# Guidelines for Rel-17 36.331 and 38331 ASN.1 review

## General

Please respect deadlines, see at the end of this document. Time is very tight.

We will use this FTP folder to store the review file in this review.

<https://www.3gpp.org/ftp/Email_Discussions/RAN2/%5BMisc%5D/ASN1%20review/Rel-17%202022-06%20Phase%201>

The review will be run by companies inserting their review comments directly into the TS3x.331 Review file.

We will also this time use Word Comments in the “balloon” format by use of a Word macro named “RILAddComment”. The macro creates a Comments with different fields to be filled in as follows:

**[RIL]**: Number allocated by the company, **one letter + 3 digits**, e.g “E123”.

If you have user name set to “Ericsson (Håkan)”, the macro will fill in “Exyz”, and you should add your number.

**[Status]**: ToDisc <only changed by the Rapporteur>

The macro sets the Status to ToDisc. The Status field will later be set to other values by the Rapporteur, to reflect the status of the RIL.

**[Delegate]**: This field is automatically filled in by the macro to the User setting. Shall be set to <Company name (Delegate name)> (to e.g. allow easy trace the responsible Delegate).

**[Class]**: Shall be set by the Delegate to value 1 or 2 (Class 0 issues are collected in separate file).

|  |  |
| --- | --- |
| Class 0: Expected correction has no functional impact | - Typo, minor wording improvement etc.  - ASN.1 field not following naming rules (e.g. incorrect suffix, capitalization, etc).Not collected as RIL in Review file, but in separate word document, see below. |
| Class 1: Expected correction has functional impact but does not affect successful RRC PDU decoding | - Incorrect/incomplete procedure textIncorrect/incomplete field description- Unsuitable need code (e.g. Need M should be replaced with Need R) |
| Class2: Expected correction affects successful RRC PDU decoding | - Change a field from optional to mandatory or vice versa- Change of the structure of an IE- Addition of extension marker within an IE |

**[TDoc]:** Add Tdoc number (or just “R2-22xxxxx” if no tdoc allocated) if the issue needs to be described and the solution is presented in separate Tdoc.

If you know already now that you will provide text proposal (tdoc with TP or CR) to resolve the issue, you can say this in **Description part**, and add R2-22xxxxx in the Tdoc field **.**

**[WI]:**

* **Try to always fill in this field!**
	+ One way to trace the related work item by identifying the related CR in the Draft version of the spec here: [https://www.3gpp.org/ftp/tsg\_ran/WG2\_RL2/Specifications/202203\_draft\_specs\_after\_RAN\_95/](https://apc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.3gpp.org%2Fftp%2Ftsg_ran%2FWG2_RL2%2FSpecifications%2F202203_draft_specs_after_RAN_95%2F&data=04%7C01%7Chchoi5%40LENOVO.COM%7C08102f4a2eca41dc802b08da17175102%7C5c7d0b28bdf8410caa934df372b16203%7C0%7C0%7C637847686528143334%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=lpMEOFTj02DhszU3d8XL58WMTVi8idK85txHRTTXqVY%3D&reserved=0)
* **Single WI code** for single-WI issue, see table below. Correction to be captured in WI-specific CR. Will typically not be handled in ASN.1 AdHoc meeting.
* **MULTI** for issue affecting multiple WIs.
	+ Indicate the concerned WIs in Description field, if applicable.
	+ Correction to be captured in general “Gen ASN1 CR” (or other standalone CR upon decision)
	+ Will typically be handled in the ASN.1 AdHoc meeting.
* **GEN** for ASN.1 general issue related to single WI or multiple WIs
	+ To be used for issues that need ASN.1 experts to conclude e.g. when
		- Guidelines are missing or cannot be applied
		- Existing solutions in RRC on similar issues cannot be re-used
		- Relates to future evolution of the specification
	+ Will typically be handled in the ASN AdHoc meeting.
	+ Will typically be handled in the ASN.1 AdHoc meeting.
	+ Correction to be captured in general “Gen ASN1 CR” (or other standalone CR upon decision), or WI-specific CR (if related to specific WI, and Rapporteur later modifies WI code from GEN to a WI-code).

**[Description]:** Describe the issue in one line, as a “title”.

**[Proposed Change]:** Describe the problem and solution.
Other company may add alternative solution (preceded by company identifier, i.e., [Ericsson]). Do not modify text entered by other companies.

**[Comments]:** Comments added by other companies (preceded by company identifier, i.e., [Ericsson]). Do not modify text entered by other companies.

**[Proposed Conclusion]:** We do not use this field for a “proposed conclusion”. Use this field to indicate the vX value of the new version of the ASN.1 review file that you will upload. This allows us all to detect recent updates to the review file easier.

**Guidelines on macros and commenting is provided in this document:**

ftp://ftp.3gpp.org/Email\_Discussions/RAN2/%5BMisc%5D/ASN1%20review/RIL-Macro%20and%20instructions.docx

**Check out/in ASN.1 Review file:**

* In order to avoid parallel editing of the ASN.1 Review file, you must
	+ **Send** a 'check out' email on RAN2 reflector before you start editing,
		- Use the following text verbatim in the Subject field of the email:

**[NR Rel-17] 36331 ASN1 Review Phase 1 - Check-out/in**

**[NR Rel-17] 38331 ASN1 Review Phase 1 - Check-out/in**

* + **Store** a check-out file in the FTP folder
		- Name the file vX-checkout.txt, where X is the highest version of the check-out file in the FTP folder + 1) e.g. “v01-checkout.txt” if the FTP folder already contains “v00-checkout.txt” as the most recent version.
		- Insert your name and email i.e. <Delegate name (Delegate email)>, as only content in the file.
* Save the ASN.1 review file locally (and step the version of the ASN.1 review file from v(x) to v(x+1)) e.g. 38331 Rel17 ASN1 review Ph1 v07 if there the most recent version of the ASN.1 review file in the FTP server is v06.
* Insert your RILs and comments into the ASN.1 review file.
	+ Indicate the v(x) in the field **[Proposed Conclusion]**, e.g.

**[****Proposed Conclusion]**: v07

* Store the updated ASN.1 Review file back to the FTP folder).
* After storing the updated ASN.1 Review file on the FTP folder:
	+ **Send** a “check in” email on RAN2 reflector and indicate the ASN.1 review file name you have checked-in in the body of the email.
		- Use the same text in the Subject field of the email:

**[NR Rel-17] 36331 ASN1 Review Phase 1 - Check-out/in
[NR Rel-17] 38331 ASN1 Review Phase 1 – Check-out/in**

* + - List the **added** and **commented** RILs in the body of the email
			* + Added RILs: Exx1, Exx2 etc
				+ Commented RILs: Yxx1, Zxx1 etc

**NOTE** For this process to work effectively we ask that you **do not have file checked out for more than 1 hour** (implying you must do the review work and prepare the RILs before checking out the CR for editing)

**For issues that need a separate Tdoc:**

* You can store a draft version of the tdoc in the 3GPP ftp folder.
* Create a folder in the ftp review folder named by the RIL issue (e.g. E123) and store a draft tdoc here.
* When submitting a tdoc related to a RIL, be sure to include the RIL number(s) in the tdoc title, e.g. “[E123] Feature X correction”

**Some general advices**

1. Ensure to have **Tracked changes “OFF”** when adding/modifying RILs in the ASN.1 Review file.
2. Before adding a new issue, please read the existing comments in that part of the spec to avoid creating a duplicate. You may respond to an existing comment in order to add your company view.
3. Each company is responsible to ensure that the issue number is unique within their company. Do not use the same RIL numer at multiple locations

**Class 0**

Class 0 issues shall be stored by the companies in the file **R2-20xxxxx NR Rel-17 ASN.1 Editorials vX** by following this procedure:

* + **Send** a 'check out' email RAN2 reflector before you start editing,
		- Use the following text in the Subject field of the:
			* **[NR Rel-17] 36331 Editorial - Check-out/in**
* **[NR Rel-17] 38331 Editorial - Check-out/in**
	+ **Store** a check-out file in the FTP folder
		- Name the file Editorial-vX-checkout.txt, i.e.. “Editorial-v01-checkout.txt”.
		- Insert your name and email i.e. <Delegate name (Delegate email)>, as only content in the file.
* Insert your Class0/Class1 comments into the file (guidelines are included in the file).
* Store the updated **R2-20xxxxx NR Rel-17 ASN.1 Editorials vX** file in the ftp folder(and step the v(x) to v(x+1) in the file name).
* After storing the file on the FTP folder:
	+ **Send** a “check in” mail on RAN2 reflector and indicate the file you checked in.
	+ Use the same text in the Subject field of the mail:
		- **[NR Rel-17] 36331 Editorial - Check-out/in**
		- **[NR Rel-17] 38331 Editorial - Check-out/in**

**Copy text from an entire bubble comment from one word document to another**

If you need to select/copy/paste text in a RIL Comment,  you maybe discovered already it is a bit tricky to select text in the macro-generated Comment-field.

You can use the method below to copy text from a an entire bubble comment from one word document to another.

1) **Be in draft-view** in the source document

2) **Locate and mark the comment’s anchor point** of the comment you want to copy. It is the little [letter+number} at the end of the range where you placed your comment in the document (e.g. [E1]). Only this “symbol” must be selected!

3) **Press Ctrl-C** to copy the comment

4) **Go to the target document** and be in draft view.

5) Place the cursor into the document but **do not make selection** (don’t highlight any charcters)

6) **Press Ctrl-V** to paste the comment in

# Company identifiers

The following 1-letter identifiers are “reserved” by companies since earlier reviews, e.g. to form the RIL issue number. Other companies wishing to participate in the review can send mail to hakan.l.palm@ericsson.com to reserve their letter.

|  |  |
| --- | --- |
| **ID** | **Companies** |
| A | Apple |
| B | Lenovo |
| C | CATT |
| D | DOCOMO |
| E | Ericsson |
| F | Fujitsu |
| G | Google |
| H | Huawei |
| I | Intel |
| J | Sharp |
| L | LGE |
| M | Mediatek |
| N | Nokia |
| O | OPPO |
| Q | QUALCOMM |
| R | Rapporteur |
| S | Samsung |
| T |  Microelectronics Technology Inc. |
| Z | ZTE |
| V | Vivo |
| X | Xiaomi |
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# WI identifiers

The following identifiers need to be used when linking a certain RIL to the WI that is addressed. If more than a WI is affected, please provide the list in the RIL template according to the following format: **[WI]**: WI1, WI2, etc.

**WI codes (NR)**

|  |  |  |  |
| --- | --- | --- | --- |
| **WI** | **Related WIs** | **WI CR** | **RAN2 Tdoc** |
| **MULTI** |  |  |  |
| **GEN** |  |  |  |
| **HSDN** | TEI17 | Introduction of mobility-state-based cell reselection for NR HSDN | [**R2-2202626**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202626.zip) |
| **UDC** | NR\_UDC-Core | Introduction of the support for UDC in NR | [**R2-2203108**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203108.zip) |
| **NPN** | NG\_RAN\_PRN\_enh-Core | Introducing NPN enhancements: Credential Holders, Onboarding, and IMS emergency support in SNPNs | [**R2-2203590**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203590.zip) |
| **SL** | NR\_SL\_enh-Core | RRC running CR for NR Sidelink enhancements | [**R2-2203672**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203672.zip) |
| **URLLC** | NR\_IIOT\_URLLC\_enh-Core | Introduction of enhanced IIoT&URLLC support for NR | [**R2-2203766**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203766.zip) |
| **SDT** | NR\_SmallData\_INACTIVE-Core | Introduction of SDT | [**R2-2203768**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203768.zip) |
| **SLIC** | NR\_slice-Core | NR RRC CR for RAN slicing | [**R2-2203784**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203784.zip) |
| **INCL** | TEI17 | Inclusive language in TS 38.331 | [**R2-2203795**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203795.zip) |
| **feMIMO** | NR\_feMIMO-Core | Introduction of Release-17 feMIMO | [**R2-2203809**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203809.zip) |
| **HSTFR2** | NR\_HST\_FR2 | HST on FR2 | [**R2-2203812**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203812.zip) |
| **UPIP** | UPIP\_SEC\_LTE-RAN-Core | Introducing support of UP IP for EPC connected architectures using NR PDCP | [**R2-2203820**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203820.zip) |
| **DSS** | NR\_DSS-Core | Introduction of NR dynamic spectrum sharing | [**R2-2203843**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203843.zip) |
| **HST** | NR\_HST\_FR1\_enh | Introduction of RRM enhancements for Rel-17 NR FR1 HST | [**R2-2203852**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203852.zip) |
| **UECap** | NR\_MBS-Core, NR\_IAB\_enh-Core, NR\_IIOT\_URLLC\_enh-Core, NR\_UE\_pow\_sav\_enh-Core, NR\_NTN\_solutions-Core, NR\_pos\_enh-Core, NR\_redcap-Core, NR\_SL\_enh-Core, NR\_feMIMO-Core, NR\_cov\_enh-Core, NR\_DL1024QAM\_FR1 | Release-17 UE capabilities based on R1 and R4 feature lists (TS38.331) | [**R2-2203863**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203863.zip) |
| **FR1enh** | NR\_RF\_FR1\_enh | Remove the maximum number of MIMO layers configuration restrictions for SUL | [**R2-2203865**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203865.zip) |
| **MINT** | TEI17 | Introduction of MINT [MINT] | [**R2-2203873**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203873.zip) |
| **1024Q** | NR\_DL1024QAM\_FR1-Core | Introduction of DL 1024QAM for NR | [**R2-2203962**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203962.zip) |
| **ULTx** | NR\_RF\_FR1\_enh-Core | RRC configuration for UL Tx switching enhancement | [**R2-2203986**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203986.zip) |
| **SISched** | TEI proposals initiated by RAN2 | Explicit Indication of SI Scheduling start position [SI-SCHEDULING] | [**R2-2203993**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203993.zip) |
| **CovEnh** | NR\_cov\_enh-Core | Introduction of NR coverage enhancements in RRC | [**R2-2204037**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204037.zip) |
| **PO** | TEI17 | Correction on PO determination in inactive state | [**R2-2204052**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204052.zip) |
| **NTN** | NR\_NTN\_enh-Core | Introduction of Release-17 NTN | [**R2-2204112**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204112.zip) |
| **71GHz** | NR\_ext\_to\_71GHz-Core | Extending NR operation to 71 GHz | [**R2-2204126**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204126.zip) |
| **MGenh** | NR\_MG\_enh-Core | Introduction of RRC signaling for measurement gap enhancement | [**R2-2204179**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204179.zip) |
| **MUSIM** | LTE\_NR\_MUSIM-Core | Introduction of NR RRC for MUSIM | [**R2-2204207**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204207.zip) |
| **SONMDT** | NR\_ENDC\_SON\_MDT\_enh-Core | Enhancement of data collection for SON | [**R2-2204209**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204209.zip) |
| **IABenh** | NR\_IAB\_enh-Core | Enhancements to Integrated Access and Backhaul for NR | [**R2-2204210**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204210.zip) |
| **QOE** | NR\_QoE-Core | Introduction of QoE measurements | [**R2-2204218**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204218.zip) |
| **SLrelay** | NR\_SL\_relay-Core | Introduction of SL relay | [**R2-2204226**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204226.zip) |
| **ULGAP** | NR\_RF\_FR2\_req\_enh2 | Introduction of FR2 UL gap | [**R2-2204230**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204230.zip) |
| **RICS** | NR\_SmallData\_INACTIVE-Core, NR\_cov\_enh-Core, NR\_redcap-Core, NR\_slice-Core | Introduction of common RACH partitioning aspects in RRC | [**R2-2204241**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204241.zip) |
| **PosEnh** | NR\_pos\_enh-Core | Introduction of Enhanced Positioning feature | [**R2-2204242**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204242.zip) |
| **MBS** | NR\_MBS-Core | Introduction of NR MBS into TS 38.331 | [**R2-2204251**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204251.zip) |
| **DCenh** | LTE\_NR\_DC\_enh2-Core | Introduction of further multi-RAT dual-connectivity enhancements | [**R2-2204252**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204252.zip) |
| **ePowSav** | NR\_UE\_pow\_sav\_enh-Core | Introd+A1:C35uction of ePowSav in TS 38.331 | **[RP-](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204265.zip)[220961](https://www.3gpp.org/ftp/TSG_RAN/TSG_RAN/TSGR_95e/Docs/RP-220961.zip)** |
| **RedCap** | NR\_redcap-Core | Introduction of RedCap | [R2-2204267](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204267.zip) |

**WI codes (LTE)**

|  |  |  |  |
| --- | --- | --- | --- |
| **WI** | **Related WIs** | **WI CR** | **RAN2 Tdoc** |
| **MULTI** |  |  |  |
| **GEN** |  |  |  |
| **SONMDT** | TEI17 | Introduction of event-based trigger for LTE MDT logging [LTE-Event-MDT] | [**R2-2202213**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202213.zip) |
| **HSDN** | TEI17 | Introduction of mobility-state-based cell reselection for NR HSDN | [**R2-2202629**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2202629.zip) |
| **IOTMTC** | NB\_IOTenh4\_LTE\_eMTC6-Core | Introduction of NB-IoT/eMTC Enhancements | [**R2-2203577**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203577.zip) |
| **PosEnh** | [NR\_pos\_enh-Core](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=900160) | Introduction of R17 PositioningEnh in LTE RRC spec | [**R2-2203625**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203625.zip) |
| **TerrBcast** | [LTE\_terr\_bcast\_bands\_part1-Core](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=911120) | Introduction of new bands and bandwidth allocation for LTE-based 5G terrestrial broadcast | [**R2-2203633**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203633.zip) |
| **NRU** | NR\_unlic-Core, TEI17 | Addition of NR-U RSSI/CO measurement UE capability | [**R2-2203648**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203648.zip) |
| **SONMDT** | [TEI17](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047) | On introducing height information reporting in MDT reports [LTE-Height-MDT] | [**R2-2203666**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203666.zip) |
| **TerrBcast** | [LTE\_terr\_bcast\_bands\_part1-Core](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=911120) | UE capabilities for new bands and bandwidth allocation for LTE-based 5G terrestrial broadcast | [**R2-2203698**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203698.zip) |
| **MUSIM** | [LTE\_NR\_MUSIM-Core](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=860163) | Introduction of MUSIM for LTE | [**R2-2203750**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203750.zip) |
| **INCL** | [TEI17](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047) | Inclusive Language Review for TS 36.331 | [**R2-2203793**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203793.zip) |
| **NTN** | [LTE\_NBIOT\_eMTC\_NTN](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=920069) | Support of Non-Terrestrial Network in NB-IoT and eMTC | [**R2-2203810**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203810.zip) |
| **UPIP** | [UPIP\_SEC\_LTE-RAN-Core](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=941111) | Introducing support of UP IP for EPC connected architectures using NR PDCP | [**R2-2203819**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203819.zip) |
| **DCenh** | [LTE\_NR\_DC\_enh2-Core](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=860149) | Introduction of further multi-RAT dual-connectivity enhancements | [**R2-2203837**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203837.zip) |
| **MINT** | [TEI17](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=850047) | Introduction of MINT [MINT] | [**R2-2203869**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203869.zip) |
| **71GHz** | [NR\_ext\_to\_71GHz-Core](https://portal.3gpp.org/desktopmodules/WorkItem/WorkItemDetails.aspx?workitemId=860141) | UE capabilities for the support of NR 71GHz | [**R2-2203954**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2203954.zip) |
| **POInact** | TEI17, LTE\_5GCN\_connect-Core | Correction on PO determination for UE in inactive state | [**R2-2204049**](https://www.3gpp.org/ftp/TSG_RAN/WG2_RL2/TSGR2_117-e/Docs/R2-2204049.zip) |