-2203273](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203273.zip) Introduction of Multi-USIM devices to 36.304 China Telecommunications CR Rel-17 36.304 16.6.0 0842 - B LTE\_NR\_MUSIM, LTE\_NR\_MUSIM-Core [R2-2201697](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2201697.zip)

* Revised in [R2-2203651](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203651.zip)

[R2-2203651](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203651.zip) Introduction of Multi-USIM devices to 36.304 China Telecommunications CR Rel-17 36.304 16.6.0 0842 1 B LTE\_NR\_MUSIM, LTE\_NR\_MUSIM-Core [R2-2203273](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203273.zip)

* [231] Expected to be agreed via email

Outcome of [238]:

[R2-2203436](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203436.zip) Running CR to 38300 for Multi-USIM devices support Ericsson CR Rel-17 38.300 16.8.0 0422 - B LTE\_NR\_MUSIM-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

[R2-2203437](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203437.zip) Running CR to 36300 for Multi-USIM devices support Ericsson CR Rel-17 36.300 16.7.0 1355 - B LTE\_NR\_MUSIM-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

Outcome of [239]:

[R2-2202696](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202696.zip) Introduction of MUSIM UE Capabilities Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2875 1 B LTE\_NR\_MUSIM-Core [R2-2202009](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202009.zip)

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

[R2-2202697](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202697.zip) Introduction of MUSIM UE Capabilities Huawei, HiSilicon CR Rel-17 38.306 16.7.0 0672 1 B LTE\_NR\_MUSIM-Core [R2-2202010](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202010.zip)

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

### 8.3.2 Paging collision avoidance

This agenda item will be deprioritized in this meeting unless additional feedback from SA2/CT1 is received. Proposals that do not provide Stage-3 details will not be treated.

Web Conf (1st week Thursday) (1)

[R2-2203751](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203751.zip) Reply LS on alternative IMSI for MUSIM (S2-2201681; contact: Sony) SA2 LS in Rel-17 To:RAN2 Cc: CT1, RAN3

*SA2 kindly request RAN2 avoids the overflow by e.g. aligning with the SA2 specification or referring to the calculation of Alternative IMSI value in TS 23.401.*

- Intel thinks the LS is a bit contradictory but we can follow SA2 formula. Samsung, Ericsson and OPPO agrees.

- NEC thinks the overflow will not happen usually. So thinks we don't need to do anything.

- QC thinks we should just follow SA2 assumption.

* As requested by SA2 LS, RAN2 will use same formula with reference to SA2 specification 23.401 for calculation of alternative IMSI. CRs to be updated accordingly.
* Offline discussion [231] (China Telecom): Revise the 36.304 CRs according to above.

Email discussion [231] (started after 1st week Thu)

* [AT117-e][231][MUSIM] Updated 36.304 CR (China Telecom)

Scope: Provided updated 36.304 taking the online agreement on alternative IMSI into account.

Intended outcome: Agreeable CR in [R2-2203651](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203651.zip).

Deadline: Deadline 5

### 8.3.3 UE notification on network switching for multi-SIM

Including discussion on NW switching for multi-SIM with leaving from and staying in RRC\_CONNECTED

This agenda item may use a summary document (decision to be made based on submitted tdocs) considering stage-3 details of MUSIM (including UAI, gap configuration and NW switching with leaving RRC\_CONNECTED)

Summary document discussion [230] (1)

* [Pre117-e][230][MUSIM] Summary Stage-3 details of MUSIM (vivo)

Scope: Provide summary of Stage-3 aspects of MUSIM configuration according to open issue list.

Intended outcome: Summary document in [R2-2203635](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203635.zip).

Deadline: Deadline 0

Web Conf (1st week Monday) (1, start)

[R2-2203635](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203635.zip) [Pre117-e][230][MUSIM] Summary Stage-3 details of MUSIM (vivo) vivo discussion Rel-17 LTE\_NR\_MUSIM-Core Late

Switching procedure without leaving RRC\_CONNECTED

* 1: Introduce gap ID in RRCReconfiguration message for MUSIM to identify each configured periodic gap, and support modification or release of configured gaps via gap ID. And adopt the list with ToAddModList/ToReleaseList in RRCReconfiguration for the scheduling gap configuration. FFS how to handle aperiodic gap configurations.

- Samsung agrees with intent of P1 but would like to clarify whether NW can change any parameters different from UE preference. Chair clarifies this is handled separately.

- Intel thinks the gap ID was intended for release request but is fine with it.

- ZTE wonders if this also applies for aperiodic gap? vivo clarifies this was for periodic gaps only.

- Apple wonders if this means we will have only two gaps configured?

- Samsung thinks we agreed earlier (RAN2#115e) that aperiodic gaps can be released by network.

* 2: If the UEAssistanceInformation does not include a field for MUSIM gap preference, it indicates no preference (i.e. no need for the gaps) for the corresponding field for MUSIM gap.

- Chair wonders if P2 intends to release the gap? vivo clarifies that needs more discussion.

- Ericsson thinks "no preference" means UE has no need for the gaps. So if UE wants to keep previously requested gaps, it needs to repeat the information. Intel, Lenovo, LGE, Samsung, Huawei and QC agree.

- ZTE thinks if UE wants to keep previously requested gaps but can just keep MUSIM assistance information absent.

Switching procedure with leaving RRC\_CONNECTED

*Proposal 4: musim-LeaveAssistanceConfig is optional. musim-LeaveWithoutResponseTimer is mandatory in musim-LeaveAssistanceConfig. The present of musim-LeaveAssistanceConfig indicates that UE is configured to provide MUSIM assistance information for leaving RRC\_CONNECTED.*

*Chair clarification for proposal 4 (to clarify the intent):*

* 4: Configuration of MUSIM leave assistance is optional, but if configured, always contains at least the MUSIM leave without response timer as mandatory field. When MUSIM leave assistance is configured, UE can indicate MUSIM assistance information for leaving RRC\_CONNECTED (i.e. when UE indicates MUSIM leave, UE will leave when the MUSIM leave without response timer expires or it receives RRCRelease).

- OPPO agrees with the rewording. LGE also agrees and thinks that if NW can deconfigure the assistance information. Ericsson think this decision may make it more difficult to implement the feature but can accept it.

- Nokia wonders if UE is allowed to leave if this is not configured?

* 6: The preferred RRC state indicator for switching notification with leaving RRC Connected includes state {RRC\_IDLE, RRC\_INACTIVE, outOfConnected}

- China Telecom wonders how P6 and P2 are related. Can UE release all gap configurations? Chair claraifies this comes in P10-12.

*Proposal 7: While the wait timer for switching notification to leave RRC connected state is running, the UE is not required to detect RLF or initiate connection re-establishment procedure. No SPEC change is needed.*

*Proposal 8: While the wait timer for switching notification to leave RRC connected state is running, the UE is not required to trigger CHO and may not perform handover command. No SPEC change is needed.*

P7-8

- Huawei thinks these would require some changes to specification. Intel agrees and thinks we could just leave specification as they are. Ericsson thinks P8 is corner case and if we do something, P7 we may consider something.

- vivo thinks that maybe these are corner cases and we don't need to capture anything about those.

* RAN2 will not specify any new behaviour if the wait timer for switching notification to leave RRC connected state is running, and UE detects RLF, triggers re-establishment, receives HO command or triggers CHO. No specification changes are needed.

Web Conf (1st week Thursday) (1, continuation)

*Proposal 9: RAN2 does not specify additional UE behavior on receiving reconfiguration of wait timer while wait timer is running.*

*Chair question for P9: What is the intended behaviour if timer is reconfigured while it is running?*

- Lenovo clarifies that if timer is running and NW reconfigures the timer value, UE could restart the timer. Alternatively, UE could stop the timer.

- Ericsson thinks this is not clear in legacy either (e.g. for UAI). But could follow legacy, which means this would be up to UE implementation. MTK agrees and thinks this is not a common scenario. vivo and Huawei agrees. QC thinks we shuold just leave it up to UE implementation. UE anyway intends to leave so the reconfiguration is not common.

- Samsung thinks that if UE sends UAI the timer is restarted. So it's not fully up to UE implementation. Thinks this is a corner case. Apple agrees and thinks the timer is restarted. Nokia agrees.

- Chair thinks reconfiguring timer to smaller value doesn't make sense since NW can just release the UE. And reconfiguring to larger value can be prevented by always using larger value.

- Nokia wonders what happens if NW releases the configuration when wait timer is running? Samsung thinks this is already specified.

* 9: RAN2 does not specify additional UE behavior on receiving reconfiguration of wait timer while wait timer is running. UE starts/stops/restarts the timer as per legacy procedures for UAI transmission, which means that at least in some cases this is left up to UE implementation.

UE capabilities and other aspects

* 10: UE stores musim-GapAssistanceConfig, musim-LeaveAssistanceConfig and musim-GapConfig when entering RRC\_INACTIVE state. Upon initiation of RRC connection resume, the UE releases musim-GapAssistanceConfig and musim-LeaveAssistanceConfig from the UE Inactive AS context.
* 11: Upon initiation of RRC connection re-establishment, the UE releases musim-GapAssistanceConfig and musim-LeaveAssistanceConfig, if configured.
* 12: Upon reception of the RRCReestablishment message, the UE releases the gap configuration indicated by the musim-GapConfig, if configured.

P10-12

- Chair wonders why these are stored if they are only released later on? vivo clarifies this tries to follow the legacy behaviour on UE context handling for RRC\_INACTIVE. LGE agrees.

- Samsung agrees we should follow legacy behaviour. We can improve on these later on to resume the configuration.

- Samsung wonders P11 contains MUSIM leave assistance - what if the leave timer is running when this happens? Nokia thinks this can be left up to UE implementation.

- Huawei is fine with P10-11 but for P12, think the new serving cell may not support MUSIM. Should release it when re-establishment is initiated. vivo thinks this is not a common case and anyway INACTIVE area can handle this.

- Intel thinks this is a common discussion. The fundamental principle is that if target can comprehend the configuration, it can at least provide signalling to release the configuration. If not, it can use full configuration.

Timer value ranges (discussion postponed in 1st week Monday session)

* 3: The prohibit timer range is {0s, 0.5s, 1s, 2s, 3s, 4s, 5s, 6s, 7s, 8s, 9s, 10s}. We aim to add some smaller values (e.g. <0.5s, FFS which) during this meeting.
* Discuss the above FFS via offline [232]

- vivo clarifies this is majority proposal but would like smaller values only. MTK thinks 10s should be the maximum. QC agrees. Nokia agrees.

* 5: The value range of musim-LeaveWithoutResponseTimer for leaving RRC Connection state is defined as {10ms, 20ms, 40ms, 60ms, 80ms, 100ms, spare2, spare1}. FFS if we define values for the spares (can be discussed during this meeting)
* Discuss the above FFS via offline [232]

- Samsung thinks this could be baseline but defining spare values would be useful. 100ms may not be large enough. Ericsson agrees.

Web Conf (1st week Thursday) (1)

[R2-2202645](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202645.zip) Open issues on Network switching and Gap release signalling Intel Corporation discussion Rel-17 LTE\_NR\_MUSIM-Core

*Observation #1: Specifying mechanism for the network to provide an alternative gap pattern instead of the requested gap pattern is complex and not essential.*

*Observation #2: The default UAI signalling already provides the signalling means to indicate that a specific gap is not needed and can be released.*

*Proposal 3: Consider Intel views on the offline issues in the pre-meeting summary.*

* 1: Network should always provide at least one of the requested gap pattern or no gaps. Network providing an alternative gap pattern instead of the one requested by the UE is not supported in this release.

- QC thinks this is simple but thinks this works. Samsung, MTK, Apple, LGE agrees. OPPO wonders how we capture this in specifications. Intel thinks we can just say "network provides" to make that clear.

- Ericsson thinks we don't need to discuss this in RAN2. RAN4 can discuss this and tell us if something is needed. Thinks capturing is not even needed at all and UE capabilities will tell this.

- Nokia thinks NW should have the flexibility to change the offset.

- Huawei wonders if P1 is agreed, do we even need the gap pattern configuration in RRC? Intel thinks NW can still only provide one gap. Ericsson thinks NW should always provide at least one of the requested gaps or no gap.

- ZTE wonders if UE requests short GRP, can NW configure GRP? E.g. UE asks 40ms but NW configures 80ms.

[R2-2202254](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202254.zip) Discussion on UE requested MUSIM gap release Samsung Electronics Co., Ltd discussion Rel-17 LTE\_NR\_MUSIM-Core

*Observation: Depending on how the current MUSIM gap assistance information is different from the latest previous one, each alternative has pros and cons from a signalling point of view i.e.*

*- If current MUSIM gap assistance information is a part of the latest previous one with/without new additional MUSIM gap assistance information, Alt 2 is more efficient than Alt 1*

*- If current MUSIM gap assistance information is completely different from the latest previous one or UE no longer has preference on MUSIM gap assistance information, Alt 1 is more efficient than Alt 2.*

*Proposal: Alt 1 is taken as a baseline for how UE indicates release of gap pattern.*

Web Conf (1st week Thursday) (1)

[R2-2202240](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202240.zip) Finalizing NW switching with leaving from RRC\_CONNECTED Samsung Electronics Co., Ltd discussion Rel-17 LTE\_NR\_MUSIM-Core

*Proposal 1: Clarify in the specification that the UE is allowed to report its preferred RRC state to network for MUSIM purpose once since it was configured to provide MUSIM assistance information for leaving RRC\_CONNECTED.*

*Proposal 2: UE stops the configured wait timer (e.g. musim-LeaveWithoutResponseTimer), if running if musim-LeaveAssistanceConfig is set to release.*

*Proposal 3: RAN2 does not specify any UE behavior on the interaction between power saving and MUSIM for leaving RRC connection.*

*Proposal 4: Do not introduce an indication in system information to indicate whether NAS busy indication is supported or not.*

* Offline discussion [232] (Samsung) to discuss these. Can also discuss other critical open issues.

[R2-2202964](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202964.zip) Remaining issue on network switching vivo discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2202206](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202206.zip) Remaining Key Issues for MUSIM Gap OPPO discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2202207](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202207.zip) Remaining Key Issues for Leaving Connected Mode OPPO discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2202419](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202419.zip) Remaining issues about UE indication on switching Spreadtrum Communications discussion Rel-17

[R2-2202517](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202517.zip) Open Issues in MUSIM Network Switching Apple discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2202573](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202573.zip) Remaining issues for switching notification and busy indication Lenovo, Motorola Mobility discussion Rel-17

[R2-2202698](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202698.zip) Remaining issues for NW switching without leaving RRC\_CONNECTED Huawei, HiSilicon discussion Rel-17

[R2-2202699](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202699.zip) Remaining issues for NW switching with leaving RRC\_CONNECTED Huawei, HiSilicon discussion Rel-17

[R2-2202740](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202740.zip) On remaining issues for MUSIM Gap configuration Nokia, Nokia Shanghai Bells discussion Rel-17

[R2-2202741](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202741.zip) On remaining issues for switching notification for leaving RRC connection Nokia, Nokia Shanghai Bells discussion Rel-17

[R2-2202768](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202768.zip) RRC Connection release request procedure for MUSIM and power saving Sharp discussion [R2-2201216](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2201216.zip)

[R2-2202770](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202770.zip) Stop using of MUSIM Gap requested to be released Sharp discussion

[R2-2202833](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202833.zip) Remaining issues of Network switching for MUSIM China Telecom discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2202844](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202844.zip) Interaction between NAS and AS for network switching ASUSTeK discussion Rel-17 36.304 LTE\_NR\_MUSIM-Core

[R2-2202845](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202845.zip) Configured time for network switching ASUSTeK discussion Rel-17 38.331 LTE\_NR\_MUSIM-Core

[R2-2202856](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202856.zip) Remaining issues on MUSIM gap configuration LG Electronics discussion Rel-17 LTE\_NR\_MUSIM-Core Withdrawn

[R2-2202880](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202880.zip) Consideration on the Remaining Issues of the Scheduling Gap ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2202925](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202925.zip) Remaining issue for NW switching with leaving RRC\_CONNECTED MediaTek Inc. discussion

[R2-2202938](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202938.zip) Remain issues for network switching with leaving RRC\_CONNECTED SHARP Corporation discussion [R2-2201228](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2201228.zip)

[R2-2203227](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203227.zip) Remaining issues on MUSIM gap configuration LG Electronics France discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2203415](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203415.zip) Remaining Issues on Switching with RRC Release LG Electronics discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2203416](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203416.zip) Considerations on Busy Indication LG Electronics discussion Rel-17 LTE\_NR\_MUSIM-Core [R2-2201577](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2201577.zip)

[R2-2203434](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203434.zip) Remaining discussion on switchover procedures Ericsson discussion

Handled in running CR discussion (1)

*Corrections to the RRC CR:*

[R2-2203440](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203440.zip) Corrections to the NR RRC CR for MUSIM (38.331) Ericsson draftCR Rel-17 38.331 16.7.0 F LTE\_NR\_MUSIM-Core

* Can be considered in the running CR email discussion

Email discussion [232] (started after 1st week Thu)

* [AT117-e][232][MUSIM] Remaining details of MUSIM network switching (Samsung)

Scope: Discuss MUSIM network switching based on [R2-2202240](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202240.zip). Discuss the value ranges of MUSIM UAI prohibit timer and musim-LeaveWithoutResponseTimer. Can also discuss other remaining critical open issues for MUSIM NW switching.

Intended outcome: Discussion report in [R2-2203664](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203664.zip).

Deadline: Deadline 4

Web Conf (2nd week Wednesday) (1)

[R2-2203664](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203664.zip) Report of [AT117-e][232][MUSIM] Remaining details of MUSIM network switching (Samsung) Samsung discussion Rel-17 LTE\_NR\_MUSIM-Core Late

### 8.3.4 Paging with service indication

This agenda item will be deprioritized in this meeting unless additional feedback from SA2/CT1 is received. Proposals that do not provide Stage-3 details will not be treated.

Postponed (1)

*SA2-related aspects:*

[R2-2202239](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202239.zip) Clarification on UE behavior for NAS-based busy indication in RRC\_INACTIVE Samsung Electronics Co., Ltd discussion Rel-17 LTE\_NR\_MUSIM-Core

*Observation 1: According to SA2 specification, IDLE UE may not send NAS-based busy indication even if it decides to reject the paging due to UE implementation constraints.*

*Observation 2: Current procedure text in the running RRC CR may mislead for UE to always resume RRC connection to accept or reject the RAN paging.*

*Proposal: Confirm that INACTIVE UE may not send NAS-based busy indication even if it decides to reject the RAN paging due to UE implementation constraints as in IDLE UE.*

* Postponed - Can discuss in Q2 whether this anything needs to be captured on this

Handled in running CR discussion (1)

*Clarifications to the running CR:*

[R2-2202965](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202965.zip) Remaining issue on paging cause feature vivo discussion Rel-17 LTE\_NR\_MUSIM-Core

* Can be considered in the running CR email discussion

[R2-2203958](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203958.zip) LS reply on RAN2 agreements for paging with service indication (S2-2201838 ; contact: vivo) SA2 LS in Rel-17 To: RAN2, RAN3, CT1 Cc:SA, RAN

### 8.3.5 UE capabilities and other aspects

Including finalization of RAN2 feature list input on MUSIM and remaining details needed to create UE capability CRs.

Including discussion on essential aspects of MUSIM that need to be resolved during Rel-17 but are not covered by other agenda items.

If changes are proposed against the baseline endorsed in previous meeting, the proposals should illustrate the differences to the baseline illustrated in [R2-2109625](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_116-e/Docs/R2-2109625.zip).

Web Conf (1st week Monday or Thursday) (1)

*Band conflicts and UE capabilities*

[R2-2202518](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202518.zip) Miscellaneous Issues in MUSIM Apple discussion Rel-17 LTE\_NR\_MUSIM-Core

*(moved from 8.3.3)*

*Observation 1: Based on UL and DL bands in which the MUSIM UE operates in RRC IDLE/INACTIVE/CONNECTED modes, there are scenarios in which both Dual-Rx/Single-Tx and Dual-Rx/Dual-Rx mode of operation are impaired due to RF band conflict across the MUSIM instances.*

*Observation 2: Autonomous MUSIM UE based solution to mitigate band conflict would result in sub-optimal and non-standard behaviour.*

*Observation 3: Current LTE and NR RRC Processing Delay Requirements are meant for single SIM cases, wherein only one RRC procedure is expected to run at any given instance of time.*

*Observation 4: MUSIM UEs can have an ongoing RRC procedure pre-empted due to a concurrent MUSIM use case, and this might result in very tight RRC processing deadline.*

*Observation 5: In Dual Rx/Single Tx MUSIM UE, initial Connected state configuration on the second SIM instance to retrieve the caller ID can impact the ongoing Connected state configuration on the first SIM instance.*

*Observation 6: In Dual Rx/Single Tx MUSIM UE, it is important to signal to the first MUSIM instance about graceful RRC Connection Release while the user accepts the incoming MT call on the second MUSIM instance, to avoid radio resource wastage.*

*Proposal 1: RAN2 to consider such Band conflict scenarios for MUSIM to arrive at a graceful specification-based solution intended to mitigate such conflicts.*

*Proposal 2: Clarify in LTE and RRC specifications for Release-17 that the existing RRC Processing Delay requirements is applicable only for UE operating in Single-SIM mode and is NOT applicable for RRC procedures for UE’s operating in MUSIM mode of operation.*

*Proposal 3: RAN2 to further study the RRC Processing Delay Requirements for MUSIM UEs based on the solutions agreed for the other MUSIM WI objective (Paging Collision, Network Switching, Busy Indication etc.)*

*Proposal 4: RAN2 to consider the problem statements for MUSIM UEs related to caller ID identification and optimal signalling to ensure faster RRC Connection Release with the intent to avoid radio resource wastage.*

* Focus on P1, P2-3 may be considered in 2Q (if there are technical problems critical to the WI) and P4 only considered if time allows

- QC wonders how we are going to specify this? Is this about how gaps are configured? Apple explains that this can happen if one SIM is using frequency that has conflict with another SIM. QC thinks this is a broader discussion, similar to IDC. Apple thinks with dual Rx/Tx there can be conflicts.

- Ericsson thinks this is in scope of Rel-18 and we can discuss it there. vivo and ZTE agrees. MTK also agrees.

* Noted

Web Conf (1st week Thursday) (2)

[R2-2202646](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202646.zip) MUSIM remaining issue on gap capability signalling Intel Corporation discussion Rel-17 LTE\_NR\_MUSIM-Core

*Observation #1: Considering the additional complexity, it is not necessary to support a mechanism for network to provide an alternative gap pattern different from the UE requested one in UAI.*

*Proposal #1: UE supported gap patterns for MUSIM is not signalled as part of the UE AS capability.*

*Proposal #2: Consider the above captured Intel view for the open issue 5-2.*

[R2-2202966](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202966.zip) Remaining issue on UE capabilities vivo discussion Rel-17 LTE\_NR\_MUSIM-Core

*(moved from 8.3.1)*

*Proposal 1: Paging cause capability is captured in TS 38.306 and TS 36.306 as an optional capability without UE radio access capability parameters.*

*Proposal 2: adopt the TPs in the appendix A.*

*Proposal 3: Introduce UE capabilities to report which MUSIM gap patterns the MUSIM supports in TS 38.306.*

*Proposal 4: adopt the TP in the appendix B.*

* Offline [233] (Huawei): MUSIM gap pattern capabilities and other capabilities.

[R2-2202700](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202700.zip) Remaining issues for MUSIM UE Capabilities Huawei, HiSilicon discussion Rel-17

[R2-2202752](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202752.zip) Discussion on MUSIM band conflict scenarios Nokia, Nokia Shanghai Bell discussion Rel-17

[R2-2202885](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202885.zip) Consideration on the MUSIM UE capability reporting ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2202893](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202893.zip) Consideration on the band collision issue ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2202936](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202936.zip) UE Capabilities for MUSIM Gap Pattern OPPO discussion Rel-17 LTE\_NR\_MUSIM-Core

[R2-2203435](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203435.zip) Remaining aspects on UE capabilities for Multi-USIM and other issues Ericsson discussion

Email discussion [233] (started after 1st week Thu)

* [AT117-e][233][MUSIM] MUSIM UE capabilities (Huawei)

Scope: Discuss MUSIM gap pattern capabilities and other capabilities. Provide updated capability descriptions (to be merged to the general capability CR).

Intended outcome: Discussion report in [R2-2203665](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203665.zip).

Deadline: Deadline 4

Web Conf (2nd week Wednesday) (1)

[R2-2203665](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203665.zip) Report of [AT117-e][233][MUSIM] MUSIM UE capabilities (Huawei) Huawei discussion Rel-17 LTE\_NR\_MUSIM-Core Late

## 8.8 RAN slicing

(NR\_Slice -Core; leading WG: RAN2; REL-17; WID: RP-212534)

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs). If a contribution does not provide TP, it may be deprioritized.

Contributions should focus on remaining open issues needed to close the WI from RAN2 perspective (e.g. as discussed in [203])

### 8.8.1 Organizational

Including LSs, any rapporteur inputs and results of the (informative) running CR email discussions [241]-[243]

Including rapporteur input on remaining open issues needed to close the WI.

Web Conf (1st week Friday) (1)

[R2-2202616](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202616.zip) List of open issues for RAN slicing WI CMCC discussion Rel-17 FS\_NR\_slice [R2-2201730](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2201730.zip)

* Most open issues discussed via email discussions during the meeting
* Can discuss whether we need to send LS to SA2 (under [242])

By Email [200] (1)

[R2-2203021](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203021.zip) Report of [Post116-e][243][Slicing] Running NR RRC CR for RAN slicing (Huawei) Huawei discussion Rel-17 NR\_slice-Core

*Proposal 1: legacy T320 timer is applied to slice specific frequency priority.*

*Proposal 2: The indication (i.e. whether slice override MCS, MPS or MPS override slice is common for all slice groups) is put under the IE BWP-UplinkCommon.*

* Noted (proposals discussed as part of [Pre117-e][240] and [AT117-e][242])

By Email [200] (2+1+2)

Outcome of [235]:

[R2-2203022](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203022.zip) NR RRC CR for RAN slicing Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2921 - B NR\_slice-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed
* Revised in [R2-2203784](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203784.zip)

Outcome of [236]:

[R2-2203069](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203069.zip) RAN enhancements in the support of slicing Nokia, Nokia Shanghai Bell CR Rel-17 38.300 16.8.0 0413 - B NR\_slice-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

Outcome of [237]:

[R2-2202443](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202443.zip) Introduction of RAN Slicing OPPO CR Rel-17 38.321 16.7.0 1190 - B NR\_slice-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed

Email discussion [241] (1st week Friday)

* [AT117-e][241][Slicing] Closing slice-specific reselection open issues (CMCC)

      Scope: Discuss and attempt to resolve remaining open issues for slice-specific cell reselection (as per previous open issue discussion). Can discuss further details of key aspects from [240] that require additional discussion.

Intended outcome: Discussion report in [R2-2203650](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203650.zip).

Deadline: Deadline 2

Web Conf (1st week Friday) (1)

[R2-2203650](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203650.zip) Report of [AT117-e][241][Slicing] Closing slice-specific reselection open issues (CMCC) CMCC discussion Rel-17 NR\_slice-Core Late

*Proposals for easy agreements:*

* 1: RAN2 confirm the working assumption on option A without formula.
* 2: The UE should determine the frequency priority order according to the following rules:

a) Considering the slice/slice group priority provided by NAS, the frequencies that support higher priority slice/slice group have higher slice based frequency priority than the frequencies that support lower priority slice/slice group;

b) Among the frequencies supporting a slice/slice group with the same priority, the UE should follow the slice specific frequency priority received in SIB or RRCRelease (if configured);

c) Among the frequencies supporting the same slice/slice group, the frequency not configured with slice specific reselection priority should be considered as lower priority than other frequencies configured with slice specific reselection priority;

d) The frequencies that support any slice/slice group have higher slice based frequency priority than the frequencies that support none of slice/slice group;

e) For the frequencies that do not support any slice/slice group, the UE should follow the legacy cell reselection priority received in SIB, FFS when only legacy priority received in RRCRelease;

- Xiaomi thinks frequency priorities can be ambiguous based on these.

- Intel is fine with these but points out that FFS on RRCRelease was not discussed yet.

- Nokia would like to clarify slice-specific priorities are only about those groups which have a priority at UE. CMCC agrees this was the intention.

- Lenovo wonders if in c, a frequency doesn't advertise any priority for as slice, is that the lowest priority for the UE? CMCC clarifies that a frequency without priorities will have lower priority than those that do indicate priority. Lenovo wonders if it still have higher priority than slices without slice support? BT wonders if there are two frequencies supporting slices but without priorities, how are they prioritized? CMCC thinks this can be left to UE implementation. Apple, Huawei, QC agree.

- Huawei wonders what the FFS means: Is it about UE receiving only legacy priorities in RRCRelease and slice-specific priorities in SIB? CMCC agrees this was the intent. In legacy the RRCRelease priorities override those from SIB.

* 5: RAN2 confirm that if the UE is configured with slice specific frequency priority via RRCRelease message, the UE shall ignore all the slice specific priorities provided in system information. FFS if we still apply the legacy cell reselection frequency priorities in SIB.

- LGE wonders if this means UE needs to merge the SIB and RRCRelease information. CMCC clarifies this was the intent.

- Apple thinks the last part was not fully discussed. Ericsson and Nokia agree this could be left to FFS and dealt in Stage-3. CMCC clarifies that legacy priorities are sorted as lower priorities.

* 6: The legacy procedure (i.e., UE first enters any cell selection state and performs cell selection) should be reused when the UE cannot find a suitable cell using any cell reselection priorities (including slice-based and legacy (non-slice based) priorities) if the UE is configured with slice based dedicated priority.
* 7: Inter-RAT frequencies are not configured with slice specific frequency priority, but inter-RAT frequencies can be considered using legacy cell reselection frequency priority after all NR frequencies that support any slice/slice group.
* 8: The slice specific cell reselection information provided by the network in SIB is slice group specific.
* 10: Reuse the legacy T320 timer for slice specific frequency priority in RRCRelease.
* 11: RAN sharing can be supported for slice based cell reselection and RACH by network implementation (e.g. dedicated priorities in RRCRelease). We don't define PLMN-specific reselection priorities or RACH configuration. FFS if we need something extra in RACH (may not be critical to WI completion).

- Intel clarifies there were two options: Either leave it to NW implementation and have PLMN-specific list. Nokia thinks this agreement means we don't have PLMN-specific frequency priorities. ZTE, LGE and OPPO agrees. Ericsson thinks we will have to discuss the combination of SIB and RRCRelease if we don't have PLMN-specific information. Nokia thinks this is quite new and currently RACH is per cell. We never indicate something per PLMN for RACH even in RAN sharing. Ericsson thinks UE needs to know if RACH configuration is valid in certain PLMN.

*Proposals needed to be discussed online:*

*Proposal 3: FFS a frequency can be sorted multiple times (7/18) or only once (2/18) or it is up to UE implementation (5/18).*

- Huawei supports multiple but is OK with UE implementation. Nokia thinks network should have control. Should be testable and ties in with UE measurements. MTK, LGE and Xiaomi are OK with UE implementation.

- QC thinks leaving it to UE implementation is OK and NW can still be in control similar to e.g. V2X. UE shouldn't be required to do measurements multiple times.

- Lenovo thinks this is important to decide. LGE agrees that IODT should be guaranteed.

- Ericsson thinks there is some freedom to UE implementation. We may not be able to fully specify everything. Samsung thinks the important thing is the rules and not how UE implements those.

* 3: FFS a frequency can be sorted multiple times (7/18) or only once (2/18) or it is up to UE implementation (5/18). Can discuss this further offline (244) (Lenovo) based on the consequences of each decision (including TPs).

*Proposal 4: FFS how to handle the frequency priority among the frequencies supporting the same slice/slice group with same frequency priority.*

*(7/19) Option 1: the frequency supporting maximum intended slices may be prioritized;*

*(13/19) Option 2: they are considered as equal priority;*

*(10/19) Option 3: up to UE implementation;*

* Discuss the TPs for each option in offline [244]

*Proposal 9: The slice group specific cell reselection information can be provided by the network in RRCRelease, FFS whether slice specific cell reselection information can be provided by the network in RRCRelease (Proponent: Opponent = 8:11).*

* 9: The slice group specific cell reselection information can be provided by the network in RRCRelease.

Email discussion [243]

* [AT117-e][243][Slicing] Updated CR for 38.304 (Ericsson)

      Scope: Updated 38.304 based on online agreements.

Intended outcome: Agreeable CR in [R2-2203781](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203781.zip).

Deadline: Deadline 5

[R2-2203781](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203781.zip) 38.304 CR for RAN slicing Ericsson CR Rel-17 38.304 16.7.0 0235 - B NR\_slice-Core

Email discussion [244]

* [AT117-e][244][Slicing] Frequency sorting and equal frequency priorities (Lenovo)

      Scope: Discuss how the frequency sorting and equal priority is handled and provide TPs for each alternative. Should discuss how each option works and provides consistent UE behaviour

Intended outcome: Discussion report in [R2-2203782](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203782.zip).

Deadline: Deadline 4

Web Conf (2nd week Thursday) (1)

[R2-2203782](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203782.zip) Report of [AT117-e][244][Slicing] Frequency sorting and equal frequency priorities (Lenovo) Lenovo discussion Rel-17 NR\_slice-Core Late

Email discussion [245]

* [AT117-e][245][Slicing] Updated CR for 38.331 (Huawei)

      Scope: Updated 38.331 and 36.331 based on online agreements. Can discuss also open issues related to RRC.

Intended outcome: Discussion report in [R2-2203783](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203783.zip). Agreeable RRC CR in [R2-2203784](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203784.zip).

Deadline: Deadline 5

Web Conf (2nd week Thursday) (1)

[R2-2203783](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203783.zip) Report of [AT117-e][245][Slicing] Updated CR for 38.331 (Huawei) Huawei, HiSilicon discussion Rel-17 NR\_slice-Core Late

[R2-2203784](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203784.zip) NR RRC CR for RAN slicing Huawei, HiSilicon CR Rel-17 38.331 16.7.0 2921 1 B NR\_slice-Core [R2-2203022](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203022.zip)

### 8.8.2 Cell reselection

This agenda item may use a summary document (decision to be made based on submitted tdocs)

Including discussion (with TPs) on how to realize the slice-specific reselection without using specific slice priority value formula when evaluating cell reselection

Including discussion on slice groups and details of how to handle (e.g. slice group mapping to RA, PCI list and/or TAC per slice, UE behaviour if gNB doesn't provide supported slice group info on the best ranked cell, handling of low priority slices, etc.)

Web Conf (2nd week Tuesday) (1+1)

[R2-2203933](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203933.zip) Reply LS on Slice list and priority information for cell reselection (S2-2201859; contact: ZTE) SA2 LS in Rel-17 To: RAN2, RAN3, CT1 Cc:SA, RAN

*SA2 would like to thank RAN2 for their reply on Slice list and priority information for cell reselection.*

*SA2 has discussed solutions, but SA2 could not reach a consensus on the topic.*

* Noted (will send reply from this meeting if possible, reply being discussed under [242]

[R2-2203785](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203785.zip) draft LS on slice group granularity OPPO LS out Rel-17 To: SA2 Cc:CT1, RAN3

* Post-meeting email discussion (OPPO) to send LS to SA2/CT1 based on online agreements.

Post-meeting email discussion [246] (1)

* [Post117-e][246][NR] LS on RAN2 agreements for RAN slicing (OPPO)

Scope: Provide reply LS to SA2 LS [R2-2203933](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203933.zip) (To: SA2, CT1) based on RAN2 agreements for RAN slicing in RAN2#117e.

Intended outcome: Approved LS in [R2-2203792](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203792.zip).

Deadline: Short

[R2-2203792](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203792.zip) LS on slice group granularity RAN2 LS out Rel-17 To: SA2, CT1 Cc: RAN3

* To be provided under post-meeting email discussion [246]

Summary document discussion [240] (1)

* [Pre117-e][240][Slicing] Summary of slice-specific cell reselection (CMCC)

Scope: Provide summary of Stage-3 aspects of MUSIM configuration according to open issue list.

Intended outcome: Summary document in [R2-2203509](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203509.zip).

Deadline: Deadline 0

Web Conf (1st week Friday) (1)

[R2-2203509](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203509.zip) [Pre117-e][240][Slicing] Summary of slice-specific cell reselection (CMCC) CMCC discussion Rel-17 NR\_slice-Core Late

Cat-A (potentially "easy" agreements)

* 15: PCI list per slice group per frequency can be provided in system information.

- Samsung thinks this should be per frequency. LGE agrees.

- Apple thinks for intra-freq, it was not clear before and thinks this is needed there too.

*Cat-b-Proposal 15.1: RAN2 discuss whether the PCI list indicates “cells not supporting the corresponding slice group” or “cells supporting the corresponding slice group”.*

- ZTE thinks this is allow-list. Lenovo thinks block-list is more efficient. Samsung thinks both could be possible.

* 15.1: Network can indicate whether the PCI list is block-list (“cells not supporting the corresponding slice group”) or allow-list (“cells supporting the corresponding slice group”).

Show of hands: allow-list vs. block-list vs. both

*15.1: The PCI list is block-list (“cells not supporting the corresponding slice group”)*

5: QC, Ericsson, LGE, Lenovo, OPPO, Kyocera

*15.1: The PCI list is allow-list (“cells supporting the corresponding slice group”).*

7: ZTE, Apple, Huawei, APT, Xiaomi, CATT, Intel

*15.1: Network can indicate whether the PCI list is block-list (“cells not supporting the corresponding slice group”) or allow-list (“cells supporting the corresponding slice group”).*

12: Nokia, Intel, CMCC, BT, NEC, SPRD, Sharp, TMO, Samsung, Lenovo, Apple, Softbank

Web Conf (2nd week Tuesday) (1)

*(9/9) Cat-a-Proposal 12: The slice specific cell reselection information provided by the network in SIB is slice group specific.*

*(6/6) Cat-a-Proposal 16: Reuse the legacy T320 timer for slice specific frequency priority in RRCRelease.*

*(15/16) Cat-a-Proposal 1: RAN2 confirm the working assumption on option A without formula.*

*Cat-a-Proposal 2: The UE should determine the slice specific frequency priority according to the following rules:*

*a) Considering the slice/slice group priority provided by NAS, the frequencies that support higher priority slice/slice group have higher slice based frequency priority than the frequencies that support lower priority slice/slice group;*

*b) Among the frequencies supporting a slice/slice group with the same priority, the UE should follow the slice specific frequency priority received in SIB or RRCRelease (if configured);*

*c) Among the frequencies supporting the same slice/slice group, the frequency not configured with slice specific reselection priority should be considered as lowest priority;*

*d) The frequencies that support any slice/slice group have higher slice based frequency priority than the frequencies that support none of slice/slice group;*

*e) For the frequencies that not support any slice/slice group, the UE should follow the legacy CellReselectionPriority received in SIB or RRCRelease;*

*Cat-b-Proposal 3: The following rules can be discussed online:*

*a) Whether a frequency can be sorted only one time or multiple times, in other words, whether a frequency can be checked only one time or multiple times in slice based cell reselection procedure;*

*b) How to handle the frequency priority among the frequencies supporting the same slice/slice group with same frequency priority;*

*Option 1: the frequency supporting maximum intended slices may be prioritized;*

*Option 2: they are considered as equal priority;*

*Option 3: up to UE implementation;*

*Cat-a-Proposal 6: RAN2 confirm the following understanding and close OI 3.3 (whether additional exit condition is needed for fallback to legacy cell reselection):*

*If all frequencies are considered in slice-based cell reselection, the fallback to legacy cell reselection will not happen, i.e., no additional exit condition to fallback to legacy cell reselection.*

*Cat-a-Proposal 7: RAN2 confirm the following understanding and close OI 3.4 (The next trigger of slice-based cell reselection after the UE fallbacks to legacy cell reselection):*

*If all frequencies are considered in slice-based cell reselection, this issue will not happen, i.e. it is natural for the UE to perform slice based cell reselection when triggering the next cell reselection.*

*Cat-a-Proposal 8.1: RAN2 confirm that if the UE is configured with slice specific frequency priority via RRCRelease message, the UE shall ignore all the slice specific priorities provided in system information.*

*Cat-a-Proposal 8.2: The legacy procedure (i.e., UE first enters any cell selection state and performs cell selection) should be reused when the UE cannot find a suitable cell if the UE is configured with slice based dedicated priority.*

*Cat-a-Proposal 9: Inter-RAT frequencies are not configured with slice specific frequency priority, but inter-RAT frequencies can be considered in slice based cell reselection based on legacy frequency priority after all frequencies that support any slice/slice group.*

Cat-B (needs online discussion)

*(3/4) Cat-b-Proposal 18: RAN sharing can be supported for slice based cell reselection and RACH, but the complexity should be kept low. Details are FFS.*

*Cat-b-Proposal 4: RAN2 discuss how the UE realises the above rules, e.g. generate a candidate frequency pool/list or it is up to UE implementation.*

*Cat-b-Proposal 5: RAN2 discuss the UE behaviour if the prioritised slice is not supported in the highest ranked cell:*

*- (3/7) Option 1: No change to the frequency priority and the UE will continue to check the next frequency;*

*- (3/7) Option 2: Recalculate the frequency priority;*

*- (2/7) Option 3: Use the legacy frequency priority;*

*- (1/7) Option 4: the UE should camp on this cell because it means that the highest ranked cell belongs to the frequencies without any slice info;*

*Cat-b-Proposal 13: The slice specific cell reselection information provided by the network in RRCRelease is slice group specific (6/9) or it can be either slice specific or slice group specific (3/9).*

*Cat-b-Proposal 15.1: RAN2 discuss whether the PCI list indicates “cells not supporting the corresponding slice group” or “cells supporting the corresponding slice group”.*

Cat-C (contentious, difficult to progress, only treated if time allows)

*Cat-c-Proposal 10: FFS a slice is associated to multiple slice groups.*

*Cat-c-Proposal 11: FFS to confirm the granularities of the slice groups for cell reselection are per TA.*

*Cat-c-Proposal 14: Postpone the discussion on whether the slice group is mapped by the mapping relationship in current RA or not.*

*Cat-c-Proposal 17: FFS in which SIB to broadcast slice info for the purpose of inter-frequency reselection, SIB4 or new SIB. This issue will be addressed during stage 3 ASN.1 phase.*

[R2-2202187](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202187.zip) Remaining issues on slice specific cell reselection Qualcomm Incorporated discussion NR\_slice-Core

[R2-2203266](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203266.zip) Realising Prioritisation rules for option A without Formula Samsung R&D Institute UK, Qualcomm Incorporated discussion

[R2-2203271](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203271.zip) Text Proposal for 38.304 on cell reselection for RAN slicing Samsung R&D Institute UK, Qualcomm Incorporated, OPPO discussion

[R2-2202350](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202350.zip) Considerations on the slice group in slice based cell reselection Beijing Xiaomi Software Tech discussion

[R2-2202416](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202416.zip) Discussion on the details of slice based cell reselection procedure Spreadtrum Communications discussion Rel-17

[R2-2202417](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202417.zip) Discussion on remaining issues for slice based cell reselection Spreadtrum Communications discussion Rel-17

[R2-2202439](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202439.zip) Remaining issues on slice-specific cell reselection OPPO discussion Rel-17 NR\_slice-Core

[R2-2202514](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202514.zip) Text Proposal for slice based cell re-selection Apple, BT plc discussion Rel-17 NR\_slice-Core

[R2-2202617](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202617.zip) Discussion on open issues for slice based cell reselection CMCC discussion Rel-17 FS\_NR\_slice

[R2-2202640](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202640.zip) Further considerations of slice based cell reselection without formula Intel Corporation discussion Rel-17 NR\_slice-Core

[R2-2202690](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202690.zip) The remaining issues on slice based cell reselection CATT discussion Rel-17 NR\_slice-Core

[R2-2203018](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203018.zip) Discussion on slice based Cell reselection under network control Huawei, HiSilicon discussion Rel-17 NR\_slice-Core

[R2-2203070](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203070.zip) Considerations on slice groups Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_slice-Core

[R2-2203071](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203071.zip) Slice-based cell reselection proposal Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_slice-Core

[R2-2203086](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203086.zip) Discussion on slice based cell reselection LG Electronics UK discussion Rel-17

[R2-2203145](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203145.zip) Discussion on slice based cell re-selection China Telecommunications discussion Rel-17 NR\_slice-Core Late

[R2-2203150](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203150.zip) Discussion on slice based cell re-selection China Telecommunications discussion Rel-17 NR\_slice-Core

[R2-2203179](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203179.zip) Remaining open points on RAN slicing Samsung R&D Institute UK discussion

[R2-2203183](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203183.zip) Way forward and TP for RAN Slicing solution Lenovo, Motorola Mobility discussion NR\_slice-Core

[R2-2203234](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203234.zip) Cell reselection relevant open issues (38.304) NEC Telecom MODUS Ltd. discussion

[R2-2203235](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203235.zip) Cell reselection relevant open issues (RRC) NEC Telecom MODUS Ltd. discussion

[R2-2203387](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203387.zip) Leftover issues in slice based cell reselection ZTE corporation,Sanechips discussion Rel-17 NR\_slice-Core

[R2-2203411](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203411.zip) RAN Slicing enhancements in shared RAN Ericsson discussion Rel-17 NR\_slice-Core

[R2-2203412](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203412.zip) On open issues for cell re-selection Ericsson discussion Rel-17 NR\_slice-Core

[R2-2203452](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203452.zip) Slice information provided by RRCRelease SHARP Corporation discussion Rel-17 [R2-2201200](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2201200.zip) Late

### 8.8.3 RACH

Including discussion based on remaining open issues for RAN slicing-specific RACH prioritization that are not discussed as part of the common RACH prioritization agenda (if any)

NOTE: The common discussion on Rel-17 RACH partitioning will be discussed under AI 8.18. This AI will only consider RACH partitioning from slicing perspective.

Common RACH indication & partitioning agreements from this meeting (1st week Monday):

***Agreements***

*1 Use the current base line without the FeatureCombination in RACHcommonConfig*

*2 Mapping between 2-step RA preambles and PUSCH resources for MsgA to be included in a Running CR update (i.e. per feature combination PUSCH resources for msgA are allowed)*

*3 As CE is agreed as part of feature combination, the inclusion in updated Running CR is kept with Editor’s note/FFS removed*

*4 Do not update Maximum number of additional RACH configurations in Running CR. FFS on what the max is based on possible combinations*

*5 The current draft signalling for Slicing is kept for now, pending Slicing progress on details. As a baseline per slicing agreements we consider at least the following two parameters for feature combination: backoffindication and powerramping steps. Further parameters can be considered based on slicing progress.*

*6 As a baseline continue using optional “feature\_extension” to FeatureCombinationIndication.*

*7 No changes to the current RO to SSB mapping principle in Running CR. FFS if some adaptations may be needed for feature specific.*

*8 As a baseline - a priority is configurable per feature. FFS on details*

*If several partitions are available for more than one feature, the UE selects only between available partition(s) with the highest feature priority. Details FFS.*

*9 FFS Include mapping of RACH resources to additional search space acc. to agreements in Running CR.*

***Agreements***

*1 Carrier selection happens before RACH partition is selected*

*2 Carrier selection threshold is common to all BWPs (same as legacy)*

Common RACH indication & partitioning agreements from this meeting (2nd week Monday):

***Agreements:***

*1 As a general rule, parameters in the common RACH configuration can be different for different preamble partitions (i.e. can be configured as feature combination specific regardless of the features included within a feature combination).*

*2a The following parameters can be configured per preamble partition:*

*• SSB selection related parameters, i.e., rsrp-ThresholdSSB, msgA-RSRP-ThresholdSSB*

*• Preamble group related parameters, i.e., msg3-DeltaPreamble/msgA-DeltaPreamble, messagePowerOffsetGroupB for 2-step RA-SDT and 4-step RA-SDT, ra-Msg3SizeGroupA/ra-MsgA-SizeGroupA, numberOfRA-PreamblesGroupA*

*• msgA-CB-PreamblesPerSSB-PerSharedRO (already captured in the RRC CR as nrofPreamblesForThisPartition-r17, naming can be discussed further)*

*• RA Prioritization parameters, i.e. powerRampingStepHighPriority, scalingFactorBI. FFS If RA prioritization is configured but no slice specific but no RACH partitioning config, we would use the common RA config*

*3a For 4-step RA:*

*• If a parameter is not provided for a specific RACH partition (feature combination), then the parameter from RACH-ConfigCommon of the corresponding RACH configuration should be used for this feature combination.*

*• FFS how it is captured in CR – Need S parameter - If a parameter is not configured in RACH-ConfigCommon in AdditionalRACH-ConfigCommon, then the value from RACH-ConfigCommon of the legacy RACH in the BWP is used*

*3b For 2-step RA:*

*• If a parameter is not provided for a specific RACH partition (feature combination), it will follow the RACH-ConfigCommon of the same feature combination (if configured).*

*• If there is no RACH-ConfigCommon for the same feature combination, then the parameter from RACH-ConfigCommonTwoStepRA of the corresponding RACH configuration should be used for this feature combination.*

*• FFS how it is captured in CR – Need S parameter - If a parameter is not configured in RACH-ConfigCommonTwoStepRA in AdditionalRACH-ConfigCommon, then the value from RACH-ConfigCommon of the legacy RACH in the BWP is used.*

*4 Parameters not agreed to be configurable per RACH partition are configurable per RACH configuration.*

*5 Additional generic RSRP thresholds determining the range of RSRP values to decide which partition to use are not supported or included in CR.*

*6 The maximum number of additional RACH configurations in RRC signaling is [MaxnrofSliceGroups] \* 8 or [MaxnrofSliceGroups] \* 8 – 1, which can be up to the CR rapporteur to decide.*

*7 The following signaling is introduced in UplinkCommon or in SIB1:*

*featurePriorities-17 SEQUENCE {*

*redCapPriority-r17 FeaturePriority-r17 OPTIONAL,*

*slicingPriority-r17 FeaturePriority-r17 OPTIONAL,*

*ce-Priority-r17 FeaturePriority-r17 OPTIONAL,*

*sdt-Priority-r17 FeaturePriority-r17 OPTIONAL,*

*...*

*}*

*FeaturePriority-r17 ::= INTEGER (0..7)*

*8 The TP for Random Access resources selection based on feature prioritization as proposed above is taken as a baseline into the MAC CR for RA partitioning.*

*9 FFS whether rsrp-ThresholdSSB-SUL can be configured per RACH partition or not (to be decided based on the conclusion for the overall RACH procedure).*

*10 Power control related parameters (i.e., preambleReceivedTargetPower/msgA-PreambleReceivedTargetPower, powerRampingStep/msgA-PreamblePowerRampingStep) can be configured per RACH configuration.*

*11 If needed, we can continue discussion during CR implementation, capture limitations about which parameters can be specifically configured depending on the feature combination corresponding to the RACH partition, e.g. in the field description as follows: “this field can only be configured if featureCombination indicates SDT/Redcap/Slice”.*

*12 As baseline, we clarify in specifications that the same priority cannot be assigned to more than one feature and if there is a RACH partition including a certain feature, then priority for this feature is always signalled.*

Email discussion [242] (1st Week Friday)

* [AT117-e][242][Slicing] Slice-specific RACH prioritization (OPPO)

Scope: Discuss RAN slicing-specific RACH prioritization aspects from selected contributions indicated in the minutes.

Intended outcome: 1st phase discussion report in [R2-2203636](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203636.zip). 2nd phase discussion report in [R2-2203787](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203787.zip)

Deadline: Deadline 2 (1st phase) / Deadline 3 (2nd phase)

Web Conf (2nd week Tuesday) (1)

[R2-2203636](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203636.zip) Report of [AT117-e][242][Slicing] Slice-specific RACH prioritization (OPPO) OPPO discussion Rel-17 NR\_slice-Core Late

* Revised in [R2-2203787](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203787.zip) (as part of 2nd phase discussion)

[R2-2203787](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203787.zip) Updated Report of [AT117-e][242][Slicing] Slice-specific RACH prioritization (OPPO) OPPO discussion Rel-17 NR\_slice-Core Late

Agreeable proposals:

* 1. Not support the slice-based dedicated RACH resources and RACH prioritization parameters in the dedicated signalling.
* 2. RAN2 confirms that RA prioritization and RA partitioning work independently. Can discuss in the next meeting if this requires some configuration changes.
* 3. Deprioritize the RRC re-establishment triggered RACH in slice-based RACH design.
* 4. Reuse the same rule as the legacy in preamble group selection for slice-based RACH, i.e. if the preamble group has been selected during the RA procedure, the UE shall select the same preamble group for each RACH attempt (can be revisited in the common session if necessary).
* 6. Not to introduce the slice-specific max number of MsgA preamble transmissions for the slice-based RA fallback.
* 7. In one BWP, one slice group links to only one slice-specific RACH configuration.
* 11. The indication (i.e. whether slice override MCS, MPS or MPS override slice is common for all slice groups) is put under the IE BWP-UplinkCommon.

- LGE is fine with P2 but would like to note that this needs to be discussed in common RACH session. Thinks FeatureCombination configuration may be problematic. wonders in which CR these are handled? Chair indicates the RACH part will be in common RACH CR. QC agrees.

- Xiaomi thinks RA prioritization is only needed in legacy RA partition.

*Phase1*

*Proposal 8. (15/15) The UE AS should be aware of the selected slice group ID (s), no matter received from the UE NAS directly or derived based on the information provided by the UE NAS indirectly.*

*Phase2*

*Proposal 8. (14/15) The UE AS should be aware of the selected slice group ID (s), no matter received from the UE NAS directly or derived based on the information provided by the UE NAS indirectly. The implicit derivation means the UE AS determines the slice group for RACH based on the slice and the slice-slice group mapping from the UE NAS.*

- Nokia thinks P8 intent is fine but thinks it just means UE is aware of slice group IDs. But this doesn't imply mapping at AS level. Thinks UE either gets slice group ID from NAS, or the AS does some mapping from NAS information to obtain the slice group ID. OPPO agrees that this is up to UE implementation.

* 8. The UE AS is aware of the slice group ID (s) based on the information provided by the UE NAS.
* 9. It is left to the network implementation on how to signal the order of slice-based RA-prioritization parameters.

**Chair proposal for clarification on P9:**

*Proposal 9bis. It is up to the network implementation on how to signal the order of slice-based RA-prioritization parameters.*

* 10. The maximum number of RA-prioritization configurations (i.e. maxSliceInfo-r17) is decided in the next meeting.

Proposals need further discussion:

* 5-1. In the case that slice-specific RA fallback is from 2-step slice-specific RA to 4-step slice-specific RA and 2-step slice-specific RA is configured with preambles group B, RA preambles group B should be configured for 4-step slice-specific RA (can be revisited in the common session if this is incompatible with the common RACH decisions).
* 5-2. In the case that slice-specific RA fallback is from 2-step slice-specific RA to 4-step common RA and 2-step slice-specific RA is configured with preambles group B, RA preambles group B should be configured for 4-step common RA (can be revisited in the common session if this is incompatible with the common RACH decisions).

***<Phase 2>***

*Agreeable proposals:*

*Proposal 12. (8/8) RAN2 confirms that the granularities of the slice groups for cell reselection are per TA.*

- MTK still prefers per PLMN.

- Ericsson wonders how the "homogeneous per RA" is treated with per TA? OPPO clarifies that this is something that can be indicated to SA2. Intel agrees the mapping is homogeneous per RA. Nokia wonders if the homogeneity agreement is needed anywhere in RAN2 specifications? Intel thinks the solution only works if the mapping is homogeneous per RA. If some cells support different slices, UE cannot know which slices can be used with NAS registration update. Nokia thinks UE now gets the PCI list per frequency, but doesn't check any TA/RA codes. Verizon agrees and thinks we shouldn't state anything to SA2 on RA. LGE agrees.

- Lenovo wonders if this means slice per slice group mapping is per TA? OPPO agrees this is the intent.

- Lenovo thinks we assumed UE gets a list of TA where the slices are provided. These are homogeneously available across the given TAs. Thinks that if we have per TA mapping, the same mapping has to be given to UE several times.

- Ericsson has sustained objection to having the mapping per TA.

* Working agreement: RAN2 assumes that the mapping of slice to the slice groups for cell reselection are per TA.
* Send LS to SA2 to indicate the RAN2 working agreement above.

- Ericsson thinks that when slice is associated with multiple groups, one group can be used for RACH and one for cell reselection. Nokia agrees and thinks having one-to-one mapping makes the RACH and reselection become tied together.

- LGE thinks it's simpler to have one-to-one configuration. OPPO thinks this UE needs to handle two slice groups with the same slice, which can cause problems. CMCC agrees. Apple thinks we would need to tell to CT1 and SA2 if we allow different configuration.

* 13. A slice is not associated with multiple slice groups for the same purpose. A slice can be associated with one slice group for RACH and one slice group for reselection.

*Proposal 13. (6/8) A slice is not associated with multiple slice groups.*

*Proposals need further discussion:*

*Proposal 14. FFS the granularity of the slice priority for cell reselection is per slice (1/7) or slice group(4/7) or left to the UE implementation(2/7).*

*Proposal 15. (6/8) For cell reselection, the UE is aware of the slice priority via NAS signalling(can be confirmed by SA2).*

*Proposal 16. (5/8) RAN2 discusses whether to send the LS to SA2. If RAN2 agrees to send the LS to SA2, the LS includes the conclusion on Proposal 8, 12, 13, 14,15, if achieved.*

By Email [242] (1)

*Support for RACH prioritization via dedicated signalling:*

[R2-2202618](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202618.zip) Discussion on open issues for slice based RACH configuration CMCC discussion Rel-17 FS\_NR\_slice

*Proposal 1: For OI 1.5, R17 will not support dedicated slice based RACH resources and RACH prioritization parameters in RRC signalling for CONNECTED mode.*

* Discuss P1 under [242]

By Email [242] (1)

*Confirming SI assumptions on whether RA prioritization and RA partitioning:*

[R2-2202188](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202188.zip) Remaining issues on slice specific RACH Qualcomm Incorporated discussion NR\_slice-Core

*Proposal 1: Do not introduce dedicated signaling for slice specific RACH prioritization*

*Proposal 2: RA prioritization and RA partitioning work independently*

* Discuss P2 under [242]

By Email [242] (1)

*RRC re-establishment and RACH prioritization:*

[R2-2202515](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202515.zip) Discussion on RACH in slicing Apple discussion Rel-17 NR\_slice-Core

*Proposal 1: RAN2 to confirm that the same slices should be supported on NUL and SUL in a cell.*

*Proposal 2: The slice specific config availability is performed before RA type selection based on RSRP threshold.*

*Proposal 3: RAN2 to discuss if RRC re-establishment triggered RACH should be considered in slice based RACH design.*

* Discuss P3 under [242]

By Email [242] (1)

[R2-2202440](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202440.zip) Remaining issues on slice-specific RACH OPPO discussion Rel-17 NR\_slice-Core

*Proposal 1 There is no need to indicate slice-specific RACH prioritization parameters in RRCRelease.*

*Proposal 2 RAN2 confirms that RA prioritization and RA partitioning shall work independently.*

*Proposal 3 In slice-specific RACH, RAN2 considers to reuse the same rule as the legacy in preamble group selection, i.e. if the preamble group has been selected during the RA procedure, the UE shall select the same preamble group for each RACH attempt.*

*Proposal 4 In the case that slice-specific RA fallback is enabled and 2-step slice-specific RA is configured with preambles group B, RA preambles group B should be configured for 4-step slice-specific RA or 4-step common RA.*

*Proposal 5 For the slice-specific RA fallback, RAN2 considers to introduce the slice-specific max number of MsgA preamble transmissions.*

*Proposal 6 In slice-specific RACH, one slice group links to only one slice-specific RACH configuration.*

* Discuss P3-6 under [242]

By Email [242] (1)

[R2-2203019](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203019.zip) Discussion on slice based RACH configuration Huawei, HiSilicon discussion Rel-17 NR\_slice-Core

*Proposal 1: It is proposed that RA Prioritization and RA Partitioning should configure/work simultaneously for a specific slice group.*

*Proposal 2: It is proposed that the UE AS should be aware of the selected slice group ID (s), no matter received from the UE NAS directly or deriving based on the information provided by the UE NAS indirectly.*

*Proposal 3: It is proposed that the MAC layer performs RACH selection based on the selected slice group ID.*

* Discuss P2 under [242]

By Email [242] (1)

[R2-2203401](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203401.zip) Detailed RRC signalling for RACH prioritization configuration Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_slice-Core

*Proposal 1: sliceGroupID in RA-prioritization configuration is referring to a single slice group (sliceGroupID-r17 INTEGER (1..FFS). FFS refers to maximum number of slice group ids.*

*Proposal 2: RAN2 to discuss whether RA-prioritization parameters (scalingFactorBI and powerRampingStepHighPriority) are signalled according to a slice group priority.*

*Proposal 3: RA-prioritization supports at most 3 different configurations (i.e. maxSliceInfo-r17= 3)).*

* Discuss P2-3 under [242]

[R2-2202418](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202418.zip) Consideration on remaining issues for slice specific RACH Spreadtrum Communications discussion Rel-17

[R2-2202691](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202691.zip) The remaining issues on slice specific random access CATT discussion Rel-17 NR\_slice-Core

[R2-2203064](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203064.zip) Remaining issues on slice based RACH LG Electronics Inc. discussion Rel-17 NR\_slice-Core

[R2-2203388](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203388.zip) Further consideration on slice specific RACH ZTE corporation,Sanechips discussion Rel-17 NR\_slice-Core

### 8.8.4 UE capabilities

Including discussion on UE capabilities related to RAN2-defined features for RAN slicing. If changes are proposed against the baseline endorsed in previous meeting, the proposals should illustrate the differences to the baseline illustrated in [R2-2109627](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_116-e/Docs/R2-2109627.zip).

[R2-2202641](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202641.zip) UE capability for Slicing enhancement Intel Corporation discussion Rel-17 NR\_slice-Core

*Proposal#1: One optional UE capability signalling for UE to indicate whether slice based cell reselection in RRC\_IDLE and RRC INACTIVE based on both broadcast and dedicated signalling. i.e.*

*#1: UE indicates its support of slice based cell reselection in the UE capability signalling with the following TS38.306 description:*

*Definitions for parameters Per M FDD-TDD DIFF FR1-FR2 DIFF*

*sliceBasedCellReselection-r17*

*Indicates whether the UE supports slice based cell reselection in RRC \_IDLE and RRC INACTIVE based on both broadcast and dedicated signalling, as defined in TS 38.304 [21]. UE No No No*

*Proposal#2: Introduce 2 optional capabilities without signalling for the slice based random access below in Section 5.4:*

*Definitions for feature*

*Slice based RACH resource partitioning*

*It is optional for UE to support slice based RACH resource partitioning as specified in TS 38.321 [8].*

*Slice based RACH parameters prioritisation*

*It is optional for UE to support slice based RACH parameters prioritisation as specified in TS 38.321 [8].*

[R2-2202189](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202189.zip) Further discussion on UE capablity related to RAN slicing enhancement Qualcomm Incorporated discussion NR\_slice-Core

[R2-2202210](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202210.zip) Considerations on UE capability for RAN slicing Beijing Xiaomi Software Tech discussion Rel-17

[R2-2202441](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202441.zip) Remaining issues on UE capability for Slicing OPPO discussion Rel-17 NR\_slice-Core

[R2-2202619](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202619.zip) Discussion on UE capability for RAN slicing enhancement CMCC discussion Rel-17 FS\_NR\_slice

[R2-2202692](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202692.zip) Analysis on UE capability for RAN slicing enhancement CATT discussion Rel-17 NR\_slice-Core

[R2-2203020](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203020.zip) Discussion on UE capabilities for RAN slicing Huawei, HiSilicon discussion Rel-17 NR\_slice-Core

[R2-2203413](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203413.zip) UE Capabilities for Slice-based Cell re-selection and RA Ericsson discussion Rel-17 NR\_slice-Core

## 8.20 Extending NR operation to 71GHz

(NR\_ext\_to\_71GHz-Core; leading WG: RAN1; REL-17; WID: RP-212637)

Time budget: 0.5

Tdoc Limitation: 2 tdocs

Contributions should illustrate the Stage-3 details of the proposals (e.g. in an Annex containing TP against the running CRs). If a contribution does not provide TP, it may be deprioritized.

Contributions should focus on remaining open issues needed to close the WI from RAN2 perspective (e.g. as discussed in [204])

### 8.20.1 Organizational

Including LSs, any rapporteur inputs and results of the (informative) running CR email discussions [218] and [219]

Including input running Stage-2 CR from the specification/WI rapporteur (which does not count against the Tdoc limits)

Including result of open issue email discussion [204].

Web Conf (1st week Wednesday) (1)

Outcome of open issue list [204]:

[R2-2202479](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202479.zip) [Post116bis-e][204][71 GHz] Open issues for 71 GHz (Qualcomm) Qualcomm Incorporated discussion Rel-17 NR\_ext\_to\_71GHz-Core

*Essential Issues (necessary for WI completion):*

*Issue A1: LBT mode signaling (differentiation between licensed and unlicensed w/o LBT)*

*Issue A2: New values for existing parameters due to new SCS (e.g. maxPUSCH-Duration, UAI parameters)*

*Issue A3: New RAN1 parameters after RAN1#107bis-e (RAN1 LS R2-202111)*

*Issue A4: Q value is limited to operation with shared spectrum channel access*

*Issue A5: Dependency between new and legacy power saving parameters in UAI*

*Issue A6: Whether define new value for maxSchedulingK0/2-SchedulingOffset*

*Issue A7: Whether to introduce new indicators in OtherConfig IE to configure the report of newly introduced power saving/overheating parameters for FR2-2*

*Issue A8: Whether to define new UE capability for overheatingAssistance-r17 /minSchedulingOffsetPreferenceFR2-2-r17*

*Issue B6: Secondary DRX for FR2-2 (clarify if additional spec change is needed)*

*Issue C1: Capture RAN feature lists for 71 Ghz (sent in RAN1 LS R2-202113) in 38.306/38.331.*

*Issue C3: FRx differentiation (including FR2-1 and FR2-2 differentiation) for UE capability*

*Issue D1: Interaction of FR2-2 with other Rel-17 features*

*Optional Issues:*

*Issue B1: Consistent LBT failure procedure (confirm no changes to MAC procedures)*

*Issue B2: LBT mode change (confirm no changes to MAC procedures)*

*Issue B3: New absolute periodicity and offset values for Configured Grant*

*Issue B4: New absolute periodicity and offset values for Scheduling Request*

*Issue B5: New DRX timer values*

*Issue B7: Specification of Contention Exempt Short Control Signaling rules applying to Msg1 and MsgA*

*Issue B8: Impacts on the guard symbols MAC CE (if FR2-2 is applicable to IAB)*

*Issue C2: UE capability for L2 buffer size*

* At least the following essential issues need to be solved for WI completion:

Issue A1: LBT mode signaling (differentiation between licensed and unlicensed w/o LBT)

Issue A2: New values for existing parameters due to new SCS (e.g. maxPUSCH-Duration, UAI parameters)

Issue A3: New RAN1 parameters after RAN1#107bis-e (RAN1 LS R2-202111)

Issue A4: Q value is limited to operation with shared spectrum channel access

Issue A5: Dependency between new and legacy power saving parameters in UAI

Issue A6: Whether define new value for maxSchedulingK0/2-SchedulingOffset

Issue A7: Whether to introduce new indicators in OtherConfig IE to configure the report of newly introduced power saving/overheating parameters for FR2-2

Issue A8: Whether to define new UE capability for overheatingAssistance-r17 /minSchedulingOffsetPreferenceFR2-2-r17

Issue B6: Secondary DRX for FR2-2 (clarify if additional spec change is needed)

Issue C1: Capture RAN feature lists for 71 Ghz (sent in RAN1 LS R2-202113) in 38.306/38.331.

Issue C3: FRx differentiation (including FR2-1 and FR2-2 differentiation) for UE capability

Issue D1: Interaction of FR2-2 with other Rel-17 features

* The following issues may be discussed if there is available time:

Issue B1: Consistent LBT failure procedure (confirm no changes to MAC procedures)

Issue B2: LBT mode change (confirm no changes to MAC procedures)

Issue B3: New absolute periodicity and offset values for Configured Grant

Issue B4: New absolute periodicity and offset values for Scheduling Request

Issue B5: New DRX timer values

Issue B7: Specification of Contention Exempt Short Control Signaling rules applying to Msg1 and MsgA

Issue B8: Impacts on the guard symbols MAC CE (if FR2-2 is applicable to IAB)

Issue C2: UE capability for L2 buffer size

- CATT thinks issue B7 might be important. Ozcan thinks impact may not be there. ZTE agrees.

* On B7, companies can bring contributions next time if problems are found.

Web Conf (1st week Wednesday) (1)

Stage-2 input from rapporteur:

[R2-2202688](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202688.zip) Introduction of Extending NR operation to 71GHz Qualcomm Incorporated CR Rel-17 38.300 16.8.0 0408 - B NR\_ext\_to\_71GHz-Core

- Ericsson thinks PRACH length could be mentioned in the CR.

* Can still consider Stage-2 corrections later on if needed
* Use latest CR template (v12.2)
* Correct WI code from NG\_RAN\_PRN\_enh-Core to NR\_ext\_to\_71GHz-Core
* With these changes, the CR will be endorsed in [R2-2203652](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203652.zip)

[R2-2203652](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203652.zip) Introduction of Extending NR operation to 71GHz Qualcomm Incorporated CR Rel-17 38.300 16.8.0 0408 1 B NR\_ext\_to\_71GHz-Core

* Endorsed as Stage-2 CR for 71 GHz WI

By Email [200] (1+2)

Outcome of [218] (RRC):

[R2-2202435](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202435.zip) Running RRC CR for 71 GHz Ericsson CR Rel-17 38.331 16.7.0 2891 - B NR\_ext\_to\_71GHz-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed
* Revised in [R2-2203644](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203644.zip) (as part of [211])

Outcome of [219] (UE capabilities):

[R2-2202659](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202659.zip) CR to 38306 on UE capabilities for 71G Intel Corporation draftCR Rel-17 38.306 16.7.0 B NR\_ext\_to\_71GHz-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed
* Revised in [R2-2203646](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203646.zip) (as real CR with CR number)

[R2-2202660](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202660.zip) CR to 38331 on UE capabilities for 71G Intel Corporation draftCR Rel-17 38.331 16.7.0 B NR\_ext\_to\_71GHz-Core

* Used as baseline for next version of CR, in case there are issues with CR changes since last endorsed CR those can still be discussed
* Revised in [R2-2203647](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203647.zip) (as real CR with CR number)

Email discussions (started after 1st week Wed online)

* [AT117-e][211][71 GHz] RRC CR finalization for 71 GHz (Ericsson)

Scope: Attempt to finalize the RRC CR for 71 GHz based on online decisions. Can discuss RRC parameter value ranges for 71 GHz.

Intended outcome: Agreeable RRC CR in [R2-2203644](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203644.zip).

Deadline: Deadline 5

* [AT117-e][212][71 GHz] MAC CR finalization for 71 GHz (LGE)

Scope: Create MAC CR for 71 GHz based on online decisions.

Intended outcome: Agreeable MAC CR in [R2-2203645](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203645.zip).

Deadline: Deadline 5

[R2-2203645](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203645.zip) CR to 38306 on UE capabilities for 71G LGE CR Rel-17 38.321 16.7.0 1219 - B NR\_ext\_to\_71GHz-Core

[R2-2203786](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203786.zip) Report of [AT117-e][211][71 GHz] RRC CR finalization for 71 GHz (Ericsson) Ericsson discussion Rel-17 NR\_ext\_to\_71GHz-Core Late

### 8.20.2 General

Including discussion if additional differentiation between licensed operation and "no-LBT mode" is needed for any case

Including discussion on whether RAN2 should introduce new absolute values for CG/SR/DRX parameters

Web Conf (1st week Wednesday) (3)

[R2-2202920](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202920.zip) Remaining issues on UAI enhancement Samsung discussion Rel-17 NR\_ext\_to\_71GHz-Core

* 1: RAN2 to reuse the existing prohibit timer (i.e., overheatingIndicationProhibitTimer) also for newly introduced OverheatingAssistance-r17.
* 2: RAN2 to reuse the existing prohibit timers (i.e., maxBW-PreferenceProhibitTimer-r16, maxMIMO-LayerPreferenceProhibitTimer-r16, minSchedulingOffsetPreferenceProhibitTimer-r16) for newly introduced power saving parameters (i.e., maxBW-PreferenceFR2-2-r17, maxMIMO-LayerPreferenceFR2-2-r17, minSchedulingOffsetPreferenceProhibitTimer-r16)
* 3: RAN2 to introduce new indicators (e.g., 1bit indicator for each new parameter in UAI) in OtherConfig IE as in the below TP. If it is agreed, the TP in Annex A.1 can be considered as baseline.

The related new parameters in UAI: maxBW-PreferenceFR2-2-r17, maxMIMO-LayerPreferenceFR2-2-r17, minSchedulingOffsetPreferenceFR2-2-r17

- Apple and LGE supports P3. Nokia thinks the overheating change could impact the reporting and field description. That could also impact LTE specification. Samsung thinks min scheduling offset only uses legacy SCSs.

*Proposal 4: RAN2 to introduce new UE capability parameters (e.g., overheatingInd-r17 and minSchedulingOffsetPreference-r17) to indicate whether the UE can provide the corresponding parameters for FR2-2 or not. If it is agreed, the TP in Annex A.2 can be considered as baseline.*

- Huawei thinks overheating capability in P4 is not needed. It's per UE currently. Nokia agrees.

[R2-2203419](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203419.zip) Remaining UP issues for extending to 71GHz ZTE Corporation, Sanechips discussion

* 1: From the MAC layer perspective, there is no need for additional differentiation for licensed operation and “no-LBT” mode of shared spectrum.

- Lenovo, LGE, vivo and Nokia agrees. Ericsson agrees with MAC. But PHY may still need differentiation. Could capture "up to physcial layer to handle the differentiation."

- QC wonders if CG-UCI being optional doesn't require something? ZTE clarifies this was only MAC analysis. There could be something to discuss from configuration perspective.

*Proposal 2: Some smaller values may be introduced for the existing UE capability scaling factor to lessen high L2 buffer requirement.*

* Only P1 to be discussed, P2 discussed jointly with [R2-2202710](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202710.zip) (if not handled in UE capability discussion)

[R2-2202710](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202710.zip) Discussion about RAN2 impacts of Ext 52-71GHz Huawei, HiSilicon discussion Rel-17 NR\_ext\_to\_71GHz-Core

*Proposal 1: Add the value ‘sl240’ to msgB-ResponseWindow-r17.*

*Proposal 2: RAN2 to support any integer slots CG periodicity up to 640ms in FR2-2.*

*Proposal 3: In addition to any integer slots CG periodicity up to 640ms, no other CG periodicities are supported in FR2-2.*

*Proposal 4: TimeDomainOffset for CG configuration can take a value from INTEGER (0..40959).*

*Proposal 5: RAN2 to confirm to scale the existing periodicityAndOffset for SR configuration, as already captured in the RRC running CR for 71GHz.*

*Proposal 6: No new capability is needed for UE indicating L2 buffer size limitation.*

*Proposal 7: RAN2 to introduce new values for DRX parameters shall be introduced, for example, up to 224 for drx-HARQ-RTT-TimerDL and drx-HARQ-RTT-TimerUL.*

* At least P6 discussed, others may be discussed if time allows

[R2-2202434](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202434.zip) Remaining RRC aspects Ericsson discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2202433](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202433.zip) Remaining protocol aspects Ericsson discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2203079](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203079.zip) Discussion on necessary update of Rel-16 LBT procedures CATT discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2203418](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203418.zip) CP open issues for RRC CR Extending NR operation to 71GHz ZTE Corporation, Sanechips discussion

### 8.20.3 UE capabilities

This agenda item may use a summary document.

Including discussion on interaction of FR2-2 UE capabilities with upper layer features introduced by other Rel-17 WIs

Including discussion on UE capabilities for FR2-2 based on decision to go with per-band signalling

Summary document discussion [210] (1)

* [Pre117-e][210][71 GHz] Summary of UE capabilities for 71 GHz (Intel)

Scope: summarize contributions to 71 GHz UE capabilities and provide proposals for discussion.

Intended outcome: Summary document in [R2-2203711](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203711.zip).

Deadline: Deadline 0

Web Conf (1st week Wednesday) (1)

[R2-2203711](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203711.zip) [Pre117-e][210][71 GHz] Summary of UE capabilities for 71 GHz (Intel) Intel discussion Rel-17 NR\_ext\_to\_71GHz-Core Late

*Issue C2: UE capability for L2 buffer size*

* 2-1: To accommodate the UE total L2 buffer size requirement, it is left to the UE implementation to limit the maximum UL/DL data rate of the FR2-2 CC. No new UE capability is introduced for UE indicating L2 buffer size limitation for this release

- Samsung has concern with the existing scaling factor. This limits UE BB processing capabilities, so there is possibility for confusion. QC agrees and thinks it's better if we have new signalling. Apple thinks the proposal reflects the consensus. Intel clarifies that this proposal means it's up to UE to choose appropriate scalign factor among existing values.

*Issue C3: FRx differentiation (including FR2-1 and FR2-2 differentiation)*

* 3-0: All new Rel-17 UE capabilities that requires FRx differentiation, including between FR2-1 and FR2-2, will have to be per-band signalling (as already agreed in the main session)
* 3-1: For existing UE capabilities that are with consistency check (’ UE shall set the capability value consistently for all FDD-FR1 bands, all TDD-FR1 bands and all TDD-FR2 bands respectively.’) in the field description, update it to:

"UE shall set the capability value consistently for all FDD-FR1 bands, all TDD-FR1 bands, all TDD-FR2-1 bands and all TDD-FR2-2 bands respectively."

* 3-2: [To agree] For new Rel-17 UE capabilities that are per UE capability signalling with FRx diff and/or xDD diff, include the following to the field description:
* UE shall set the capability value consistently for all FDD-FR1 bands, all TDD-FR1 bands, all TDD-FR2-1 bands and all TDD-FR2-2 bands respectively.
* 3-3: Clarify in Annex B of TS 38.306 that for a UE capability which are not differentiated between FR2-1 and FR2-2, ‘FR2 TDD’ in Table B-1 includes both FR2-1 TDD and FR2-2 TDD.
* 3-4: Clarify in Annex B of TS 38.306 that for a UE capability which are differentiated between FR2-1 and FR2-2, ‘FR2 TDD’ in Table B-1 only means ‘FR2-1 TDD’.

3-1

- Ericsson thinks that anything that applies to FR2 would also apply to both FR2-1 and FR2-2? Huawei thinks 3-1 only applies for FR2-1 and FR2-2 differentiation. Intel clarifies the intent was to only clarify the consistency since the signalling is per-band.

*Intra-NR handover to/from FR2-2*

* 4.1-1: RAN2 to clarify the intra-NR handover capabilities in FR2-2 should be defined with separate IOT capability bit, even when the corresponding FR2-2 band is supported.

- Huawei agrees with proposal. Samsung thinks we can keep it mandatory and not introduce new bit. The existing bit can be used to indicate the IOT availability. Intel clarifies the current bit is per UE with FRx differentiation. We haven't introduced new bits yet. Apple agrees with Intel but thinks the capability could be optional.

*EUTRAN to NR handover capabilities*

* 4.2-1: RAN2 to clarify that ‘eutra-5GC-HO-ToNR-TDD-FR2-r15’ and ‘eutra-EPC-HO-ToNR-TDD-FR2-r15’ in LTE indicates whether the UE supports handover from E-UTRA/5GC and E-UTRA/EPC to NR TDD FR2-1, respectively.
* 4.2-2: RAN2 to introduce new UE capabilities ‘eutra-5GC-HO-ToNR-TDD-FR2-r17’ and ‘eutra-EPC-HO-ToNR-TDD-FR2-r17’ in LTE to indicate whether the UE supports handover from E-UTRA/5GC and E-UTRA/EPC to NR TDD FR2-2, respectively.
* 4.2-3: RAN2 to clarify that ‘ims-VoiceOverNR-FR2-r15’ in LTE indicates whether the UE supports IMS voice over NR FR2-1, and RAN2 introduce a new UE capability ‘ims-VoiceOverNR-FR2-r17’ in LTE to indicate whether the UE supports IMS voice over NR FR2-2.
* 4.2-4: RAN2 to clarify ‘ce-EUTRA-5GC-HO-ToNR-TDD-FR2-r16’ in LTE indicates whether the UE supports handover from E-UTRA/5GC in coverage enhancement mode A or B to NR TDD FR2-1, and RAN2 add ‘ce-EUTRA-5GC-HO-ToNR-TDD-FR2-r17’ in LTE to indicate whether the UE supports handover from E-UTRA/5GC in coverage enhancement mode A or B to NR TDD FR2-2.
* Can discuss exact field names in CR discussion

*Applicability of FR2-2 to other Rel-17 features*

* 4.3-1: From RAN2 point of view, FR2-2 are assumed to be also applicable to other Rel-17 features, unless otherwise specified (e.g. if the feature is only for FR1). No impact to the specification expected for cases where we don't specify otherwise.
* Companies can bring up cases (e.g. for some WIs where FR2-2 has not been discussed at all) where differentiation is needed by contributions to May meeting.

- Huawei thinks the status is not clear for all WIs. So we may have to doublecheck. QC thinks finding all combinations takes a long time. We can still correct these if required. Apple agrees.

[R2-2202661](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202661.zip) Remaining UE capability issues on NR operation for upto 71GHz Intel Corporation discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2202711](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202711.zip) Discussion about UE capabilities on Ext 52-71GHz Huawei, HiSilicon discussion Rel-17 NR\_ext\_to\_71GHz-Core

[R2-2202921](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202921.zip) Discussion on L2 buffer size Samsung discussion Rel-17 NR\_ext\_to\_71GHz-Core

Email discussions (started after 1st week Wed online)

* [AT117-e][213][71 GHz] NR UE capability CR finalization for 71 GHz (Intel)

Scope: Attempt to finalize the NR UE capability CRs for 71 GHz based on online decisions.

Intended outcome: Agreeable CRs in [R2-2203646](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203646.zip) (38.306) and [R2-2203647](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203647.zip) (38.331).

Deadline: Deadline 5

[R2-2203646](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203646.zip) CR to 38306 on UE capabilities for 71G Intel Corporation CR Rel-17 38.306 16.7.0 0697 - B NR\_ext\_to\_71GHz-Core [R2-2202659](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202659.zip)

[R2-2203647](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203647.zip) CR to 38331 on UE capabilities for 71G Intel Corporation CR Rel-17 38.331 16.7.0 2966 - B NR\_ext\_to\_71GHz-Core [R2-2202660](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202660.zip)

* [AT117-e][214][71 GHz] LTE UE capability CR finalization for 71 GHz (Apple)

Scope: Attempt to finalize the LTE UE capability CRs for 71 GHz based on online decisions.

Intended outcome: Agreeable CRs for 36.306 and 36.331.

Deadline: Deadline 5

# 9 Rel-17 EUTRA Work Items

## 9.0 EUTRA Rel-17 General

Tdoc Limitation: 0 tdocs

No documents should be submitted to 9.0. Please submit to 9.0.x

### 9.0.1 L1 parameters and cross-WI RRC aspects

This agenda item may use a summary document (decision made based on submitted contributions).

Including RRC details on L1 parameters for Rel-17 WIs that require discussion in the common session or are related to multiple Rel-17 WIs.

### 9.0.2 Feature Lists and UE capabilities

This agenda item may use a summary document (decision made based on submitted contributions).

Including UE capability details based on RAN1/4 inputs that are not covered by other WIs or require discussion in the common session due to affecting multiple Rel-17 LTE WIs.

## 9.3 EUTRA R17 Other

Time budget: 0 TU

Tdoc Limitation: No limitation but new topics may be deprioritized depending on available time.

This agenda item may use a summary document (decision made based on submitted contributions).

Including RRC CRs based on L1 parameters received from RAN1 for all Rel-17 LTE WIs not covered by other AIs

Including final CRs for LTE TEI17 proposals that have been agreed in principle earlier.

By Email [204] (2)

[R2-2202237](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202237.zip) Introduction of new bands and bandwidth allocation for LTE-based 5G terrestrial broadcast Qualcomm Incorporated CR Rel-17 36.331 16.7.0 4750 1 B LTE\_terr\_bcast\_bands\_part1-Core [R2-2200209](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2200209.zip)

* Revised in [R2-2203633](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203633.zip)

[R2-2202238](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202238.zip) Introduction of new bands and bandwidth allocation for LTE-based 5G terrestrial broadcast Qualcomm Incorporated CR Rel-17 36.306 16.7.0 1836 - B LTE\_terr\_bcast\_bands\_part1-Core

* Revised in [R2-2203634](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203634.zip)
* [AT117-e][204][LTE] CRs LTE-based 5G terrestrial broadcast (Qualcomm)

Scope: Review CRs for LTE-based 5G terrestrial broadcast. In case critical issues are found, those can be raised also online prior to the discussion deadline.

Intended outcome: Agreeable CRs in [R2-2203633](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203633.zip) (36.331) and [R2-2203634](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203634.zip) (36.306) (to be submitted to RANP approval).

Deadline: Deadline 4

Web Conf (2nd Week Thursday) (1)

[R2-2203790](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203790.zip) Report of [AT117-e][204][LTE] CRs LTE-based 5G terrestrial broadcast (Qualcomm) Qualcomm Inc. (rapporteur) report Rel-17 LTE\_terr\_bcast\_bands\_part1-Core

[R2-2203633](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203633.zip) Introduction of new bands and bandwidth allocation for LTE-based 5G terrestrial broadcast Qualcomm Incorporated CR Rel-17 36.331 16.7.0 4750 2 B LTE\_terr\_bcast\_bands\_part1-Core [R2-2202237](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202237.zip)

[R2-2203634](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203634.zip) Introduction of new bands and bandwidth allocation for LTE-based 5G terrestrial broadcast Qualcomm Incorporated CR Rel-17 36.306 16.7.0 1836 1 B LTE\_terr\_bcast\_bands\_part1-Core [R2-2202238](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202238.zip)

By Email [205] (4)

[R2-2202212](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202212.zip) Introduction of event-based trigger for LTE MDT logging [LTE-Event-MDT] KDDI Corporation, CMCC, Telecom Italia, Samsung, Ericsson, China Unicom, Huawei, HiSilicon, Qualcomm Inc. CR Rel-17 37.320 16.7.0 0113 - B TEI17

* Agreed

[R2-2202213](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202213.zip) Introduction of event-based trigger for LTE MDT logging [LTE-Event-MDT] KDDI Corporation, CMCC, Telecom Italia, Samsung, Ericsson, China Unicom, Huawei, HiSilicon, Qualcomm Inc. CR Rel-17 36.331 16.7.0 4752 - B TEI17

* Agreed

[R2-2202841](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202841.zip) Introduction of event-based trigger for LTE MDT logging [LTE-Event-MDT] Huawei, HiSilicon, Qualcomm Inc., KDDI Corporation CR Rel-17 36.304 16.6.0 0834 1 B TEI17 R2-2110643

* Agreed

[R2-2202842](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202842.zip) Introduction of event-based trigger for LTE MDT logging [LTE-Event-MDT] Huawei, HiSilicon, Qualcomm Inc., KDDI Corporation CR Rel-17 36.306 16.7.0 1830 1 B TEI17 R2-2110644

* Agreed
* [AT117-e][205][LTE] TEI17 CRs for event-triggered LTE MDT (KDDI)

Scope: Collect comments (if any) to the updated (previously in-principle agreed) TEI17 LTE CRs marked for this discussion.

Intended outcome: Agreeable CRs.

Deadline: Deadline 1

By Email [206] (2)

[R2-2203161](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203161.zip) Addition of NR-U RSSI/CO measurement UE capability Apple, xiaomi, vivo, Lenovo, Motorola Mobility, Ericsson, Qualcomm Incorporated CR Rel-17 36.331 16.7.0 4729 3 F NR\_unlic-Core, TEI17 R2-2111319

* No TEI17 identifier needed (since this is related to Rel-16 WI and is not really TEI17 CR)
* [206] Revised in [R2-2203648](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203648.zip)

[R2-2203648](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203648.zip) Addition of NR-U RSSI/CO measurement UE capability Apple, xiaomi, vivo, Lenovo, Motorola Mobility, Ericsson, Qualcomm Incorporated CR Rel-17 36.331 16.7.0 4729 4 F NR\_unlic-Core, TEI17 [R2-2203161](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203161.zip)

* [206] Agreed

[R2-2203162](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203162.zip) Addition of NR-U RSSI/CO measurement UE capability Apple, xiaomi, vivo CR Rel-17 36.306 16.7.0 1827 3 F NR\_unlic-Core, TEI17 R2-2111320

* No TEI17 identifier needed (since this is related to Rel-16 WI and is not really TEI17 CR)
* [206] Revised in [R2-2203649](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203649.zip)

[R2-2203649](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203649.zip) Addition of NR-U RSSI/CO measurement UE capability Apple, xiaomi, vivo, Lenovo, Motorola Mobility, Ericsson, Qualcomm Incorporated CR Rel-17 36.306 16.7.0 1827 4 F NR\_unlic-Core, TEI17 [R2-2203162](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203162.zip)

* [206] Agreed
* [AT117-e][206][LTE] TEI17 CRs for NR-U RSSI/CO measurement UE capability (Apple)

Scope: Collect comments (if any) to the updated (previously in-principle agreed) TEI17 LTE CRs marked for this discussion.

Intended outcome: Agreeable CRs.

Deadline: Deadline 1

By Email [207] (3)

[R2-2202290](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202290.zip) On introducing height information reporting in MDT reports [LTE-Height-MDT] KDDI Corporation, Ericsson CR Rel-17 36.331 16.7.0 4756 - B TEI17 [R2-2200368](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2200368.zip)

* [207] Revised in [R2-2203666](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203666.zip)

[R2-2203666](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203666.zip) On introducing height information reporting in MDT reports [LTE-Height-MDT] KDDI Corporation, Ericsson CR Rel-17 36.331 16.7.0 4756 1 B TEI17 [R2-2202290](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202290.zip)

[R2-2202291](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202291.zip) On introducing height information reporting in MDT reports [LTE-Height-MDT] KDDI Corporation, Ericsson CR Rel-17 37.320 16.7.0 0114 - B TEI17 [R2-2200370](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2200370.zip)

* [207] Revised in [R2-2203667](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203667.zip)

[R2-2203667](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203667.zip) On introducing height information reporting in MDT reports [LTE-Height-MDT] KDDI Corporation, Ericsson CR Rel-17 37.320 16.7.0 0114 1 B TEI17 [R2-2202291](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202291.zip)

[R2-2202292](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202292.zip) On introducing height information reporting in MDT reports [LTE-Height-MDT] KDDI Corporation, Ericsson CR Rel-17 36.306 16.7.0 1838 - B TEI17 [R2-2200371](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2200371.zip)

* [207] Revised in [R2-2203668](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203668.zip)

[R2-2203668](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203668.zip) On introducing height information reporting in MDT reports [LTE-Height-MDT] KDDI Corporation, Ericsson CR Rel-17 36.306 16.7.0 1838 1 B TEI17 [R2-2202292](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202292.zip)

* [AT117-e][207][LTE] TEI17 UE height reporting (Ericsson)

Scope: 1st phase: Collect comments UE height reporting CRs marked for this discussion. 2nd phase: Provide agreeable CRs based on online agreements (based on QC inputs in [R2-2203653](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203653.zip), [R2-2203654](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203654.zip) and [R2-2203655](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203655.zip)).

Intended outcome: Agreeable CRs in [R2-2203666](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203666.zip) (36.331), [R2-2203667](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203667.zip) (37.320) and [R2-2203668](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203668.zip) (36.306).

Deadline: Deadline 1 / Deadline 4

- Ericsson clarifies that only 5 companies have participated and there is one controversial issue to handle.

[R2-2203653](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203653.zip) Suggested revisions for [R2-2202290](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202290.zip) On introducing height information reporting in MDT reports [LTE-Height-MDT] Qualcomm draftCR Rel-17 36.331 16.7.0 TEI17

* Noted (Used as reference in 2nd phase of offline discussion [207])

[R2-2203654](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203654.zip) Suggested revisions for [R2-2202291](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202291.zip) On introducing height information reporting in MDT reports [LTE-Height-MDT] Qualcomm draftCR Rel-17 37.320 16.7.0 TEI17

* Noted (Used as reference in 2nd phase of offline discussion [207])

[R2-2203655](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203655.zip) Suggested revisions for [R2-2202292](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202292.zip) On introducing height information reporting in MDT reports [LTE-Height-MDT] Qualcomm draftCR Rel-17 36.306 16.7.0 TEI17

* Noted (Used as reference in 2nd phase of offline discussion [207])

Web Conf (1st Week Thursday) (1)

[R2-2203767](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203767.zip) Report of [AT117-e][207][LTE] TEI17 UE height reporting (Ericsson) Ericsson report Rel-17 TEI17 late

*Proposal 1 RAN2 to agree one of the following methods for configuring barometric sensor reporting request:*

*a. Option-A (as in NR): (otherConfig or LoggedMeasurementConfiguration)  sensor-NameConfig  measUncomBarPre*

*b. Option-B: (otherConfig or LoggedMeasurementConfiguration)  measUncomBarPre*

- Ericsson clarifies that with option A, RAN3 changes are minimal.

- QC indicates co-signing companies agreed to option A but all others thought option B is simpler. Option 6 is also related.

* 1 For configuring barometric sensor reporting request, we follow Option-B (barometric report) based on draft CRs provided during the discussion (by QC in [R2-2203653](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203653.zip), [R2-2203654](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203654.zip) and [R2-2203655](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203655.zip))
* 6 Define separate UE capabilities for uncompensated barometric pressure reporting for logged MDT and immediate MDT.
* Continue discussion under [207] to finalize the CRs. Deadline 4.

*Proposal 2 (easy agreement) The following essential but editorial changes are agreed and will be implemented in the running CR (only some of the changes are necessary if option-B is agreed in Proposal-1):*

*a. Removal of comma after OPTIONAL in ReprotConfigEUTRA (Correction#2)*

*b. Suffix of “measUncomBarPre“ should be changed to “-r17” (Part of Correction#3)*

*c. Removal of comma after OPTIONAL in otherConfig. (Correction#4)*

*d. The word ’measurement’ is added in the description of barometerMeasReport (Correction#5)*

*e. The IE of sensor-NameConfig-r17 needs to be imported in EUTRA-UE-Variables instead of the corresponding field (Correction#6)*

*Proposal 3 (easy agreement) If option-A is agreed for proposal-1, then the Need Code of sensor-NameConfig-r17 in LoggedMeasurementConfiguration-v17xy-IEs is changed from Need OR to Need ON.*

*Proposal 4 (easy agreement) If option-A is agreed for proposal-1, then the Need Code of measUncomBarPre in Sensor-NameConfig IE would be Need OR.*

*Proposal 5 (easy agreement) The term ‘measurement’ is added in the description of barometerMeasReport is the TS 36.306 CR.*

*Proposal 7 (easy agreement) If option-B is agreed, then the CR to TS 37.320 is updated accordingly.*

Withdrawn:

[R2-2202503](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202503.zip) Addition of NR-U RSSI/CO measurement UE capability (TS36.331) Apple, xiaomi, vivo, Lenovo, Motorola Mobility, Ericsson, Qualcomm Incorporated CR Rel-17 36.331 16.7.0 4761 - F NR\_unlic-Core, TEI17 Withdrawn

[R2-2202504](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202504.zip) Addition of NR-U RSSI/CO measurement UE capability (TS36.306) Apple, xiaomi, vivo, Lenovo, Motorola Mobility, Ericsson, Qualcomm Incorporated CR Rel-17 36.306 16.7.0 1840 - F NR\_unlic-Core, TEI17 Withdrawn

## 9.4 User Plane Integrity Protection support for EPC connected architectures

(UPIP\_SEC\_LTE-RAN-Core; leading WG: RAN3; REL-17; WID: RP‑213669)

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

Including discussion on SA3 LS [R2-2200153](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2200153.zip)

Including configuration and capability aspects of allowing full rate UPIP for EN-DC UEs connected to EPC

By Email [200] (2)

[R2-2202145](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202145.zip) Reply LS on LTE User Plane Integrity Protection (R3-221473; contact: Vodafone) RAN3 LS in Rel-17 To:SA3, SA2 Cc:CT4, CT1, RAN2

*(moved from 8.24.3)*

* [200] RAN2 in CC, no actions, reply LS to previous SA3 LS discussed separately
* [200] Noted

[R2-2203728](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203728.zip) Reply LS on LTE User Plane Integrity Protection (R3-221473; contact: Huawei) SA2 LS in Rel-17 To: RAN3, SA3 Cc:CT4, CT1, RAN2 Late

* [200] Noted (RAN2 in CC with no actions)

[R2-2203755](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203755.zip) Reply LS on LTE User Plane Integrity Protection (S3-220464; contact: Ericsson) SA2 LS in Rel-17 To: RAN3, SA2 Cc:CT4, CT1, RAN2 Late

* [200] Noted (RAN2 in CC with no actions)

By Email [203] (2)

[R2-2202722](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202722.zip) Discussion on LTE User Plane Integrity Protection (SA3 LS) Huawei, HiSilicon discussion Rel-17 UPIP\_SEC\_LTE

*Observation: The question in LS S3-214462 is in the scope of the new Rel-17 WI: UPIP\_EN-DC\_UE.*

*Proposal 1: UPIP for the EPC connected architectures using NR PDCP is configured in following way:*

*‐ LTE algorithm code point is configured in SMC as legacy LTE UE, which is used to derive KUPint.*

*‐ NR algorithm code point indicated by integrityProtAlgorithm included in RadioBearerConfig is used to configure the UP IP algorithm applied by NR PDCP to perform integrity protection.*

*‐ The integrityProtection indicated in pdcp-Config is used to activated/deactivated the UP IP, which can be changed only by DRB release and add.*

*Proposal 2: Include the RAN2 agreements on UP IP algorithm configuration in reply LS to SA3.*

[R2-2203369](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203369.zip) draft Reply LS on LTE User Plane Integrity Protection Vodafone LS out Rel-17 To:SA3 Cc:RAN3, SA2

By Email [203] (5)

[R2-2202717](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202717.zip) Introducing support of UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone, Ericsson CR Rel-17 36.331 16.7.0 4763 - B UPIP\_SEC\_LTE

[R2-2202718](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202718.zip) Introducing support of UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone, Ericsson CR Rel-17 38.331 16.7.0 2904 - B UPIP\_SEC\_LTE

[R2-2202719](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202719.zip) Introducing support of UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone, Ericsson CR Rel-17 36.300 16.7.0 1353 - B UPIP\_SEC\_LTE

[R2-2202720](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202720.zip) Introducing support of UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone, Ericsson CR Rel-17 37.340 16.8.0 0294 - B UPIP\_SEC\_LTE

[R2-2202721](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202721.zip) Introducing support of UP IP for EPC connected architectures using NR PDCP Huawei, HiSilicon, Vodafone, Ericsson CR Rel-17 38.323 16.6.0 0085 - B UPIP\_SEC\_LTE

Email discussion [203] (1st Week Thursday)

* [AT117-e][203][UPIP] LTE UPIP configuration and capabilities (Vodafone)

Scope: 1st phase: Discuss what is needed to finalize the WI and identify any open issues that require online discussion. 2nd phase: Provided updated CRs based on online agreements. Can discuss whether/how it should be possible to allow release of UPIP at handover (to legacy eNB), and how the UPINt key derivation works in handover and whether there should be something said about that in RRC.

Intended outcome: First phase discussion report in [R2-2203632](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203632.zip). Revised CRs provided in second phase.

Deadline: Deadline 1 (first phase) / Deadline 4 (second phase)

Web Conf (1st Week Thursday) (1)

[R2-2203632](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203632.zip) Report of [AT117-e][203][UPIP] LTE UPIP configuration and capabilities (Vodafone) Vodafone discussion Rel-17 UPIP\_SEC\_LTE-Core Late

* 1: (Aligned with text in the RAN WID), no company thinks that TS 36.306 needs to be changed for this WID (i.e. no new LTE UE capabilities defined in RAN2 specifications).

- Intel thinks we could say "in RAN2 specifications" for UE capability definition.

- QC thinks we don't add any new RRC-indicated capabilities.

* 2: We reply to the SA3 LS (S3-214462/[R2-2200153](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2200153.zip)) using [R2-2203369](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203369.zip) as the starting point for a second phase of discussion.

- QC thinks that SMC is only used for configuring UPIP but not activating it. Vodafone agrees this is how SA3 specifications work and also how the RAN2 CRs were written.

* Offline [208] (Vodafone): Provide reply LS to SA3 based on [R2-2203369](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203369.zip) and this discussion. Deadline 5.
* 3: Companies agreed that (for RAN 2) only TSs 36.331, 38.331, 36.300, 37.340 and 38.323 are impacted by this WID.

- QC thinks we don't need to mention the CRs in this agreement.

* 4: Detailed editing of the CRs in [R2-2202717](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202717.zip), 2718, 2719, 2720 and 2721 should continue in a second phase of discussion.

- Intel thinks that the NR model has been followed where UPIP is activated per DRB. But in NR, we only allowed change of configuration at DRB setup. But in LTE there can be HO to eNB not supporting the feature. So maybe we don't need the restriction here and can allow the change during handover. Vodafone thinks this was mentioned in RAN3 discussion. Can consider it in CR discussion. QC thinks release and add can be sufficient. Huawei thinks that eNB has to use full configuration since it doesn't comprehend the UPIP configuration anyway.

- Intel wonders how the UPInt key derivation works at handover? That was not covered. Vodafone thinks this is in SA3. Intel is not sure it's there already? Huawei thinks this needs to be covered and we can check it in CR details.

- QC wonders what the "release of UPIP" works at handover? thinks NW would not move the UE to eNB that doesn't support UPIP. Intel clarifies that DRB has a flag that prevents this. So all we need to consider if whether we change the ASN.1 need code. QC wonders if this could lead to key mismatch?

* Can discuss in the second phase whether/how it should be possible to allow release of UPIP at handover (to legacy eNB).
* Can discuss in the second phase how the UPINt key derivation works in handover and whether there should be something said about that in RRC.
* [203] will continue in 2nd phase to cover CR finalization (Deadline 4)
* 5: the following 3 LSs that were copied to RAN 2 can be Noted:

a) LS from RAN 3 to SA2 and SA3 in [R2-2202145](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202145.zip) / R3-221473;

b) LS reply from SA2 to RAN 3 and SA3 in [R2-2203728](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203728.zip) / S2-2201518; and

c) LS reply from SA3 to RAN 3 and SA2 in [R2-2203755](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203755.zip) / S3-220464.

[R2-2203765](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203765.zip)

[R2-2203765](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203765.zip) Updated Report of [AT117-e][203][UPIP] LTE UPIP configuration and capabilities (Vodafone) Vodafone discussion Rel-17 UPIP\_SEC\_LTE-Core [R2-2203632](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203632.zip) Late

Email discussion [208]

* [AT117-e][208][UPIP] Reply LS to SA3 on LTE UPIP (Vodafone)

Scope: Provide reply LS to SA3 based on [R2-2203369](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203369.zip) based on online agreements.

Intended outcome: Approved LS in [R2-2203663](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203663.zip).

Deadline: Deadline 5

By Email [208]

[R2-2203663](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203663.zip) Reply LS on LTE User Plane Integrity Protection RAN2 LS out Rel-17 To:SA3 Cc:RAN3, SA2

* [208] Expected to be agreed over email

## 9.5 NR and EUTRA Inclusive language

Time budget: N/A

RAN coordinator for inclusive language is Gino Masini (Ericsson).

CRs were endorsed/agreed-in-principle at R2#112-e. Final approval of CRs is expected in RAN#95e, so affected RAN2 specifications rapporteurs are requested to submit the endorsed CRs (updated to latest TS versions) for approval in this meeting.

* [AT117-e][201][IncLang] Inclusive language CR review (Nokia)

Scope: Review CRs for inclusive language provided to this meeting.

Intended outcome: Agreed CRs for inclusive language.

Deadline: Deadline 5

[R2-2203789](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203789.zip) Report of [AT117-e][201][IncLang] Inclusive language CR review (Nokia) Nokia discussion Rel-17 TEI17 Late

36.300

[R2-2203270](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203270.zip) Inclusive Language Review for TS 36.300 Nokia (rapporteur) CR Rel-17 36.300 16.7.0 1333 2 D TEI17 R2-2101989

* [201] Revised in [R2-2203788](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203788.zip)

[R2-2203788](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203788.zip) Inclusive Language Review for TS 36.300 Nokia (rapporteur) CR Rel-17 36.300 16.7.0 1333 3 D TEI17 [R2-2203270](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203270.zip)

* [201] Expected to be agreed over email (after potential revisions)

36.304

[R2-2203228](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203228.zip) Inclusive language in 36.304 Nokia, Nokia Shanghai Bell CR Rel-17 36.304 16.6.0 0822 2 D TEI17 R2-2101990 Late

* [201] Revised title to "inclusive language review in TS36.304"
* [201] Revised in [R2-2203791](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203791.zip)

[R2-2203791](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203791.zip) Inclusive Language Review for TS 36.304 Nokia, Nokia Shanghai Bell CR Rel-17 36.304 16.6.0 0822 3 D TEI17 [R2-2203228](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203228.zip) Late

* Expected to be agreed over email (after potential revisions)

36.306

[R2-2202227](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202227.zip) Inclusive Language Review for TS 36.306 Motorola Mobility (Rapporteur) CR Rel-17 36.306 16.7.0 1835 - D TEI17

* [201] Expected to be agreed over email (after potential revisions)

36.331

[R2-2202934](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202934.zip) Inclusive language in TS 36.331 Samsung (Rapporteur) CR Rel-17 36.331 16.7.0 4600 1 D TEI17 R2-2101988

* [201] Revised in [R2-2203793](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203793.zip)

[R2-2203793](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203793.zip) Inclusive Language Review for TS 36.331 Samsung (Rapporteur) CR Rel-17 36.331 16.7.0 4600 2 D TEI17 [R2-2202934](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202934.zip)

* [201] Expected to be agreed over email (after potential revisions)

37.320

[R2-2203399](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203399.zip) Inclusive language in 37.320 Nokia (Rapporteur) CR Rel-17 37.320 16.7.0 0104 1 D TEI17 R2-2101991

* [201] Revised in [R2-2203939](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203939.zip)

[R2-2203939](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203939.zip) Inclusive Language Review for TS 37.320 Nokia (Rapporteur) CR Rel-17 37.320 16.7.0 0104 2 D TEI17 R2-2101991

* [201] Expected to be agreed over email (after potential revisions)

38.300

[R2-2202217](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202217.zip) Inclusive Language Review for TS 38.300 Nokia (Rapporteur) CR Rel-17 38.300 16.8.0 0401 - D TEI17

* [201] Revised in [R2-2203938](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203938.zip)

[R2-2203938](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203938.zip) Inclusive Language Review for TS 38.300 Nokia (Rapporteur) CR Rel-17 38.300 16.8.0 0401 1 D TEI17 [R2-2202217](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202217.zip)

* [201] Expected to be agreed over email (after potential revisions)

38.304

[R2-2202687](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202687.zip) Inclusive language in TS 38.304 Qualcomm Incorporated (Rapporteur) CR Rel-16 38.304 16.7.0 0204 1 D TEI17 R2-2102295

* [201] Revised in [R2-2203794](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203794.zip)

[R2-2203794](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203794.zip) Inclusive Language Review for TS 38.304 Qualcomm Incorporated (Rapporteur) CR Rel-16 38.304 16.7.0 0204 2 D TEI17 [R2-2202687](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202687.zip)

* [201] Expected to be agreed over email (after potential revisions)

38.306

[R2-2202666](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202666.zip) Inclusive Language Review for TS 38.306 Intel Corporation CR Rel-17 38.306 16.7.0 0686 - D TEI17

* [201] Expected to be agreed over email (after potential revisions)

38.331

[R2-2203406](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203406.zip) Inclusive language in TS 38.331 Ericsson CR Rel-17 38.331 16.7.0 2459 1 D TEI17 R2-2101987

* [201] Revised in [R2-2203795](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203795.zip)

[R2-2203795](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203795.zip) Inclusive Language Review for TS 38.331 Ericsson (Rapporteur) CR Rel-17 38.331 16.7.0 2459 2 D TEI17 [R2-2203406](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203406.zip)

* [201] Expected to be agreed over email (after potential revisions)

*Withdrawn*

[R2-2202933](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202933.zip) Inclusive language review for TS 36.331 Samsung CR Rel-17 36.331 16.7.0 4767 - D TEI17 Withdrawn

[R2-2203189](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203189.zip) Inclusive Language Review for TS36.304 Nokia, Nokia Shanghai Bell CR Rel-17 36.304 16.6.0 0841 - D TEI17 Withdrawn

# Summary

**Agreed documents ()**

*LTE legacy*

*LTE Rel-17*

[R2-2202212](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202212.zip) Introduction of event-based trigger for LTE MDT logging [LTE-Event-MDT] KDDI Corporation, CMCC, Telecom Italia, Samsung, Ericsson, China Unicom, Huawei, HiSilicon, Qualcomm Inc. CR Rel-17 37.320 16.7.0 0113 - B TEI17

[R2-2202213](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202213.zip) Introduction of event-based trigger for LTE MDT logging [LTE-Event-MDT] KDDI Corporation, CMCC, Telecom Italia, Samsung, Ericsson, China Unicom, Huawei, HiSilicon, Qualcomm Inc. CR Rel-17 36.331 16.7.0 4752 - B TEI17

[R2-2202841](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202841.zip) Introduction of event-based trigger for LTE MDT logging [LTE-Event-MDT] Huawei, HiSilicon, Qualcomm Inc., KDDI Corporation CR Rel-17 36.304 16.6.0 0834 1 B TEI17 R2-2110643

[R2-2202842](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202842.zip) Introduction of event-based trigger for LTE MDT logging [LTE-Event-MDT] Huawei, HiSilicon, Qualcomm Inc., KDDI Corporation CR Rel-17 36.306 16.7.0 1830 1 B TEI17 R2-2110644

[R2-2203648](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203648.zip) Addition of NR-U RSSI/CO measurement UE capability Apple, xiaomi, vivo, Lenovo, Motorola Mobility, Ericsson, Qualcomm Incorporated CR Rel-17 36.331 16.7.0 4729 4 F NR\_unlic-Core, TEI17 [R2-2203161](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203161.zip)

[R2-2203649](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203649.zip) Addition of NR-U RSSI/CO measurement UE capability Apple, xiaomi, vivo, Lenovo, Motorola Mobility, Ericsson, Qualcomm Incorporated CR Rel-17 36.306 16.7.0 1827 4 F NR\_unlic-Core, TEI17 [R2-2203162](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203162.zip)

*Rel-17 DCCA*

*Rel-17 MUSIM*

*Rel-17 RAN slicing*

*Rel-17 71 GHz*

**Endorsed documents ()**

*Rel-17 DCCA*

*Rel-17 MUSIM*

*Rel-17 RAN slicing*

*Rel-17 71 GHz*

**Approved LS out ()**

**Post-meeting email discussions (short) ()**

* [Post117-e][246][NR] LS on RAN2 agreements for RAN slicing (OPPO)

Scope: Provide reply LS to SA2 LS [R2-2203933](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203933.zip) (To: SA2, CT1) based on RAN2 agreements for RAN slicing in RAN2#117e.

Intended outcome: Approved LS in [R2-2203792](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203792.zip).

Deadline: Short

**Post-meeting email discussions (short, running CRs) ()**