**3GPP TSG RAN meeting #97-e RP-22xxxx**

**Electronic Meeting, September 12-16, 2022**

## Status Report to TSG

**Agenda item:** 9.2.7

|  |  |
| --- | --- |
| **WI / SI Name** | Study on NR network-controlled repeaters |
| included in this status report | Study Item: Yes | Core part: No | Performance part:No | Testing part:No |
| **Acronym** | FS\_NR\_netcon\_repeater |
| **Unique ID** | 940083 |
| **TSG Tdoc of latest approved WI/SI description (if any)** | RP-221229 |
| **Target Completion Date****(indicate if changed)** | Study Item: 09/2022  | Core part:  | Performance part:  | Testing part:  |
| **Overall Completion level** | Study Item: 100%  | Core part:  | Performance Part:  | Testing part:  |

Note: Overall completion level percentage numbers should use one of the colors below:

* xx%: Normal progress, no RAN plenary action needed
* xx%: Progress behind schedule, may need RAN plenary intervention. If so, SR should clearly define requested action
* xx%: Progress critically behind, RAN plenary shall intervene. SR should define requested action

**Source:**

|  |  |
| --- | --- |
| **Leading WG** | RAN1 |
| **Rapporteur** | **Name** | Nan Zhang |
| **Company** | ZTE |
| **Email** | Zhang.nan152@zte.com.cn |

## 1 Work plan related evaluation

|  |  |
| --- | --- |
| **Do you want to modify the time budget for this WI/SI compared to what was endorsed at the last RAN meeting?** | No |

*If you answered No: Then please remove the Excel file from the zip file of this status report.*

*If you answered Yes: Then please fill out the attached Excel template to request a modification of the time budgets for your WI /SI. The Excel table has to be filled out for all affected RAN WGs and up to the target date of the WI/SI. The basis are the endorsed time budgets of the last RAN meeting. Please highlight all changes of the values.
 One time unit (TU) corresponds to ~ 2 hours in the meeting.
 If this status report covers a WI with Core and Performance part, then please have one line for each in the attached Excel table.
 Note: If no Excel table is attached, then this means no time budget change.*

**Additional explanations/motivations for the time budget changes in the attached Excel table:**

## 2. Detailed progress in RAN WGs since last TSG meeting (for all involved WGs)

 NOTE: Agreements and Open issues impacted cross-TSG aspects shall be explicitly highlighted

## 2.1 RAN1

#### 2.1.1 Agreements

**RAN1#110**

**Agreement**

The time domain resource corresponding to an access link beam can be determined with following options:

* Option 1: Explicit determination based on the explicitly indicated the time domain resources per beam indication

Note-1: Different parameters may be indicated for semi-static or dynamic beam indication

Note 2: One or multiple beams can be indicated via single beam indication.

**Agreement**

The NCR-Fwd is always expected to be “OFF” unless otherwise explicitly or implicitly indicated by gNB.

* Note-1: This applies to the case regardless of the RRC state of NCR-MT.
* Note-2: Indication (e.g., received when NCR-MT in RRC-connected) or DRX state of NCR-MT to control the ON-OFF behaviour of NCR-Fwd when the NCR-MT is in RRC-idle/inactive is not precluded.

The above is not meant to imply any signalling design for NCR-Fwd ON-OFF.

**Agreement**

For the flexible symbol based on the semi-static configuration (e.g., TDD-UL-DL-ConfigCommon, TDD-UL-DL-ConfigDedicated), following options are considered for the NCR-Fwd on these symbols

* Option 1: The NCR-Fwd is expected to be OFF or not forwarding over these symbols
* Option 2: The NCR-Fwd will follow the TDD operation determined by NCR-MT, i.e., determined by NCR-MT based on the received SFI indication or scheduling from gNB
	+ Note: It means that no new side control signalling is needed.
* Option 3: The NCR-Fwd will follow a new dynamic side control signalling of DL/UL forwarding over these symbols to NCR-Fwd

**Agreement**

For the timing of NCR, the following assumption is captured into TR 38.867.

* The DL transmitting timing of the NCR-Fwd is delayed after the DL receiving timing of the NCR-MT (or the NCR-Fwd) by the internal delay;
* The UL receiving timing of the NCR-Fwd is advanced before the UL transmitting timing of the NCR-MT (or the NCR-Fwd) by the internal delay.

**Agreement**

The following TP is agreed as the conclusion for the TR on NWC repeater for RAN1.

|  |
| --- |
| RAN1 has studied the side control information for NCR with corresponding signalling (including its configuration). The following are recommended to be specified as part of Rel-18 NCR WI from RAN1’s perspective:* Beam information as side control information
* ON-OFF information as side control information
* UL-DL TDD configuration and NCR’s behaviour over flexible symbols.
 |

**Agreement**

Beam index is used to indicate an access link beam (Option 1)

**Agreement**

Both slot-level and symbol-level granularity are recommended for the time-domain resource indication and determination of the access link beam.

**Agreement**

Both dynamic beam indication and semi-static beam indication are recommended for access link.

* Note: the semi-static beam indication includes the semi-persistent indication.

**Working Assumption**

In access link, a DL beam and a UL beam which are correspondent with each other have the same beam index.

* The forwarding direction of an indicated beam in access link can be determined based on its corresponding time domain resource and the UL/DL TDD configuration.
* Note: The forwarding behavior (or the forwarding direction) of an indicated beam in access link in flexible symbols is separately discussed in 9.8.1.

**Agreement**

Update the agreement achieved in RAN1#109e as follows:

For the signaling of the side control information of timing to align transmission / reception boundaries, new signaling ~~may be~~ is unnecessary.

* ~~FFS: the impact of internal delay~~

**Agreement**

In case that adaptive beams are adopted for C-link and backhaul link, the following mechanisms can be considered for the indication and determination of beams of backhaul link:

* Option 1: The beam of backhaul link is indicated by a new signaling.
	+ The new signaling is dynamic signaling and/or semi-static signaling (e.g., RRC signaling/ MAC CE) indicating a beam(s) from the set of beams of the C-link
	+ This does not imply that the beam of backhaul link is always indicated by the new signaling
* Option 2: The beam of backhaul link is determined by a pre-defined rule.
	+ In slots/symbols with simultaneous DL receptions / UL transmissions in both C-link and backhaul link, the beam of backhaul link is the same as the beam of C-link. Otherwise, the beam of backhaul link follows one of the beams of the C link.
	+ Other predefined rules are not precluded

#### 2.1.2 Remaining Open issues

Void

## 2.2 RAN2

#### 2.2.1 Agreements

**RAN2#119-e**

* Capture RAN2 aspects of solution 1 in TR (leave out the 3rd bullet, feasibility is conditional on SA3 reply)
* Capture RAN2 aspects of solution 2 in TR (leave out “Secure NCR…” bullet, feasibility is conditional on SA3 reply)
* Capture RAN2 aspects of solutions 3 and 4
* Add “implicitly or explicitly” after “NCR indicator” in solution 1 and 3
* “From security point of view, the feasibility of NCR validation procedure in solution 1 and the feasibility of solution 2 will be further evaluated in potential WI phase based on SA3 feedback -> “From security point of view, the feasibility of NCR validation procedure in solution 1 and the feasibility of solution 2 will be decided by SA3 in potential WI”
* In solution 1, step 12 in the figure replace UAI with “RRC message”
* In specifications impact table, Uu impact of solution 2, add “further details on procedures impacts due to not having NAS are FFS and will be discussed in a potential WI”
* Revised in R2-2208888, with these changes it is agreed unseen
* Replace the attachment, remove “draft”, fix “next meetings”, remove “RAN2 has discussed the NCR identification and authorization in SI phase. “, final in R2-2208890
* Revised in R2-2208890, with these changes it is agreed unseen
* The SI is completed from RAN2 perspective

#### 2.2.2 Remaining Open issues

Void

## 2.3 RAN3

#### 2.3.1 Agreements

**RAN3#117-e**

To capture the quasi-legacy UE based solution into TR.

The step12 and step13 can be updated as optional.

To capture OAM based solution into TR with adding following note:

Note: Security concern and OAM impact can be confirmed by SA3 and SA5 respectively.

LS to SA3 and SA5 for further checking this solution.

Redcap like solution will not be captured in TR.

To capture the V2X like solution into TR.

LS on NCR TR and possible solutions to SA3, SA5 in R3-225253.

LS on NCR identification and authorization to RAN1 in R3-225254.

pCR for NCR TR 38.867 in R3-225252.

#### 2.3.2 Remaining Open issues

Void

## 4. References

NOTE: This can be e.g. a list of all related Tdocs in the affected WGs since last TSG, references to LSs, produced TRs/TSs, the work/study item description or status reports of previous TSGs.

[R1-2206017](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206017.zip) Updated TR38.867 for Study on NR NCR ZTE

[R1-2205813](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2205813.zip) Power Control and Side Control Information for NCRs Pivotal Commware, AT&T

[R1-2205875](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2205875.zip) On the side control information and performance evaluation for NCR Huawei, HiSilicon

[R1-2205939](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2205939.zip) Discussion on side control information to enable NR network-controlled repeaters Nokia, Nokia Shanghai Bell

[R1-2206001](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206001.zip) Discussion on side control information to enable NR network-controlled repeaters Spreadtrum Communications

[R1-2206018](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206018.zip) Discussion on side control information for NCR ZTE

[R1-2206055](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206055.zip) Discussion on side control information to enable NR network-controlled repeaters vivo

[R1-2206128](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206128.zip) Additional considerations on side control information to enable NR network-controlled repeaters Sony

[R1-2206174](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206174.zip) Discussion on side control information for NR network-controlled repeaters Fujitsu

[R1-2206183](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206183.zip) Discussions on side control information for NR network-controlled repeaters InterDigital, Inc.

[R1-2206208](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206208.zip) Side control information for network-controlled repeaters NICT and Toyota InfoTechnology Center

[R1-2206330](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206330.zip) Discussion on side control information for NCR OPPO

[R1-2206413](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206413.zip) Side control information to enable NR network-controlled repeaters CATT

[R1-2206435](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206435.zip) Discussion on side control information for network-controlled repeaters Panasonic

[R1-2206478](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206478.zip) Discussion on side control information to enable NR network-controlled repeaters NEC

[R1-2206597](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206597.zip) Discussion on Side control information to enable NR network-controlled repeater Intel Corporation

[R1-2206656](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206656.zip) Discussion on side control information to enable NR network-controlled repeaters Xiaomi

[R1-2206698](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206698.zip) Discussion on side control information for network-controlled repeaters China Telecom

[R1-2206840](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206840.zip) Side control information to enable NR network-controlled repeaters Samsung

[R1-2206927](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206927.zip) Discussion on side control information to enable NR network-controlled repeaters CMCC

[R1-2206957](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206957.zip) Discussion on side control information for network-controlled repeater ETRI

[R1-2206981](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206981.zip) Side control information for network-controlled repeaters MediaTek Inc.

[R1-2207075](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207075.zip) Discussion on Side control information to enable NR network-controlled repeaters CEWiT, IITK

[R1-2207120](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207120.zip) Discussion on side control information for NCR Rakuten Mobile, Inc

[R1-2207127](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207127.zip) Discussion on side control information to enable NCR operations Sharp

[R1-2207247](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207247.zip) On side control information for network controlled repeaters (NCR) Qualcomm Incorporated

[R1-2207297](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207297.zip) Discussion on side control information for network-controlled repeater Lenovo

[R1-2207300](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207300.zip) Discussion on side control information to enable NR network-controlled repeaters CAICT

[R1-2207345](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207345.zip) Discussion on side control information for NR network-controlled repeaters Apple

[R1-2207366](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207366.zip) Discussion on side control information for NCR LG Electronics

[R1-2207420](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207420.zip) Discussion on side control information to enable NR network-controlled repeaters NTT DOCOMO, INC.

[R1-2207460](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207460.zip) Discussion on side control information to enable NR network-controlled repeaters KDDI Corporation

[R1-2207680](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207680.zip) Control information for enabling NCR Ericsson

R1-2207688 Summary#1 of discussion on side control information Moderator (ZTE)

R1-2207933 Summary#2 of discussion on side control information Moderator (ZTE)

R1-2208041 Summary#3 of discussion on side control information Moderator (ZTE)

[R1-2205876](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2205876.zip) On L1/L2 signaling for side control information Huawei, HiSilicon

[R1-2205940](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2205940.zip) Discussion on L1/L2 signaling for side control information of network-controlled repeaters Nokia, Nokia Shanghai Bell

[R1-2206002](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206002.zip) Discussion on L1/L2 signaling for side control information Spreadtrum Communications

[R1-2206019](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206019.zip) Discussion on L1/L2 signaling for side control information ZTE

[R1-2206056](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206056.zip) Discussion on signaling for side control information vivo

[R1-2206129](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206129.zip) Additional considerations on L1/L2 signaling for side control information Sony

[R1-2206175](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206175.zip) Discussion on L1/L2 signaling for side control information Fujitsu

[R1-2206184](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206184.zip) L1/L2 signaling for side control information of network-controlled repeaters InterDigital, Inc.

[R1-2206414](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206414.zip) Discussion on signaling for side control information for NR network-controlled repeaters CATT

[R1-2206479](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206479.zip) Discussion on L1/L2 signaling for side control information NEC

[R1-2206598](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206598.zip) Discussions on L1/L2 signaling for side control information Intel Corporation

[R1-2206657](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206657.zip) Discussion on L1/L2 signalling for side control information Xiaomi

[R1-2206699](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206699.zip) Discussion on L1/L2 signaling for side control information China Telecom

[R1-2206841](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206841.zip) L1/L2 signaling for side control information Samsung

[R1-2206858](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206858.zip) Discussion on ON-OFF information for NCR KT Corp.

[R1-2206928](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206928.zip) Discussion on L1/L2 signaling for side control information CMCC

[R1-2206958](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206958.zip) Discussion on L1/L2 signaling for side control information ETRI

[R1-2206982](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2206982.zip) L1/L2 control signaling for enabling network controlled repeaters MediaTek Inc.

[R1-2207076](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207076.zip) Discussion on L1/L2 signaling for side control information for NCR CEWiT, IITK

[R1-2207089](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207089.zip) Discussion on L1/L2 signaling for side control information of network-controlled repeaters Lenovo

[R1-2207121](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207121.zip) Discussion on signaling for side control information Rakuten Mobile, Inc

[R1-2207248](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207248.zip) On L1/L2 signaling for side control information for NCR Qualcomm Incorporated

[R1-2207346](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207346.zip) Discussion on L1/L2 signaling for side control information Apple

[R1-2207367](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207367.zip) Discussion on L1/L2 signaling for side control information LG Electronics

[R1-2207421](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207421.zip) Discussion on L1/L2 signaling for side control information NTT DOCOMO, INC.

[R1-2207681](file:///C%3A%5CUsers%5Cyouns%5COneDrive%5CDocuments%5C3GPP%5CRAN1%20tdocs%5CTSGR1_110%5CDocs%5CR1-2207681.zip) Signaling of control information for NCR Ericsson

R1-2207848 Summary#1 on L1/L2 signaling for side control information Moderator (Fujitsu)

R1-2207984 Summary#2 on L1/L2 signaling for side control information Moderator (Fujitsu)

R1-2208110 Summary#3 on L1/L2 signaling for side control information Moderator (Fujitsu)

[R2-2208108](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2208108.zip) Work plan for NR network-controlled repeaters ZTE Corporation (Rapporteur) Work Plan Rel-18 FS\_NR\_netcon\_repeater

[R2-2208109](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2208109.zip) TR 38.867 on network-controlled repeaters management ZTE Corporation (Rapporteur) draft TR Rel-18 38.867 0.1.0 FS\_NR\_netcon\_repeater

[R2-2208886](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CInbox%5CR2-2208886.zip) [Pre119-e][701][NCR] Summary of AI 8.1 network-controlled repeaters ZTE (rapporteur)

[R2-2208887](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CInbox%5CR2-2208887.zip) TP to TR 38.867 about RAN2 (Uu related) part ZTE (rapporteur)

[R2-2208889](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CInbox%5CR2-2208889.zip) (draft) LS on the progress of NCR identification and authorization

[R2-2207123](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2207123.zip) Identification and Authorization of Network-Controlled Repeater Intel Corporation discussion Rel-18 FS\_NR\_netcon\_repeater

[R2-2207205](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2207205.zip) Identification and authorization of Network Controlled Repeater Nokia, Nokia Shanghai Bell discussion Rel-18

[R2-2207285](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2207285.zip) RAN2 Aspects of Network-Controlled Repeater Qualcomm Inc. discussion Rel-18 FS\_NR\_netcon\_repeater

[R2-2207291](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2207291.zip) Overview of network-controlled repeaters NEC Telecom MODUS Ltd. discussion

[R2-2207413](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2207413.zip) Discussion on functionality for NCR-MT Fujitsu discussion Rel-18 FS\_NR\_netcon\_repeater

[R2-2207459](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2207459.zip) Discussion on identification and authorization of NCR Apple discussion Rel-18 DUMMY Late

[R2-2207485](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2207485.zip) General consideration on NCR management Huawei, HiSilicon discussion Rel-18 FS\_NR\_netcon\_repeater

[R2-2207517](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2207517.zip) Identification and Authorization of Network-controlled Repeater CATT discussion Rel-18 FS\_NR\_netcon\_repeater

[R2-2207691](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2207691.zip) Network-controlled repeaters - key issues Samsung R&D Institute UK discussion

[R2-2207717](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2207717.zip) Discussion on identification and authorization for network-controlled repeaters Lenovo discussion Rel-18

[R2-2207825](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2207825.zip) Considerations on NCR authorization and fwd link config Sony discussion Rel-18 DUMMY Late

[R2-2208034](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2208034.zip) Identification and authorization of NCRs: capabilities and attributes management Philips International B.V. discussion Rel-18 FS\_NR\_netcon\_repeater

[R2-2208110](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2208110.zip) Considertion on NCR identification and authorization ZTE Corporation, Sanechips discussion Rel-18 FS\_NR\_netcon\_repeater

[R2-2208198](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2208198.zip) Discussion on RAN2 topics for NCR Ericsson discussion Rel-18 FS\_NR\_netcon\_repeater

[R2-2208293](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2208293.zip) Initial consideration on Network-controlled repeaters Kyocera discussion Rel-18

[R2-2208390](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2208390.zip) Identification and authorization of network-controlled repeaters MediaTek Beijing Inc. discussion Rel-18

[R2-2208416](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2208416.zip) Multi-frequency support to enable control links for NR network-controlled repeaters AT&T discussion Rel-18

[R2-2208447](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2208447.zip) Discussion on the network-controlled repeater management CMCC discussion Rel-18 FS\_NR\_netcon\_repeater

[R2-2208458](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2208458.zip) Discussion on NCR Related Procedures vivo discussion

[R2-2208628](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2208628.zip) Discussion on identification and authorization of Network-controlled Repeaters China Telecom discussion

[R2-2208658](file:///C%3A%5CUsers%5Csasha.sirotkin%5CDocuments%5Cmeetings%5CTSGR2_119-e%5CDocs%5CR2-2208658.zip) Initial discussion on Network Control Repeater Rakuten Mobile, Inc discussion Rel-18

[R3-224926](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224926.zip) Work plan for NR network-controlled repeaters ZTE

[R3-224877](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224877.zip) Discussion on NCR identification and authorization ZTE Corporation

[R3-224979](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224979.zip) Draft TP to TR 38867 on NCR identification and authorization ZTE Corporation

[R3-224387](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224387.zip) Discussion on Identification and authorization of Network Controlled Repeater Nokia, Nokia Shanghai Bell

[R3-224388](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224388.zip) (TP for TR38.867) Update to Identification and authorization of Network Controlled Repeater Nokia, Nokia Shanghai Bell

[R3-224507](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224507.zip) RAN3 Aspects of Network-Controlled Repeater Qualcomm Inc.

[R3-224567](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224567.zip) NCR Identification and Authorization Ericsson LM

[R3-224568](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224568.zip) NCR Study - Proposed Conclusions Ericsson LM

[R3-224632](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224632.zip) Discussion on NCR Identification and Authorization CATT

[R3-224633](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224633.zip) (TP for TR 38.867) Support of NCR management CATT

[R3-224662](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224662.zip) Discussion on NCR identification and authorization Huawei

[R3-224663](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224663.zip) (TP to TR 38.867) NR network-controlled repeater identification and authorization Huawei

[R3-224755](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224755.zip) (TP for FS\_NR\_NetCon\_Repeater for TR 38.8xx) Authorization for Network Controlled Repeater Samsung

[R3-224785](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224785.zip) Identification and Authorization of Network-Controlled Repeater Intel Corporation

[R3-224917](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224917.zip) Discussion on the network-controlled repeater management CMCC

[R3-224927](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224927.zip) On Identification and authorization of Network-Controlled Repeater China Telecom

[R3-224953](file:///D%3A%5C%E4%BC%9A%E8%AE%AE%E7%A1%AC%E7%9B%98%5CTSGR3_117-e%5CDocs%5CR3-224953.zip) TP to TR 38.867 CMCC

R3-225252 pCR to TR 38.867 ZTE

R3-225253 LS on NCR Solutions RAN3

R3-225254 Progress on NCR identification and authorization RAN3

 10.01.2022 minor adaptations for RAN #95e

 04.10.2021 minor adaptations for RAN #94e

 08.08.2021 minor adaptations for RAN #93e

 17.05.2021 minor adaptations for RAN #92e

 28.01.2021 minor adaptations for RAN #91e

 09.11.2020 minor adaptations for RAN #90e

 31.08.2020 minor adaptations for RAN #89e

 20.04.2020 minor adaptations for RAN #88e

 18.02.2020 minor adaptations for RAN #87e

 14.11.2019 minor adaptations for RAN #86

 18.08.2019 minor adaptations for RAN #85

 12.05.2019 minor adaptations for RAN #84

 27.02.2019 minor adaptations for RAN #83

 21.11.2018 completion levels with colours added (for RAN #82)

v04.81 31.07.2018 simplification of template and addition of cross-TSG aspects (for RAN #81)

v04.80 21.05.2018 minor adaptations for RAN #80

v04.79 26.02.2018 minor adaptations for RAN #79

v04.78 18.11.2017 minor adaptations for RAN #78

v04.77 06.08.2017 minor adaptations for RAN #77

v04.76 15.05.2017 minor adaptations for RAN #76

v04.75 31.01.2017 minor adaptations for RAN #75

v04.74 28.10.2016 minor adaptations for RAN #74

v04.73 01.09.2016 adaptations for RAN #73 (time units in extra Excel table, RAN6 reporting included)

v04.72 26.05.2016 adaptations for RAN #72 (introduction of NR & GERAN TUs)

v04.71 10.02.2016 minor adaptations for RAN #71

v04.70 30.10.2015 minor adaptations for RAN #70

v04.69 12.08.2015 minor adaptations for RAN #69

v04.68 21.05.2015 minor adaptations for RAN #68

v04.67 01.02.2015 minor adaptations for RAN #67

v04.66 16.11.2014 minor adaptations for RAN #66

v04.65 16.08.2014 minor adaptations for RAN #65

v04.64 22.05.2014 minor adaptations for RAN #64

v04.63 24.01.2014 restructuring for RAN #63 to cover Core & Perf. in one doc file

v03.62 11.11.2013 section 1.2.3 adapted for RAN #62

v03 11.08.2013 section 1.2.3 added on time budget

v02 07.05.2010 history added, some spelling corrections

v01 13.11.2009 First version of the template