3GPP TSG-RAN WG2 Meeting #99bis

Prague, Czech Republic, 9th – 13th October 2017

Source: RAN2 Chairman (Intel)

Object: Chairman notes

# 1 Opening of the meeting (9 AM)

## 1.1 Call for IPR

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| The attention of the delegates of this Working Group is drawn to the fact that **3GPP Individual Members have the obligation** under the IPR Policies of their respective Organizational Partners **to inform their respective Organizational Partners of Essential IPRs** they become aware of.  The delegates were asked to take note that they were hereby invited:   * to investigate whether their organization or any other organization owns IPRs which were, or were likely to become Essential in respect of the work of 3GPP. * to notify their respective Organizational Partners of all potential IPRs, e.g., for ETSI, by means of the IPR Statement and the Licensing declaration forms (http://webapp.etsi.org/Ipr/). |

NOTE: IPRs may be declared to the Director-General or Chairman of the SDO, but not to the RAN WG2 Chairman.

## 1.2 Network usage conditions

The PCG has laid down the following network usage conditions

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| 1. **Users shall not use the network to engage in illegal activities. This includes activities such as copyright violation, hacking, espionage or any other activity that may be prohibited by local laws.**  2. **Users shall not engage in non-work related activities that consume excessive bandwidth** or cause significant degradation of the performance of the network.  Since the network is a shared resource, users should exercise some basic etiquette when using the 3GPP network at a meeting. It is understood that high bandwidth applications such as downloading large files or video streaming might be required for business purposes, but delegates should be strongly discouraged in performing these activities for personal use. Downloading a movie or doing something in an interactive environment for personal use essentially wastes bandwidth that others need to make the meeting effective. The meeting chairman should remind end users that the network is a shared resource; the more one user grabs, the less there is for another. Email and its attachments already take up significant bandwidth (certain email programs are not very bandwidth efficient). In case of need the chair can ask the delegates to restrict IT usage to things that are essential for the meeting itself.  **1. DON’T place your WiFi device in ad-hoc mode**  **2. DON’T set up a personal hotspot in the meeting room**  **3. DO try 802.11a if your WiFi device supports it**  **4. DON’T manually allocate an IP address**  **5. DON’T be a bandwidth hog by streaming video, playing online games, or downloading huge files**  **6. DON’T use packet probing software which clogs the local network (e.g., packet sniffers or port scanners)** |

## 1.3 Other

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| In accordance with the Working Procedures it is reaffirmed that:  (i) compliance with all applicable antitrust and competition laws is required;  (ii) timely submissions of work items in advance of TSG or WG meetings are important to allow for full and fair consideration of such matters; and  (iii) the chairman will conduct the meeting with strict impartiality and in the interests of 3GPP |

Note on (i): In case of question please contact your legal counsel.

Note on (ii): WIDs don’t need to be submitted to the RAN2 meeting and will typically not be discussed here either.

# 2 General

THANK YOU to companies that request TDoc numbers and submit contributions early before deadline (really appreciated). Will start to refrain from treating late documents.

## 2.1 Approval of the agenda

A draft schedule for the week is provided as a separate document, distributed via the RAN2 email reflector and made available during the meeting week in the RAN2\Inbox\Chairmans\_Notes folder.

[R2-1710000](file:///C:\Data\3GPP\Extracts\R2-1710000.doc) Agenda for RAN2#99bis Chairman agenda

=> Approved

## 2.2 Approval of the report of the previous meeting

[R2-1710001](file:///C:\Data\3GPP\Extracts\R2-1710001.doc) RAN2#99 Meeting Report MCC report

=> Approved

## 2.3 Reporting from other meetings

Summary of the RAN2 impacting items from RAN#77

**LTE**

**UDC**: A new WI to specify UDC was agreed as a working agreement in [RP-172076](file:///C:\Data\3GPP\TSGR\TSGR_77\Docs\RP-172076.zip). The working agreement has no impact to RAN2 work in Q4 - RAN2 should progress the work as with any other WI.

**feD2D**: The SI was extended by one quarter in order to address SA2 issues raised in the related REAR study item, as described in the status report in [RP-172091](file:///C:\Data\3GPP\TSGR\TSGR_77\Docs\RP-172091.zip).

**NR**

Prioritisation: RAN performed a prioritisation task to identify the priorities for completion by December 2017, and to help manage the workload of the WGs. A summary of this activity from the RAN chairman was endorsed in [RP-172114](file:///C:\Data\3GPP\TSGR\TSGR_77\Docs\RP-172114.zip) which refers to a number of other endorsed documents - the ones most relevant to RAN 2 are covered below.

For the RAN2 prioritisation activity, the endorsed document [RP-172087](file:///C:\Data\3GPP\TSGR\TSGR_77\Docs\RP-172087.zip) describes that during Q4 we will be prioritise topics that are needed EN-DC completion, and then with any remaining time we will progress items for standalone (i.e. very similar to what we have already been doing in the last few meetings). I will identify within the agenda which standalone topics I would like to treat in any remaining time. The document also provides clarification on some specific items that do not have to be completed for the December 2017 specifications (see slide 4).

RAN1/2 led study items are all deferred until 2018. For RAN2 this only impacts the SI on IAB which was due to start at the November meeting. This will now start at the January ad hoc meeting.

**Single UL Tx**: A way forward on single uplink transmission was endorsed in documents [RP-172064](file:///C:\Data\3GPP\TSGR\TSGR_77\Docs\RP-172064.zip) and [RP-172085](file:///C:\Data\3GPP\TSGR\TSGR_77\Docs\RP-172085.zip) with the latter describing the capability signalling that RAN2 need to complete in Q4. This has also been communicated to RAN2 in LS [RP-172100](file:///C:\Data\3GPP\TSGR\TSGR_77\Docs\RP-172100.zip).

**UE capabilities for NR**: RAN agreed that UE categories will be defined for marketing purposes and will not be signalled from the UE to the network. RAN will decide the definition of the categories. This is captured in LS RP-172133.

**Revised NR WID** was approved in [RP-172115](file:///C:\Data\3GPP\TSGR\TSGR_77\Docs\RP-172115.zip) although the changes to not have significant impact to RAN2 work.

## 2.4 Others

Rapporteur changes

Spec former rapporteur proposed new rapporteur

TS38.331 Kai-Erik Sunell (Ericsson) Håkan Palm (Ericsson)

TS36.314. Yi Guo (Huawei) Chen Jun (Huawei)

=> Rapporteur changes are approved

Isolated impact analysis

Note that an isolated impact analysis is required for Rel-8 to Rel-14 CRs from Q3 2017 onwards.

Only corrections where there is a proven problem are allowed for frozen releases (Rel-8 to Rel-14).

RAN2 WG compendium

Latest version can always be found at ftp://ftp.3gpp.org/tsg\_ran/WG2\_RL2/Org/RAN2\_Compendium/

Drafting rules

Note that specification drafting rules in TR 21.801 must be followed when drafting a CR and draft TS/TR.

Latest version can always be found at http://www.3gpp.org/ftp/specs/archive/21\_series/21.801/

Time Budget

The time budget endorsed at RAN-77 is available in RP-172116

Offline discussion during RAN2 meeting

Chairs will allocate a number of offline discussions during the meeting. Create a folder with format "NNN\_name" (please use 3 digit number to ensure folders are listed in correct sequence, the name can be anything you like) within inbox/drafts and use this to share any documents relating to the offline discussion. Also use this number in the title of any reflector emails relating to this offline discussion. Do not share documents over the reflector during the meeting.

# 3 Incoming liaisons

Note: LSs are moved to the respective agenda items if any.

Liaisons to RAN2

[R2-1710006](file:///C:\Data\3GPP\Extracts\R2-1710006_C1-173752.doc) Reply LS on LTE call redirection to GERAN (C1-173752; contact: Nokia) CT1 LS in Rel-15 TEI15 To:RAN2 Cc:SA3, RAN3

=> Noted

[R2-1710028](file:///C:\Data\3GPP\RAN2\Docs\R2-1710028.zip) Corrections on antenna switching (R1-1715335; contact: Qualcomm) RAN1 LS in Rel-13 LTE\_CA\_TDD\_FDD-Core To:RAN2, RAN4

=> Noted

[R2-1710042](file:///C:\Data\3GPP\Extracts\R2-1710042_R4-1708768.doc) Reply LS on Support of BCS for Fallback Band Combinations (R4-1708768; contact: Samsung) RAN4 LS in Rel-13 LTE\_CA\_enh-Core To:RAN2

- Ericsson have discussion paper in 11538.

=> Noted

[R2-1710050](file:///C:\Data\3GPP\RAN2\Docs\R2-1710050.zip) LS on RAN4 Rel-14 UE Feature List (R4-1709180; contact: Intel) RAN4 LS in Rel-14 TEI14 To:RAN2 Cc:RAN1, RAN3

- Intel explain most of this is already captured and the remaining part is the interference capability signalling. Some CR is needed to update the R13 signalling an will submit a CR to the next meeting.

=> Noted

[R2-1710056](file:///C:\Data\3GPP\Extracts\R2-1710056_R5-175165.doc) LS Seeking clarification on DCI monitoring subframe for eIMTA (R5-175165; contact: Huawei) RAN5 LS in To:RAN2, RAN4

- Intel think the RAN2 spec needs to be updated.

=> Offline discussion to conclude if anything is needed in RAN2 specs and how to respond to RAN5. Offline discussion #01 (Huawei)

=> Draft LS in R2-1711844

[R2-1710067](file:///C:\Data\3GPP\RAN2\Docs\R2-1710067.zip) LS on Paging failures for CE Capable UEs (S2-176685; contact: NTT DOCOMO) SA2 LS in Rel-13 TEI13 To:RAN2, RAN3

=> Noted

=> Discussion will be handled in the main session.

[R2-1710245](file:///C:\Data\3GPP\Extracts\R2-1710245_S2-176693.doc) LS on the number of bearers (S2-176693; contact: Telstra) SA2 LS in Rel-15 TEI15

- Samsung have a contribution in 10106.

- Vodafone think we need to look at the whole system NR and LTE and see if they can support a common number.

- Intel also have a document

- AT+T think that the number of bearers in LTE should be expanded to 15 or 16 and would like it to be done quickly. T-Mobile support AT+T's comments.

=> Related document(s) will be treated on Wednesday covering both LTE and NR.

Liaisons to RAN2 with agreements to take into account

[R2-1710027](file:///C:\Data\3GPP\RAN2\Docs\R2-1710027.zip) LS on RRC parameters for FeCoMP (R1-1715332; contact: ZTE) RAN1 LS in Rel-15 feCOMP\_LTE-Core To:RAN2

- Ericsson ask if these are all the parameters. ZTE doesn't know if they will agree more parameters.

=> Noted

[R2-1711843](file:///C:\Data\3GPP\RAN2\Docs\R2-1711843.zip) LS on no dedicated bearer support over NB-IoT (S2-176690; contact: MediaTek) SA2 LS in Rel-13 CIoT To:RAN5, RAN2, CT1

=> Noted without presentation

Liasons with RAN2 in CC

[R2-1710003](file:///C:\Data\3GPP\RAN2\Docs\R2-1710003.zip) Reply LS on request to update maximum data rate values in EPS (C1-173572; contact: Qualcomm) CT1 LS in Rel-15 5GS\_Ph1-CT, NR\_newRAT-Core To:SA2 Cc:RAN3, CT4, CT3, SA5, SA1, RAN2

=> Noted without presentation

[R2-1710043](file:///C:\Data\3GPP\Extracts\R2-1710043_R4-1708772.doc) LS on effect of SRS switching in TDD + FDD CA (R4-1708772; contact: Qualcomm) RAN4 LS in Rel-12 To:RAN1 Cc:RAN2

=> Noted without presentation

[R2-1710057](C:\\Data\\3GPP\\Extracts\\R2-1710057_R6-170460.doc" \o "C:\Data\3GPP\Extracts\R2-1710057_R6-170460.doc) LS on Restricted Use of Enhanced Coverage (R6-170460; contact: Nokia) RAN6 LS in Rel-14 CIoT\_Ext To:CT1 Cc:SA2, RAN2

=> Noted without presentation

# 4-5 Void

# 6 LTE: Rel-12 and earlier releases

Including corrections related to the following WIs:

(LTE-L23, leading WG: RAN2, REL-8, started: Sep. 06, closed: Dec. 08, WID: [RP-080747](file:///C:\Data\3GPP\Extracts\RP-080747%20Revised%20LTE%20WID.doc))

(LTE\_CA-Core, leading WG: RAN1, REL-10, started: Dec. 09, closed: June 11, WID: [RP-100661](file:///C:\Data\3GPP\archive\TSGR\TSGR_48\Docs\RP-100661.zip))

(LTE\_UL\_MIMO-Core, leading WG: RAN1, REL-10, started: Dec.09, closed: June 11, WID: [RP-100959](file:///C:\Data\3GPP\archive\TSGR\TSGR_49\Docs\RP-100959.zip))

(LTE\_eDL\_MIMO-Core, leading WG: RAN1, REL-10, started: Dec.09, closed: March 11, WID: [RP-100196](file:///C:\Data\3GPP\archive\TSGR\TSGR_47\Docs\RP-100196.zip))

(LTE\_Relay-Core, leading WG: RAN1, REL-10, started: Dec. 09, closed: June 11, WID: [RP-110911](file:///C:\Data\3GPP\archive\TSGR\TSGR_52\Docs\RP-110911.zip))

(MBMS\_LTE\_enh-Core, leading WG: RAN2, REL-10, started: June 10, closed: March 11, WID: [RP-101244](file:///C:\Data\3GPP\archive\TSGR\TSGR_50\Docs\RP-101244.zip))

(MDT\_UMTSLTE-Core, leading WG: RAN2, REL-10, started: Dec. 09, closed: June 11, WID: [RP-100360](file:///C:\Data\3GPP\Extracts\RP-100360.doc))

(eICIC\_LTE-Core, leading WG: RAN1, REL-10, started: March 10, closed: June 11, WID: [RP-100383](file:///C:\Data\3GPP\archive\TSGR\TSGR_47\Docs\RP-100383.zip))

(SONenh\_LTE-Core, leading WG: RAN3, REL-10, started: March 10, closed: June 11, WID: [RP-101004](file:///C:\Data\3GPP\archive\TSGR\TSGR_49\Docs\RP-101004.zip))

(LTE\_CA\_enh-Core, leading WG: RAN1, REL-11, started: March 11, closed: Mar.13, WID: [RP-121999](file:///C:\Data\3GPP\archive\TSGR\TSGR_58\Docs\RP-121999.zip))

(MBMS\_LTE\_SC-Core, leading WG: RAN2, REL-11, started: June 10, closed: Sep.12, WID: [RP-120258](file:///C:\Data\3GPP\archive\TSGR\TSGR_55\Docs\RP-120258.zip))

(LTE\_eDDA-Core, leading WG: RAN2, REL-11, started: March 11, closed: Dec.12, WID: [RP-120256](file:///C:\Data\3GPP\archive\TSGR\TSGR_55\Docs\RP-120256.zip))

(LCS\_LTE-NBPS-Core, leading WG: RAN2, REL-11, started: March 09, closed: June. 13, WID: [RP-131259](file:///C:\Data\3GPP\archive\TSGR\TSGR_61\Docs\RP-131259.zip))

(eICIC\_enh\_LTE-Core, leading WG: RAN1, REL-11, started: March 11, closed: Dec. 12, WID: [RP-120860](file:///C:\Data\3GPP\archive\TSGR\TSGR_56\Docs\RP-120860.zip))

(SPIA\_IDC\_LTE-Core, leading WG: RAN2, REL-11, started: Sep.11, closed: Dec. 12, WID: [RP-111355](file:///C:\Data\3GPP\archive\TSGR\TSGR_53\Docs\RP-111355.zip))

(COMP\_LTE\_DL-Core, leading WG: RAN1, REL-11, started: Sep.11, closed: Dec.12, WID: [RP-111365](file:///C:\Data\3GPP\archive\TSGR\TSGR_53\Docs\RP-111365.zip))

(COMP\_LTE\_UL-Core, leading WG: RAN1, REL-11, started: Sep.11, closed: Dec.12, WID: [RP-111365](file:///C:\Data\3GPP\archive\TSGR\TSGR_53\Docs\RP-111365.zip))

(LTE\_TDD\_add\_subframe, leading WG: RAN1, REL-11, started: March 12; closed: Sep. 12, WID: [RP-120384](file:///C:\Data\3GPP\archive\TSGR\TSGR_55\Docs\RP-120384.zip))

(FS\_HetNet\_eMOB\_LTE, leading WG: RAN2, REL-11, started: March 11, closed: Sep. 12, WID: [RP-110709](file:///C:\Data\3GPP\Extracts\RP-110709.doc))

(LTE\_enh\_dl\_ctrl-Core, leading WG: RAN1, REL-11, started: Dec. 11, closed: Dec. 12, WID: [RP-120871](file:///C:\Data\3GPP\archive\TSGR\TSGR_56\Docs\RP-120871.zip))

(LTE\_SC\_enh\_dualC-Core, leading WG: RAN2, REL-12, started: Dec.13, closed: Dec.14, WID: [RP-141797](file:///C:\Data\3GPP\archive\TSGR\TSGR_66\Docs\RP-141797.zip))

(LTE\_SC\_enh\_L1-Core, leading WG: RAN1, REL-12, started: Dec.13, closed: Dec.14, WID: [RP-132073](file:///C:\Data\3GPP\archive\TSGR\TSGR_62\Docs\RP-132073.zip))

(LTE\_D2D\_Prox-Core, leading WG: RAN1, REL-12, started: Mar.14, closed: Mar.15, WID: [RP-142043](file:///C:\Data\3GPP\Extracts\RP-142043%20LTE%20Device%20to%20Device%20Proximity%20Services%20-%20Work%20Item.doc))

(MBMS\_LTE\_OS-Core, leading WG: RAN2, REL-12, started: Sep.13, closed: Dec.14, WID: [RP-140282](file:///C:\Data\3GPP\Extracts\RP-140282_RevWID_MBMS_MDT.doc))

(LTE\_NAICS-Core, leading WG: RAN1, Rel-12, started: Mar 14, closed: Dec.14, WID: [RP-140519](file:///C:\Data\3GPP\Extracts\RP-140519.doc))

(LC\_MTC\_LTE-Core, leading WG: RAN1, REL-12, started: Jun 13, closed: Dec 14, WID: [RP-140522](file:///C:\Data\3GPP\Extracts\RP-140522.doc))

(GCSE\_LTE-MBMS\_CM-Core, leading WG: RAN3, started: Sep. 14, closed: Mar. 2015, WID: [RP-141035](file:///C:\Data\3GPP\Extracts\RP-141035.doc))

(LTE\_CA\_TDD\_FDD-Core, leading WG: RAN1, REL-12, started: Jun 13, closed: Jun 14, WID: [RP-140465](file:///C:\Data\3GPP\Extracts\RP-140465%20Revised%20WID%20TDD-FDD%20joint%20operation%20including%20CA.doc))

(LCS\_BDS-LTE-Core, leading WG: RAN2, REL-12, started: Mar 13, closed: Dec 13, WID: [RP-130416](file:///C:\Data\3GPP\archive\TSGR\TSGR_59\Docs\RP-130416.zip))

(LTE\_eDL\_MIMO\_enh-Core, leading WG: RAN1, REL-12, started: Sep 12, closed: June 14, WID: [RP-121416](file:///C:\Data\3GPP\archive\TSGR\TSGR_57\Docs\RP-121416.zip))

(HetNet\_eMOB\_LTE-Core, leading WG: RAN2, REL-12, started: Dec.12, , closed: Sep 14, WID: [RP-122007](file:///C:\Data\3GPP\archive\TSGR\TSGR_58\Docs\RP-122007.zip))

(Cov\_Enh\_LTE-Core, leading WG: RAN1, REL-12, started: Jun.13, closed: Jun.14, WID: [RP-130833](file:///C:\Data\3GPP\archive\TSGR\TSGR_60\Docs\RP-130833.zip))

(LTE\_TDD\_eIMTA-Core, leading WG: RAN1, REL-12, started: Dec 12, closed: Jun.14, WID: [RP-121772](file:///C:\Data\3GPP\archive\TSGR\TSGR_58\Docs\RP-121772.zip))

(SCM\_LTE-Core, leading WG: RAN2, REL-12, started: Mar.14, closed: Sep.14, WID: [RP-140434](file:///C:\Data\3GPP\Extracts\RP-140434_SCM%20WID.doc))

Including any LTE corrections related to the following joint UMTS/LTE WIs:

(SIMTC-RAN\_OC-Core, leading WG: RAN2, REL-11, started: Sep.11, closed: Sep. 12, WID: [RP-111373](file:///C:\Data\3GPP\archive\TSGR\TSGR_53\Docs\RP-111373.zip))

(eMDT\_UMTSLTE-Core, leading WG: RAN2, REL-11, started: Sep.11, closed: Dec.12, WID: [RP-121204](file:///C:\Data\3GPP\archive\TSGR\TSGR_57\Docs\RP-121204.zip))

(SONenh2\_LTE\_UTRA-Core, leading WG: RAN3, REL-11, started: Sep.11, closed: Dec.12, WID: [RP-120314](file:///C:\Data\3GPP\archive\TSGR\TSGR_55\Docs\RP-120314.zip))

(rSRVCC-GERAN, leading WG: GERAN2, REL-11, started: Sep.11, closed: Nov.13, WID: GP-111290)

(EHNB\_enh3-Core, leading WG: RAN3, REL-12, started: Sep.12, closed: Dec 13, WID: [RP-130741](file:///C:\Data\3GPP\archive\TSGR\TSGR_60\Docs\RP-130741.zip))

(MTCe\_RAN-Core, leading WG: RAN2, REL-12, started: Dec.13, closed: Sep.14, WID: [RP-132053](file:///C:\Data\3GPP\archive\TSGR\TSGR_62\Docs\RP-132053.zip))

(UTRA\_LTE\_WLAN\_interw-Core, leading WG: RAN2, REL-12, started: Dec.13, closed: Sep.14, WID: [RP-132101](file:///C:\Data\3GPP\archive\TSGR\TSGR_62\Docs\RP-132101.zip))

(LTE\_UTRA\_IncMon-Core, leading: RAN4, REL-12, started: Dec.13, closed: Dec. 14, WID: [RP-132061](file:///C:\Data\3GPP\archive\TSGR\TSGR_62\Docs\RP-132061.zip))

[R2-1710551](file:///C:\Data\3GPP\Extracts\36331_CR3080_(Rel-13)_R2-1710551%20capabilities%20for%20tx%20antenna%20selection.doc) UE capabilities for Tx antenna selection Qualcomm Incorporated CR Rel-13 36.331 13.7.0 3080 - F LTE\_CA\_TDD\_FDD-Core

[R2-1710552](file:///C:\Data\3GPP\Extracts\36331_CR3081_(Rel-14)_R2-1710552%20capabilities%20for%20tx%20antenna%20selection.doc) UE capabilities for Tx antenna selection Qualcomm Incorporated CR Rel-14 36.331 14.4.0 3081 - A LTE\_CA\_TDD\_FDD-Core

[R2-1710553](file:///C:\Data\3GPP\Extracts\36306_CR1510_(Rel-13)_R2-1710553%20capabilities%20for%20tx%20antenna%20selection.doc) UE capabilities for Tx antenna selection Qualcomm Incorporated CR Rel-13 36.306 13.7.0 1510 - F LTE\_CA\_TDD\_FDD-Core

[R2-1710554](file:///C:\Data\3GPP\Extracts\36306_CR1511_(Rel-14)_R2-1710554%20capabilities%20for%20tx%20antenna%20selection.doc) UE capabilities for Tx antenna selection Qualcomm Incorporated CR Rel-14 36.306 14.4.0 1511 - A LTE\_CA\_TDD\_FDD-Core

[R2-1711276](file:///C:\Data\3GPP\Extracts\36331_CR3097_(Rel-10)_R2-1711276%20MIMO%20spatial%20multiplexing%20continuity.doc) MIMO spatial multiplexing continuity Nokia, Nokia Shanghai Bell CR Rel-10 36.331 10.21.0 3097 - F TEI10

[R2-1711277](file:///C:\Data\3GPP\Extracts\36331_CR3098_(Rel-11)_R2-1711277%20MIMO%20spatial%20multiplexing%20continuity.doc) MIMO spatial multiplexing continuity Nokia, Nokia Shanghai Bell CR Rel-11 36.331 11.18.0 3098 - A TEI10

[R2-1711278](file:///C:\Data\3GPP\Extracts\36331_CR3099_(Rel-12)_R2-1711278%20MIMO%20spatial%20multiplexing%20continuity.doc) MIMO spatial multiplexing continuity Nokia, Nokia Shanghai Bell CR Rel-12 36.331 12.15.0 3099 - A TEI10

[R2-1711279](file:///C:\Data\3GPP\Extracts\36331_CR3100_(Rel-13)_R2-1711279%20MIMO%20spatial%20multiplexing%20continuity.doc) MIMO spatial multiplexing continuity Nokia, Nokia Shanghai Bell CR Rel-13 36.331 13.7.0 3100 - A TEI10

[R2-1711280](file:///C:\Data\3GPP\Extracts\36331_CR3101_(Rel-14)_R2-1711280%20MIMO%20spatial%20multiplexing%20continuity.doc) MIMO spatial multiplexing continuity Nokia, Nokia Shanghai Bell CR Rel-14 36.331 14.4.0 3101 - A TEI10

New CRs related to incoming LS ([R2-1710056](file:///C:\Data\3GPP\Extracts\R2-1710056_R5-175165.doc)) from RAN5 on DCI monitoring subframe for eIMTA

[R2-1711990](file:///C:\Data\3GPP\Extracts\draft_36331_CR3123_(Rel-12)_R2-1711990_eIMTA.doc) DCI monitoring subframes for eIMTA Huawei, HiSilicon CR Rel-12 36.331 LTE\_TDD\_eIMTA-Core 3123 F

=> Agreed in principle

R2-1711991 DCI monitoring subframes for eIMTA Huawei, HiSilicon CR Rel-13 36.331 LTE\_TDD\_eIMTA-Core 3124 A

=> Agreed in principle

R2-1711992 DCI monitoring subframes for eIMTA Huawei, HiSilicon CR Rel-14 36.331 LTE\_TDD\_eIMTA-Core 3125 A

=> Agreed in principle

[R2-1711844](file:///C:\Data\3GPP\Extracts\R2-1711844.doc) [DRAFT] [Reply LS on Seeking clarification on DCI monitoring subframe for eIMTA] Huawei LS out To:RAN5 Cc:RAN4

=> Approved in R2-1712036

# 7 LTE: Rel-13

## 7.1 WI: Further LTE Physical Layer Enhancements for MTC

(LTE\_MTCe2\_L1-Core, leading WG: RAN1, REL-13; started: Sep. 14, closed: Mar. 16, WID: [RP-150492](file:///C:\Data\3GPP\Extracts\RP-150492.doc))

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

Including output from email discussion [99#40][MTC] UE in CE (Intel)

[R2-1710534](file:///C:\Data\3GPP\Extracts\R2-1710534%20-%20SI%20accumulation%20over%20SI%20windows%20in%20Rel-14%2036.331.doc) SI accumulation over SI windows Ericsson CR Rel-14 36.331 14.4.0 3078 - A LTE\_MTCe2\_L1-Core To:RAN2

[R2-1710535](file:///C:\Data\3GPP\Extracts\R2-1710535%20-%20SI%20accumulation%20over%20SI%20windows%20in%20Rel-13%2036.331.doc) SI accumulation over SI windows Ericsson CR Rel-13 36.331 13.7.0 3079 - F LTE\_MTCe2\_L1-Core To:RAN2, RAN4

[R2-1710645](file:///C:\Data\3GPP\Extracts\R2-1710645_EmailDisc-40_CE.doc) Email discussion report on [99#40][MTC] UE in CE Intel Corporation discussion Rel-13 LTE\_MTCe2\_L1-Core To:RAN2

[R2-1710646](file:///C:\Data\3GPP\Extracts\36331_CR3082_(REL-13)_R2-1710646.doc) Clarifications for a UE in coverage enhancement Intel Corporation CR Rel-13 36.331 13.7.0 3082 - F LTE\_MTCe2\_L1-Core To:RAN4 Cc:RAN2

[R2-1710647](file:///C:\Data\3GPP\Extracts\36331_CR3083_(REL-14)_R2-1710647.doc) Clarifications for a UE in coverage enhancement Intel Corporation CR Rel-14 36.331 14.4.0 3083 - A LTE\_MTCe2\_L1-Core To:RAN2 Cc:RAN4

[R2-1711209](file:///C:\Data\3GPP\Extracts\R2-1711209.doc) Paging monitoring in RRC\_CONNECTED in Rel-13 MTC Huawei, HiSilicon discussion Rel-13 LTE\_feMTC-Core [R2-1709726](file:///C:\Data\3GPP\Extracts\R2-1709726%20Discussion%20on%20paging%20monitoring%20in%20RRC_CONNECTED%20in%20Rel-13%20MTC.doc) To:RAN1 Cc:RAN2

[R2-1711210](file:///C:\Data\3GPP\Extracts\R2-1711210.doc) Corrections on paging monitoring in RRC\_CONNECTED in Rel-13 eMTC Huawei, HiSilicon CR Rel-13 36.331 13.7.0 3045 - F LTE\_feMTC-Core [R2-1709385](file:///C:\Data\3GPP\Extracts\36331_CR3045_(Rel-13)_R2-1709385_Corrections%20on%20paging%20monitoring%20in%20RRC_CONNECTED%20in%20Rel-13%20eMTC%20and%20NB-IoT.doc) To:RAN2 Cc:RAN4

[R2-1711211](file:///C:\Data\3GPP\Extracts\R2-1711211.doc) Corrections on paging monitoring in RRC\_CONNECTED in Rel-13 eMTC Huawei, HiSilicon CR Rel-14 36.331 14.4.0 3046 - A LTE\_feMTC-Core [R2-1709386](file:///C:\Data\3GPP\Extracts\36331_CR3046_(Rel-14)_R2-1709386_Corrections%20on%20paging%20monitoring%20in%20RRC_CONNECTED%20in%20Rel-13%20eMTC%20and%20NB-IoT.doc) To:SA2 Cc:RAN2

[R2-1711212](file:///C:\Data\3GPP\Extracts\R2-1711212.doc) Corrections on paging monitoring in RRC\_CONNECTED in Rel-13 eMTC Huawei, HiSilicon CR Rel-13 36.300 13.9.0 1054 - F LTE\_feMTC-Core [R2-1709387](file:///C:\Data\3GPP\Extracts\36300_CR1054_(Rel-13)_R2-1709387_Corrections%20on%20paging%20monitoring%20in%20RRC_CONNECTED%20in%20Rel-13%20eMTC%20and%20NB-IoT.doc) To:RAN2, SA5

[R2-1711213](file:///C:\Data\3GPP\Extracts\R2-1711213.doc) Corrections on paging monitoring in RRC\_CONNECTED in Rel-13 eMTC Huawei, HiSilicon CR Rel-14 36.300 14.4.0 1055 - A LTE\_feMTC-Core [R2-1709388](file:///C:\Data\3GPP\Extracts\36300_CR1055_(Rel-14)_R2-1709388_Corrections%20on%20paging%20monitoring%20in%20RRC_CONNECTED%20in%20Rel-13%20eMTC%20and%20NB-IoT.doc) To:RAN2

[R2-1711230](file:///C:\Data\3GPP\Extracts\R2-1711230.doc) Corrections on field description of cellSelectionInfoCE for eMTC Huawei, HiSilicon, CMCC CR Rel-13 36.331 13.7.0 3095 - F LTE\_feMTC-Core To:RAN2 Cc:RAN1

[R2-1711231](file:///C:\Data\3GPP\Extracts\R2-1711231.doc) Corrections on field description of cellSelectionInfoCE for eMTC Huawei, HiSilicon, CMCC CR Rel-14 36.331 14.4.0 3096 - A LTE\_feMTC-Core To:RAN2

[R2-1711232](file:///C:\Data\3GPP\Extracts\R2-1711232.doc) Corrections on TS 36.302 for Rel-13 eMTC Huawei, HiSilicon CR Rel-13 36.302 13.6.0 0116 - F LTE\_feMTC-Core To:RAN2 Cc:RAN1

[R2-1711233](file:///C:\Data\3GPP\Extracts\R2-1711233.doc) Corrections on TS 36.302 for Rel-13 eMTC Huawei, HiSilicon CR Rel-14 36.302 14.3.0 0117 - A LTE\_feMTC-Core To:RAN2 Cc:RAN1

[R2-1711456](file:///C:\Data\3GPP\Extracts\R2-1711456%20-%20Radio%20paging%20capability.doc) Paging failure for CE capable UEs Qualcomm Incorporated discussion To:RAN2 Cc:RAN1

[R2-1711464](file:///C:\Data\3GPP\Extracts\R2-1711464_36331_CR3037_r1(Rel-14)-FeMTC_PBCH_repetition.doc) Target cell optional PBCH repetition status indication Qualcomm Incorporated CR Rel-14 36.331 14.4.0 3037 - F LTE\_feMTC-Core [R2-1709289](file:///C:\Data\3GPP\Extracts\R2-1709289_36331_CR3037_(Rel-14)-FeMTC_PBCH_repetition.doc) To:RAN2

[R2-1711511](file:///C:\Data\3GPP\Extracts\R2-1711511_36331_CR3116_r0(Rel-14)-CE%20Mode%20ndication.doc) CE Mode Indication Qualcomm Incorporated CR Rel-14 36.331 14.4.0 3116 - F LTE\_feMTC-Core To:RAN1 Cc:RAN2

[R2-1711644](file:///C:\Data\3GPP\Extracts\36331_CR3119_R2-1711644-%20FGI4%20for%20Cat%20M1.doc) Aligment of FGI4 (Short DRX) for Cat M1 Ericsson CR Rel-13 36.331 13.7.0 3119 - F LTE\_MTCe2\_L1-Core To:RAN2 Cc:RAN1

[R2-1711645](file:///C:\Data\3GPP\Extracts\36331_CR3120_R2-1711645-%20FGI4%20for%20Cat%20M1%20and%20M2.doc) Aligment of FGI4 (Short DRX) for Cat M1 and M2 Ericsson CR Rel-14 36.331 14.4.0 3120 - F LTE\_MTCe2\_L1-Core To:RAN1, RAN2

[R2-1711660](file:///C:\Data\3GPP\Extracts\R2-1711660.doc) Correction on starting subframe of MPDCCH repetition for Paging NTT DOCOMO INC. CR Rel-13 36.304 13.7.0 0390 - F LTE\_MTCe2\_L1-Core To:RAN1 Cc:RAN2

[R2-1711661](file:///C:\Data\3GPP\Extracts\R2-1711661.doc) Correction on starting subframe of MPDCCH repetition for Paging NTT DOCOMO INC. CR Rel-14 36.304 14.4.0 0391 - A LTE\_MTCe2\_L1-Core To:RAN2 Cc:RAN1

## 7.2 WI: Narrowband IOT

(NB\_IOT-Core; leading WG: RAN1; started: Sep. 15; target: Jun. 16; WID: [RP-152284](file:///C:\Data\3GPP\Extracts\RP-152284.docx))

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

## 7.3 Other LTE Rel-13 WIs

Including corrections related to the following WIs:

(LTE\_LAA-Core, leading WG: RAN1, REL-13; started: June 15, closed: Dec. 15, WID: [RP-151045](file:///C:\Data\3GPP\Extracts\RP-151045.doc))

(LTE\_CA\_enh\_b5C-Core, leading WG: RAN1, REL-13; started: Dec. 14, closed: Dec. 15, WID: [RP-151984](file:///C:\Data\3GPP\Extracts\RP-151984.doc))

(LTE\_SC\_PTM-Core, leading WG: RAN2, REL-13; started: June 15, closed: Dec. 15, WID: [RP-151110](file:///C:\Data\3GPP\Extracts\RP-151110%20New%20WI%20proposal%20on%20SC-PTM%20v3.doc))

(LTE\_eD2D\_Prox-Core, leading WG: RAN2, REL-13; started: Dec. 14, closed: Mar. 16, WID: [RP-150441](file:///C:\Data\3GPP\Extracts\RP-150441%20Revised%20WID%20Enhanced%20LTE%20Device%20to%20Device%20Proximity%20Services.doc))

(LTE\_MC\_load-Core, leading WG: RAN2, started: Mar. 15, closed: Dec. 15, WID: [RP-152181](file:///C:\Data\3GPP\Extracts\RP-152181%20Revised%20WI%20Multicarrier%20Load%20Distribution%20of%20UEs%20in%20LTE.doc))

(LTE\_dualC\_enh-Core, leading WG: RAN2, started: Mar. 15, closed: Dec. 15, WID: [RP-151739](file:///C:\Data\3GPP\archive\TSGR\TSGR_70\Docs\RP-151739.zip))

(LTE\_extDRX-Core; leading WG: RAN2; started: Mar. 15; closed: Mar. 16; WID: [RP-150493](file:///C:\Data\3GPP\Extracts\RP-150493-WID_Extended-DRX.doc))

(LTE\_EBF\_FDMIMO-Core; leading WG: RAN1; started: June. 15; closed: Dec. 15; WID: [RP-151085](file:///C:\Data\3GPP\Extracts\RP-151085%20WID_EBF_FD-MIMO.doc))

(LTE\_eMDT2-Core; leading WG: RAN2; started: Sep. 15; closed: Dec 15; WID: [RP-151611](file:///C:\Data\3GPP\Extracts\RP-151611.docx))

(UTRA\_LTE\_iPos\_enh-Core; leading WG: RAN2; started: Sep. 15; closed: Dec 15; WID: [RP-152251](file:///C:\Data\3GPP\Extracts\RP-152251%20(revision%20of%20RP-152008)%20Revised%20work%20item%20proposal%20Positioning%20enhancements%20for%20UTRA%20and%20LTE.doc))

(LTE\_WLAN\_radio-Core, leading WG: RAN2, started: Mar. 15, closed: Mar. 16, WID: [RP-152213](file:///C:\Data\3GPP\Extracts\RP-152213%20Revised-LTE-WIFI-WI-RAN-70-v2.doc))

(LTE\_WLAN\_radio\_legacy-Core; leading WG: RAN2; started: Sep. 15; closed: Mar 15; WID: [RP-151615](file:///C:\Data\3GPP\archive\TSGR\TSGR_69\Docs\RP-151615.zip))

Including any LTE corrections related to the following joint UMTS/LTE WIs:

(ACDC-RAN-Core; leading WG: RAN2; REL-13; started: Mar. 15; closed: Dec. 15; [RP-150662](file:///C:\Data\3GPP\Extracts\RP-150662%20RAN%20ACDC%20WID%20Rev.doc))

Including output from email discussion [99#19][LTE/CA] Unnecessary mandatory IE in UE capability signalling (Intel)

[R2-1711444](file:///C:\Data\3GPP\Extracts\R2-1711444_36331_CR3106_r0(Rel-13)-Maximum%20SC-PTM%20service.doc) Define requirement for reception of number of simultaneous SC-PTM services Qualcomm Incorporated CR Rel-13 36.331 13.7.0 3106 - F LTE\_SC\_PTM-Core

[R2-1711453](file:///C:\Data\3GPP\Extracts\R2-1711453_36331_CR3108_r0(Rel-14)-Maximum%20SC-PTM%20service.doc) Define requirement for reception of number of simultaneous SC-PTM services Qualcomm Incorporated CR Rel-14 36.331 14.4.0 3108 - A LTE\_SC\_PTM-Core

[R2-1711467](file:///C:\Data\3GPP\Extracts\36.331_CR3111_R2-1711467%20Clarification%20on%20csi-RS-ConfigNZPId.doc) Clarification on csi-RS-ConfigNZPId Qualcomm Korea CR Rel-13 36.331 13.7.0 3111 - F LTE\_EBF\_FDMIMO-Core

[R2-1711471](file:///C:\Data\3GPP\Extracts\36.331_CR3112_R2-1711471%20Clarification%20on%20csi-RS-ConfigNZPId.doc) Clarification on csi-RS-ConfigNZPId Qualcomm Korea CR Rel-14 36.331 14.4.0 3112 - A LTE\_EBF\_FDMIMO-Core

[R2-1711621](file:///C:\Data\3GPP\Extracts\R2-1711621.doc) Discussion on SFN mismatch issue NTT DOCOMO INC. discussion LTE\_extDRX-Core

- MediaTek think this is an issue to be addressed. Huawei also agree.

- Qualcomm think this is an issue but should be addressed by UE implementation as agreed before.

- Qualcomm think for solution 3 the flag must remain set for the eDRX period. Wonders what happens if there is another reset while the flag is set.

- Samsung prefer to stay with the agreement from last time to rely on UE implementation.

- DOCOMO think if it is left to implementation then operator cannot control this issue.

- MediaTek think there needs to be something in UE to reacquire MIB regularly and a really aggressive UE that doesn't acquire MIB could have problems.

=> Capture the problem in the specification and that UE implementations are expected to handle it in some way. Wording and spec in which it is captured to be progressed offline. Offline discussion #02 (DOCOMO)

[R2-1712002](file:///C:\Data\3GPP\Extracts\R2-1712002.doc) SFN desynchronizaion between eNB and eDRX UE NTT DOCOMO, INC. CR Rel-14 36.331 3126 F LTE\_extDRX-Core

=> Agreed in principle

[R2-1711671](file:///C:\Data\3GPP\Extracts\R2-1711671.doc) Paging failure for CE mode capable UE NTT DOCOMO INC. discussion TEI13

- Nokia do not understand the exact problem as the network can get the UE capabilities when the TAU is performed.

- DOCOMO think there is a problem when TAU is implemented without active flag and so eNB doesn’t receive initial context setup request.

- Qualcomm think the problem is only for UEs that don’t support CE mode B. Think the network based approach means that eNB will have to request capabilities for all UEs that don’t support CE mode B. For CE mode B there is a flag in the Connection Setup Complete that is already provided to the MME can be used by the network

- LG think there is no need for a UE based solution. Don't see why MME can no request the UE capability from those UEs that might have a problem.

- Ericsson agree with the Qualcomm explanation. Think it is a benefit to transfer the UE capabilities at the TAU as it then avoids the need to transfer the UE capabilities in the case of service request later.

- Huawei think that the network solution is anyway needed to solve the legacy UEs and the UE solution is a possible optimisation on top.

=> RAN2 see that a network based solution is required.

=> Offline discussion whether a UE based solution is also feasible and beneficial (Offline discussion #03, Qualcomm)

=> Draft LS in R2-1711875 (Qualcomm)

[R2-1711875](file:///C:\Data\3GPP\Extracts\R2-1711875%20response%20LS%20on%20paging%20failure.doc) [DRAFT] [LS on Paging failure for CE mode capable UE] NTT DOCOMO, Inc. LS out Rel-13 LTE\_extDRX-Core

=> WI code changed to TEI13

=> Approved in R2-1712064

[R2-1711281](file:///C:\Data\3GPP\Extracts\R2-1711281%20UL%20CA%20IDC%20clarification.docx) UL CA IDC clarification Nokia, Nokia Shanghai Bell discussion SPIA\_IDC\_LTE-Core

moved from 6 to 7.3

[R2-1711282](file:///C:\Data\3GPP\Extracts\36331_CR3102_(Rel-13)_R2-1711282%20Correction%20to%20UL%20CA%20IDC%20problem%20signalling.doc) Correction to UL CA IDC problem signalling Nokia, Nokia Shanghai Bell CR Rel-13 36.331 13.7.0 3102 - F SPIA\_IDC\_LTE-Core

moved from 6 to 7.3

[R2-1711283](file:///C:\Data\3GPP\Extracts\36331_CR3103_(Rel-14)_R2-1711283%20Correction%20to%20UL%20CA%20IDC%20problem%20signalling.doc) Correction to UL CA IDC problem signalling Nokia, Nokia Shanghai Bell CR Rel-14 36.331 14.4.0 3103 - A SPIA\_IDC\_LTE-Core

moved from 6 to 7.3

# 8 LTE Rel-14

## 8.1 WI: Enhanced LAA for LTE

(LTE\_eLAA-Core; leading WG: RAN1; REL-14; started: Dec. 15; closed: Mar. 17; WID:[RP-162229](file:///C:\Data\3GPP\archive\TSGR\TSGR_74\Docs\RP-162229.zip))

This agenda item is for correction CRs to the closed WI.

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

[R2-1711662](file:///C:\Data\3GPP\Extracts\36331_CR3121_(Rel-14)_R2-1711662.doc) Correction to eLAA reconfiguration HTC Corporation CR Rel-14 36.331 14.4.0 3121 - F LTE\_eLAA-Core

## 8.2 WI: Support for V2V services based on LTE sidelink

(LTE\_SL\_V2V-Core; leading WG: RAN1; started: Dec. 15; closed: Sept 16; WID: [RP-161603](file:///C:\Data\3GPP\archive\TSGR\TSGR_73\Docs\RP-161603.zip))

This agenda item is for correction CRs to the closed WI.

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### 8.2.1 User plane

### 8.2.2 Control plane

## 8.3 Void

## 8.4 Void

## 8.5 WI: Enhanced LTE-WLAN Aggregation (eLWA)

(LTE\_WLAN\_aggr-Core; leading WG: RAN2; REL-14; started: Mar. 16; closed: Mar. 17; WID: [RP-160923](file:///C:\Data\3GPP\Extracts\RP-160923%20eLWA-WID.doc))

This agenda item is for correction CRs to the closed WI.

## 8.6 WI: Further mobility enhancements in LTE

(LTE\_eMob-Core; leading WG: RAN2; REL-14; started: Mar. 16; closed: Mar. 17; WID:[RP-162503](file:///C:\Data\3GPP\Extracts\RP-162503%20Revised%20WID%20Mobility%20enhancements%20for%20LTE.docx))

This agenda item is for correction CRs to the closed WI

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

## 8.7 WI: Further Indoor Positioning enhancements for UTRA and LTE

(UTRA\_LTE\_iPos\_enh2-Core; leading WG: RAN2; REL-14; started: Mar. 16; closed: Dec. 16; WID: [RP-162026](file:///C:\Data\3GPP\Extracts\RP-162026_Revised%20Work%20Item_Further%20Indoor%20Positioning%20enhancements.doc))

This agenda item is for correction CRs to the closed WI

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## 8.8 WI: L2 latency reduction techniques for LTE

(LTE\_LATRED\_L2-Core; leading WG: RAN2; REL-14; started: Mar. 16; closed: Sep. 16; WID: [RP-160667](file:///C:\Data\3GPP\Extracts\RP-160667%20L2%20New%20WID%20for%20L2%20latency%20reduction%20techniques%20for%20LTE.doc))

This agenda item is for correction CRs to the closed WI

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

## 8.9 Void

## 8.10 WI: eMBMS enhancements for LTE

(MBMS\_LTE\_enh2-Core; leading WG: RAN1; REL-14; started: Mar. 16; closed: Sep. 17; WID:[RP-162231](file:///C:\Data\3GPP\Extracts\RP-162231%20updated%20WID%20eMBMS%20enhancements%20for%20LTE.doc))

This agenda item is for correction CRs to the closed WI

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

[R2-1710038](file:///C:\Data\3GPP\Extracts\R2-1710038_R4-1708663.doc) LS on MBSFN RSRP/RSRQ measurement mapping for FeMBMS (R4-1708663; contact: Qualcomm) RAN4 LS in Rel-14 MBMS\_LTE\_enh2-Core To:RAN2, RAN4

[R2-1711611](file:///C:\Data\3GPP\Extracts\36331_CR3118_Rev0_(REL-14)_R2-1711611_FeMBMS_RSRP_Ranges.doc) MBSFN RSRP/RSRQ measurement mapping for FeMBMS Qualcomm Incorporated CR Rel-14 36.331 14.4.0 3118 - F MBMS\_LTE\_enh2-Core To:CT1 Cc:SA2, RAN2

[R2-1711617](file:///C:\Data\3GPP\Extracts\36300_CR1069_Rev0_(REL-14)_R2-1711617_FeMBMS_Reference_Signals.doc) Reference Signals for MBSFN with 1.25kHz and 7.5khz sub-carrier spacing Qualcomm Incorporated CR Rel-14 36.300 14.4.0 1069 - F MBMS\_LTE\_enh2-Core To:SA, RAN1, RAN2, RAN3, RAN4, RAN5 Cc:CT, RAN6

## 8.11 WI: Enhancements of NB-IoT

(NB\_IOTenh-Core; leading WG: RAN1; REL-14; started: June 16; closed: Jun. 17; WID: [RP-171060](file:///C:\Data\3GPP\Extracts\RP-171060.doc))

This agenda item is for correction CRs to the closed WI

Note: SC-PTM for eNB-IoT is handled under 8.12.1

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[R2-1710064](file:///C:\Data\3GPP\Extracts\R2-1710064_S2-176130.doc) Reply LS on Solution 9 (Option 2) for CN overload control for CP data (S2-176130; contact: Qualcomm) SA2 LS in Rel-14 CIoT\_Ext To:RAN4, RAN2 Cc:RAN1, RAN3

[R2-1710733](file:///C:\Data\3GPP\Extracts\R2-1710733%20Interference%20Randomisation%20in%20NB-IoT.doc) Interference Randomisation in NB-IoT Ericsson discussion Rel-14 NB\_IOTenh-Core To:RAN1 Cc:RAN2, RAN4

[R2-1710734](file:///C:\Data\3GPP\Extracts\R2-1710734%20Clarification%20on%20Interference%20Randomisation%20in%20NB-IoT%20in%2036.331.doc) Clarification on Interference Randomisation in NB-IoT in 36.331 Ericsson, Qualcomm Incorporated CR Rel-14 36.331 14.4.0 3090 - F NB\_IOTenh-Core To:SAE DSRC Technical Committee Cc:SA2, RAN2, RAN1, SAE Cellular V2X Technical Committee

[R2-1710747](file:///C:\Data\3GPP\Extracts\R2-1710747%20Open%20issue%20RAI.doc) Open issue RAI Ericsson discussion Rel-14 NB\_IOTenh-Core To:CT1, SA2, RAN2 Cc:CT6

[R2-1710748](file:///C:\Data\3GPP\Extracts\R2-1710748%20Removal%20of%20FFS%20for%20RAI%20in%2036.321.doc) Removal of FFS for RAI in 36.321 Ericsson CR Rel-14 36.321 14.4.0 1186 - F NB\_IOTenh-Core To:RAN2, CT1

[R2-1711335](file:///C:\Data\3GPP\Extracts\R2-1711335_Carrier_index_in_PDCCH_order.doc) Clarification on carrier index in PDCCH order Huawei, HiSilicon CR Rel-14 36.321 14.4.0 1188 - F NB\_IOTenh-Core To:CT1, RAN3, RAN2

[R2-1711472](file:///C:\Data\3GPP\Extracts\36331_CR3113_(Rel-14)_R2-1711472_Correction%20to%20UE-Capability-NB%20extension.docx) Correction to UE-Capability-NB extension Sequans Communications CR Rel-14 36.331 14.4.0 3113 - F NB\_IOTenh-Core To:RAN2, RAN3

## 8.12 WI: Further Enhanced MTC for LTE

(LTE\_feMTC-Core; leading WG: RAN1; REL-14; started: June 16; closed: Jun. 17; WID: [RP-170532](file:///C:\Data\3GPP\Extracts\RP-170532%20Revised%20WID%20for%20Further%20Enhanced%20MTC.doc))

This agenda item is for correction CRs to the closed WI

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[R2-1711362](file:///C:\Data\3GPP\Extracts\R2-1711362.doc) Correction of reference for kPHICH value Ericsson India Private Limited CR Rel-14 36.321 14.4.0 1189 - F LTE\_feMTC-Core To:RAN, RAN1, RAN2, RAN3 Cc:SA3, CT1

=> WI code should be TEI14

=> Agreed in principle

[R2-1711840](file:///C:\Data\3GPP\Extracts\36331_CR3122_(REL-14)_R2-1711840_CR%20Scheduling%20info%20of%20SIB1-BR.doc) Scheduling information of SIB1-BR when skipping MIB during HO Intel Corporation CR Rel-14 36.331 14.4.0 3122 - F LTE\_feMTC-Core

### 8.12.1 Multicast for feMTC and eNB-IoT

[R2-1711224](file:///C:\Data\3GPP\Extracts\R2-1711224.doc) Correction on downlink reception type combination for SC-PTM in feMTC Huawei, HiSilicon CR Rel-14 36.302 14.3.0 0115 - F LTE\_feMTC-Core To:RAN2, RAN3

[R2-1711226](file:///C:\Data\3GPP\Extracts\R2-1711226.doc) Correction on TS 36.331 for feMTC and NB-IoT Huawei, HiSilicon CR Rel-14 36.331 14.4.0 3094 - F LTE\_feMTC-Core, NB\_IOTenh-Core

[R2-1711473](file:///C:\Data\3GPP\Extracts\DRAFT_36331_CR3114_(REL-14)_R2-1711473_CR%20Clarification%20on%20srs-UpPtsAdd.doc) Clarification on srs-UpPtsAdd in SRS coverage enhancement Intel Corporation CR Rel-14 36.331 14.4.0 3114 - F LTE\_feMTC-Core

moved from 8.2 to 8.12

### 8.12.2 Other

[R2-1710893](file:///C:\Data\3GPP\Extracts\36331_CR3089_(Rel-14)_R2-1710893_CR%20timer%20for%20eMTC.doc) Extension of mac-ContentionResolutionTimer for FeMTC Nokia, Nokia Shanghai Bell CR Rel-14 36.331 14.4.0 3089 - F LTE\_feMTC-Core

[R2-1711225](file:///C:\Data\3GPP\Extracts\R2-1711225.doc) Minor correction on the IE of pusch-EnhancementsConfig in feMTC Huawei, HiSilicon CR Rel-14 36.321 14.4.0 1187 - F LTE\_MTCe2\_L1-Core

[R2-1711227](file:///C:\Data\3GPP\Extracts\R2-1711227.doc) Correction on TS 36.300 for feMTC Huawei, HiSilicon CR Rel-14 36.300 14.4.0 1066 - F LTE\_MTCe2\_L1-Core

[R2-1711228](file:///C:\Data\3GPP\Extracts\R2-1711228.doc) Discussion on the correction in TS 36.355 for feMTC Huawei, HiSilicon discussion Rel-14 LTE\_MTCe2\_L1-Core

[R2-1711229](file:///C:\Data\3GPP\Extracts\R2-1711229.doc) Corrections on TS 36.355 for feMTC Huawei, HiSilicon CR Rel-14 36.355 14.3.0 0187 - F LTE\_MTCe2\_L1-Core

## 8.13 WI: LTE-based V2X Services

(LTE\_V2X-Core, leading WG: RAN1; REL-14; started: June 16; closed: Mar. 17; WID: [RP-162519](file:///C:\Data\3GPP\archive\TSGR\TSGR_74\Docs\RP-162519.zip))

This agenda item is for correction CRs to the closed WI

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

[R2-1710063](file:///C:\Data\3GPP\RAN2\Docs\R2-1710063.zip) Reply LS on mapping between service types and V2X frequencies (S2-174064; contact: Huawei) SA2 LS in Rel-14 V2XARC To:RAN2, CT1

### 8.13.1 Stage 2

[R2-1710098](file:///C:\Data\3GPP\Extracts\36300_CR1062_(REL-14)_R2-1710098_Corrections%20to%20V2X%20in%20TS%2036.300.doc) Corrections to V2X in TS 36.300 Huawei, HiSilicon CR Rel-14 36.300 14.4.0 1062 - F LTE\_V2X-Core

[R2-1710099](file:///C:\Data\3GPP\Extracts\36302_CR0114_(REL-14)_R2-1710099_Correction%20to%20V2X%20descriptions%20in%20TS%2036.302.doc) Correction to V2X descriptions in TS 36.302 Huawei, HiSilicon CR Rel-14 36.302 14.3.0 0114 - F LTE\_V2X-Core

[R2-1711492](file:///C:\Data\3GPP\Extracts\36300_CR1067_(Rel-14)_R2-1711492%20-%20Clarification%20to%20Mapping%20Between%20Service%20Types%20and%20V2X%20Frequencies.doc) Clarification to Mapping Between Service Types and V2X Frequencies Ericsson CR Rel-14 36.300 14.4.0 1067 - F LTE\_V2X-Core

### 8.13.2 User plane

[R2-1711687](file:///C:\Data\3GPP\Extracts\36321_CR(1190)_(REL-14)_R2-1711687_Corrections%20to%20V2X%20functionality.doc) Corrections to V2X functionality LG Electronics Inc. CR Rel-14 36.321 14.4.0 1190 - F LTE\_V2X-Core

### 8.13.3 Control plane

[R2-1710100](file:///C:\Data\3GPP\Extracts\36331_CR3072_(REL-14)_R2-1710100_Correction%20to%20Inter-frequency%20reception%20for%20V2X%20sidelink%20communication.doc) Correction to Inter-frequency reception for V2X sidelink communication Huawei, HiSilicon CR Rel-14 36.331 14.4.0 3072 - F LTE\_V2X-Core To:RAN1

[R2-1710153](file:///C:\Data\3GPP\Extracts\36331_CR3073_(REL-14)_R2-1710153_CR%20on%20SIB21%20reading.docx) CR on SIB21 reading OPPO, Qualcomm Incorporated CR Rel-14 36.331 14.4.0 3073 - F LTE\_V2X-Core

[R2-1710686](file:///C:\Data\3GPP\Extracts\R2-1710686-CR_36.331%20Correction%20on%20transmisison%20in%20Exceptional%20Pool%20for%20P-UE.doc) Transmission of P2X sidelink communication in Exceptional Pool Qualcomm Incorporated CR Rel-14 36.331 14.4.0 3084 - F LTE\_V2X-Core

[R2-1710687](file:///C:\Data\3GPP\Extracts\R2-1710687-CR_36.331%20Correction%20on%20%20Subframe%20Bitmap%20Configuration.doc) Correction on SubframeBitmap Configuration in Band 47 Qualcomm Incorporated CR Rel-14 36.331 14.4.0 3085 - F LTE\_V2X-Core

[R2-1710688](file:///C:\Data\3GPP\Extracts\R2-1710688-Discussion%20on%20UE%20behavior%20for%20using%20provisioned%20ITS%20carrier.doc) UE behavior for using provisioned ITS carrier Qualcomm Incorporated discussion LTE\_V2X-Core

[R2-1710689](file:///C:\Data\3GPP\Extracts\R2-1710689-CR_36.331%20Correction%20on%20Transmission%20of%20V2X%20sidelink%20communication%20in%20provisioned%20carriers.doc) Correction on transmission of V2X sidelink communication in provisioned frequency Qualcomm Incorporated CR Rel-14 36.331 14.4.0 3086 - F LTE\_V2X-Core

[R2-1711448](file:///C:\Data\3GPP\Extracts\36331_CR3010_(REL-14)_R2-1711448_UE_cap.doc) Correction to UE capabilities Nokia, Nokia Shanghai Bell CR Rel-14 36.331 14.4.0 3107 - F LTE\_V2X-Core

## 8.14 WI: SRS switching between LTE component carriers

(LTE\_SRS\_switch; leading WG: RAN1; REL-14; started: Mar.16: closed: Dec. 16; WID: [RP-160935](file:///C:\Data\3GPP\Extracts\RP-160935%20WI%20on%20SRS%20carrier%20switching.doc))

This agenda item is for correction CRs to the closed WI

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

[R2-1710891](file:///C:\Data\3GPP\Extracts\36331_CR3088_(Rel-14)_R2-1710891%20Correction%20on%20SRS%20switching%20capabilities%20field%20description.doc) Correction on SRS switching capabilities field description Qualcomm Incorporated CR Rel-14 36.331 14.4.0 3088 - F LTE\_SRS\_switch

## 8.15 WI: Measurement Gap Enhancement for LTE

(LTE\_meas\_gap\_enh-Core; leading WG: RAN4; REL-14; started: Mar. 16; closed: Jun. 17; WID: [RP-160912](file:///C:\Data\3GPP\Extracts\RP-160912.doc))

This agenda item is for correction CRs to the closed WI

[R2-1711466](file:///C:\Data\3GPP\Extracts\36.331_CR3110_R2-1711466%20Signaling%20of%20NCSG%20for%20Inter-F%20Measurement.doc) Signaling of NCSG Support for Inter-F Measurement Qualcomm Korea CR Rel-14 36.331 14.4.0 3110 - B LTE\_meas\_gap\_enh-Core

## 8.16 Void

## 8.17 WI: Performance enhancements for high speed scenario in LTE

(LTE\_high\_speed-Core; leading WG: RAN4; REL-14; started: Dec. 15. 16; closed: Dec. 16; WID: [RP-160172](file:///C:\Data\3GPP\archive\TSGR\TSGR_71\Docs\RP-160172.zip))

This agenda item is for correction CRs to the closed WI

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

## 8.18 WI: Voice and Video enhancement for LTE

(LTE\_VoLTE\_ViLTE\_enh; leading WG: RAN2; REL-14; started: Sep. 16; closed: Mar. 17: WID: [RP-161856](file:///C:\Data\3GPP\archive\TSGR\TSGR_73\Docs\RP-161856.zip))

This agenda item is for correction CRs to the closed WI.

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

## 8.19 New UE category with single receiver based on Category 1 for LTE

(LTE\_UE\_cat\_1Rx-Core; leading WG: RAN4; REL-14; started: Sep. 16; closed: Jun. 17: WID: [RP-171149](file:///C:\Data\3GPP\archive\TSGR\TSGR_76\Docs\RP-171149.zip))

This agenda item is for correction CRs to the closed WI.

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

## 8.20 Uplink Capacity Enhancements for LTE

LTE\_UL\_CAP\_enh-Core; leading WG: RAN1; REL-14; started: Mar. 16; closed: Mar. 17: WID: [RP-162488](file:///C:\Data\3GPP\Extracts\RP-162488%20WID.doc)

This agenda item is for correction CRs to the closed WI.

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

## 8.21 WI: Enhancements on Full-Dimension (FD) MIMO for LTE

(LTE\_eFD\_MIMO-Core; leading WG: RAN1; REL-14; started: Mar. 2016; closed: Mar. 17: WID: [RP-160623](file:///C:\Data\3GPP\Extracts\RP-160623%20WID_eFD-MIMO.doc))

This agenda item is for correction CRs to the closed WI.

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

[R2-1710041](file:///C:\Data\3GPP\Extracts\R2-1710041_R4-1708730.doc) Reply LS reply on TM10 / FD-MIMO UE capability signalling (R4-1708730; contact: Intel) RAN4 LS in Rel-14 LTE\_EBF\_FDMIMO-Core To:RAN2 Cc:RAN1

## 8.22 Void

## 8.23 WI: Downlink Multiuser Superposition Transmission for LTE

(LTE\_MUST-Core; leading WG: RAN1; REL-14; started: Mar. 16; closed: Dec. 16: WID: [RP-161019](file:///C:\Data\3GPP\archive\TSGR\TSGR_72\Docs\RP-161019.zip))

This agenda item is for correction CRs to the closed WI

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

[R2-1710040](file:///C:\Data\3GPP\Extracts\R2-1710040_R4-1708704.doc) Reply LS on LTE Rel-14 UE feature list for MUST (R4-1708704; contact: MediaTek) RAN4 LS in Rel-14 LTE\_MUST To:RAN2 Cc:RAN1

[R2-1710986](file:///C:\Data\3GPP\Extracts\36331_CR3091_(REL-14)_R2-1710986%20MUST%20capability.doc) MUST capability MediaTek Inc. CR Rel-14 36.331 14.4.0 3091 - F LTE\_MUST-Core

## 8.24 Other LTE Rel-14 WIs

This agenda item may be used for documents relating to Rel-14 WIs with no allocated RAN2 time but which might have minor RAN2 impact.

Including any LTE corrections related to the following joint UMTS/LTE WI:

(eDECOR-UTRA\_LTE-Core; leading WG: RAN3; REL-14; started: Dec. 16; closed: Mar. 17: WID: [RP-162543](file:///C:\Data\3GPP\archive\TSGR\TSGR_74\Docs\RP-162543.zip))

[R2-1711512](file:///C:\Data\3GPP\Extracts\36331%20CRxxxx_(REL-14)_R2-1711512%20on%20UE%20capability%20retrieval.docx) UE capability, retrieval of fallback combinations Samsung Telecommunications CR Rel-14 36.331 14.4.0 3117 - F LTE\_CA\_enh\_b5C-Core, TEI14

## 8.25 LTE TEI14 enhancements

Small Technical Enhancements affecting LTE Rel-14 that do not belong to any Rel-14 WI.

Note: A TEI enhancement proposal should be treated for only one meeting cycle and involve only one WG. Otherwise, a WI should be proposed at RAN plenary!

This agenda item is for items already discussed under TEI14. New proposals should be submitted to TEI15 which is planned to be included on the agenda from RAN2#100.

Including output from email discussion [99#20][LTE/TEI14] Overheating (Huawei)

Including output from email discussion [99#21][LTE/TEI14] CQI-ReportConfig (Nokia)

Overheating

[R2-1710559](file:///C:\Data\3GPP\Extracts\R2-1710559.doc) Report of email discussion [99#20][LTE/TEI14] Overheating Huawei discussion Rel-14 TEI14

Agreements:

1: The UE provides a reduced UE category and the preferred maximum number of CCs in the request.

[R2-1710555](file:///C:\Data\3GPP\Extracts\R2-1710555.doc) Introduction of the overheating indication Huawei Device, Huawei, HiSilicon, IPCom, Nokia, Nokia Shanghai Bell CR Rel-14 36.300 14.4.0 1048 3 B TEI14 [R2-1709908](file:///C:\Data\3GPP\Extracts\R2-1709908.doc)

- Ericsson also have a text proposal that would like to be considered to be merged into this CR.

=> Wording can be progress offline

=> Can discuss whether to capture the additional text from Ericsson paper.

=> Revised in R2-1711876 (Offline discussion #04)

[R2-1711876](file:///C:\Data\3GPP\Extracts\R2-1711876.doc) Introduction of the overheating indication Huawei Device, Huawei, HiSilicon, IPCom, Nokia, Nokia Shanghai Bell CR Rel-14 36.300 14.4.0 1048 4 B TEI14

=> Revised in R2-1712039

[R2-1712039](file:///C:\Data\3GPP\Extracts\R2-1712039.doc) Introduction of the overheating indication Huawei Device, Huawei, HiSilicon, IPCom, Nokia, Nokia Shanghai Bell CR Rel-14 36.300 14.4.0 1048 5 B TEI14

=> Agreed in principle

[R2-1710558](file:///C:\Data\3GPP\Extracts\R2-1710558.doc) Introduction of the overheating indication Huawei Device, Huawei, HiSilicon, IPCom CR Rel-14 36.331 14.4.0 2982 3 B TEI14 [R2-1709910](file:///C:\Data\3GPP\Extracts\R2-1709910.doc)

- Nokia think the note relating to user preference is not correct. Huawei explain that the user might not want to reduce the rate and would accept the overheating.

- Nokia wonder why the network needs to be involved at all if the user can override it.

- Intel think the stage 2 spec covers this issue and the note in stage 3 is not required.

- LG think the UE category should be explicit, not an AS release. Huawei think that the UE category can be indicated by indicating a release.

=> Note in initiation section can be removed.

=> Category should be indicated as an explicit UE category

=> Wording can be further improved offline.

=> Consider what information is passed from source to target at handover

=> Can discuss the exact inhibit timer behaviour.

=> Revised in R2-1711877 (Offline discussion #04, same as for stage 2 CR)

[R2-1711877](file:///C:\Data\3GPP\Extracts\R2-1711877.doc) Introduction of the overheating indication Huawei Device, Huawei, HiSilicon, IPCom CR Rel-14 36.331 14.4.0 2982 4 B TEI14

=> Revised in R2-1712040

[R2-1712040](file:///C:\Data\3GPP\Extracts\R2-1712040.doc) Introduction of the overheating indication Huawei Device, Huawei, HiSilicon, IPCom CR Rel-14 36.331 14.4.0 2982 5 B TEI14

=> Revised in R2-1712053

[R2-1712053](file:///C:\Data\3GPP\Extracts\R2-1712053.doc) Introduction of the overheating indication Huawei Device, Huawei, HiSilicon, IPCom CR Rel-14 36.331 14.4.0 2982 6 B TEI14

=> Agreed in principle

[R2-1710556](file:///C:\Data\3GPP\Extracts\R2-1710556.doc) Introduction of the UE capability for overheating indication Huawei Device, Huawei, HiSilicon, IPCom, Nokia, Nokia Shanghai Bell CR Rel-14 36.306 14.4.0 1490 3 B TEI14 [R2-1709909](file:///C:\Data\3GPP\Extracts\R2-1709909.doc)

=> Wording can be further improved offline.

=> Revised in R2-1711878 (Offline discussion #04, same as for stage 2 CR)

[R2-1711878](file:///C:\Data\3GPP\Extracts\R2-1711878.doc) Introduction of the UE capability for overheating indication Huawei Device, Huawei, HiSilicon, IPCom, Nokia, Nokia Shanghai Bell CR Rel-14 36.306 14.4.0 1490 4 B TEI14

=> Agreed in principle

[R2-1711537](file:///C:\Data\3GPP\Extracts\R2-1711537%20UE%20overheat.docx) Remaining issues for UE overheating feature Ericsson discussion Rel-14

TEI14

P1

- Huawei is ok to add this text to the stage 2. Intel think that the indication is sent when the UE can’t resolve the issue by itself. Ericsson think this was discussed previously and it was clear that the UE could not rely fully on the network. LG have the same view as Intel, and think the UE will not send this indication frequently. Also think UE behaviour cannot to be specified for this case.

P2

- Huawei think this is already addressed in the CR.

- Samsung think there are 2 parts the configuration and the indication

=> Noted

[R2-1710752](file:///C:\Data\3GPP\Extracts\R2-1710752_Prohibit%20timer%20for%20the%20overheating%20solution.doc) Prohibit timer for the overheating solution LG Electronics Mobile Research discussion TEI14 [R2-1708752](file:///C:\Data\3GPP\Extracts\R2-1708752_Prohibit%20timer%20for%20the%20overheating%20solution.doc)

=> Noted

CQI-ReportingConfig

[R2-1710993](file:///C:\Data\3GPP\Extracts\R2-1710993_Cleaning%20up%20CQI%20and%20CSI-RS-related%20configurations%20(related%20to%20Rel-14%20ASN.1%20review%20issue%20N.099)_36331_CR2968R3_(Rel-14).doc) Restructuring of CQI-ReportConfig (email discussion 99#21) Nokia, Nokia Shanghai Bell CR Rel-14 36.331 14.4.0 2968 2 F TEI14 [R2-1709813](file:///C:\Data\3GPP\Extracts\36331_CR2968R2_(Rel-14)_R2-1709813_Cleaning%20up%20CQI%20and%20CSI-RS-related%20configurations%20(related%20to%20Rel-14%20ASN.1%20review%20issue%20N.099).doc)

- Ericsson wonder if the exercise if really essential. Shall we continue on this track. Nokia intended this as a one-time activity.

=> Remove "part of"

=> Agreed in principle in R2-1711930

R2-1711930 Restructuring of CQI-ReportConfig (email discussion 99#21) Nokia, Nokia Shanghai Bell CR Rel-14 36.331 14.4.0 2968 3 F TEI14

=> Companies are requested to carefully check this CR before the next meeting.

Other

[R2-1710247](file:///C:\Data\3GPP\Extracts\36306_CR1508r1_R2-1710247%20Introduction%20of%20DL%202Gbps%20Category.doc) Introduction of DL 2Gbps Category Qualcomm Incorporated CR Rel-14 36.306 14.4.0 1508 - B TEI14 [RP-171823](file:///C:\Data\3GPP\Extracts\36306_CR1508_(Rel-14)_RP-171823.doc)

[R2-1710246](file:///C:\Data\3GPP\Extracts\36331_CR3071r1_R2-1710246%20Introduction%20of%20DL%202Gbps%20Category.doc) Introduction of DL 2Gbps Category Qualcomm Incorporated CR Rel-14 36.331 14.4.0 3071 - B TEI14 [RP-171822](file:///C:\Data\3GPP\Extracts\36331_CR3071_(Rel-14)_RP-171822.doc)

[R2-1711162](file:///C:\Data\3GPP\Extracts\R2-1711162_Correction%20on%20the%20dataInactivityTimer%20operation.docx) Correction on the dataInactivityTimer operation LG Electronics Inc. discussion Rel-14 TEI14

[R2-1711186](file:///C:\Data\3GPP\Extracts\36331_CR(3092)_(Rel-14)_R2-1711186_Correction%20on%20the%20DataInactivityTimer%20operation%20(Option1).doc) 36331\_CR(3092)\_(Rel-14)\_[R2-1711186](file:///C:\Data\3GPP\Extracts\36331_CR(3092)_(Rel-14)_R2-1711186_Correction%20on%20the%20DataInactivityTimer%20operation%20(Option1).doc)\_Correction on the DataInactivityTimer operation (Option1) LG Electronics UK CR Rel-14 36.331 14.4.0 3092 - F TEI14

[R2-1711206](file:///C:\Data\3GPP\Extracts\36331_CR(3093)_(Rel-14)_R2-1711206_Correction%20on%20the%20DataInactivityTimer%20operation%20(Option2).doc) 36331\_CR(3093)\_(Rel-14)\_[R2-1711206](file:///C:\Data\3GPP\Extracts\36331_CR(3093)_(Rel-14)_R2-1711206_Correction%20on%20the%20DataInactivityTimer%20operation%20(Option2).doc)\_Correction on the DataInactivityTimer operation (Option2) LG Electronics UK CR Rel-14 36.331 14.4.0 3093 - F TEI14

[R2-1711475](file:///C:\Data\3GPP\Extracts\R2-1711475_lpp_message_size.doc) Clarification on LPP Message size due to limitations at the lower layers Intel Corporation CR Rel-14 36.305 14.3.0 0071 - F LCS\_LTE

[R2-1711538](file:///C:\Data\3GPP\Extracts\R2-1711538%20BCS%20and%20fallback%20BCs.docx) BCS and fallback band combinations Ericsson discussion Rel-14 TEI14

[R2-1711559](file:///C:\Data\3GPP\Extracts\36323_CR0203_(Rel-14)_R2-1711559_Deliver%20stored%20PDCP%20SDUs%20for%20LWA%20bearer%20with%20RLC%20UM%20at%20PDCP%20re-establishment.docx) Deliver stored PDCP SDUs for LWA bearer with RLC UM at PDCP re-establishment LG Electronics France CR Rel-14 36.323 14.4.0 0203 - F LTE\_WLAN\_aggr-Core

[R2-1711562](file:///C:\Data\3GPP\Extracts\36300_CR1068_(Rel-14)_R2-1711562.doc) Clarification on Explicit Congestion Notification (ECN) Qualcomm Incorporated CR Rel-14 36.300 14.4.0 1068 - F TEI14

# 9 LTE Rel-15

## 9.1 SI: Further Enhancements to LTE Device to Device, UE to Network Relays for IoT and Wearables

(FS\_feD2D\_IoT\_relay\_wearable; leading WG: RAN2; REL-15; started: Mar. 16; target: Dec. 17; SID: [RP-170295](file:///C:\Data\3GPP\Extracts\RP-170295.doc))

Time budget: 0.5TU

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

[R2-1710546](file:///C:\Data\3GPP\Extracts\R2-1710546.doc) Evaluations of the assumptions from SA2 (S2-176444) Huawei, HiSilicon, Intel discussion Rel-15

[R2-1710547](file:///C:\Data\3GPP\Extracts\R2-1710547.doc) Clarification that bearers are distinguished by LCID on PC5 Huawei, HiSilicon CR Rel-15 36.746 15.0.0 0001 - F FS\_feD2D\_IoT\_relay\_wearable

[R2-1710548](file:///C:\Data\3GPP\Extracts\R2-1710548.docx) DRAFT Reply LS on FS\_REAR study outcome Huawei discussion Rel-15 FS\_feD2D\_IoT\_relay\_wearable

[R2-1710549](file:///C:\Data\3GPP\Extracts\R2-1710549.doc) Introduction of PDCP in layer 2 relaying protocol stacks Huawei, HiSilicon CR Rel-15 36.746 15.0.0 0002 - F FS\_feD2D\_IoT\_relay\_wearable

[R2-1710550](file:///C:\Data\3GPP\Extracts\R2-1710550.doc) Why Is PC5 PDCP Missing from L2 Relaying Radio Protocol Stack? Huawei, HiSilicon discussion Rel-15 FS\_feD2D\_IoT\_relay\_wearable

[R2-1711017](file:///C:\Data\3GPP\Extracts\R2-1711017%20Consideration%20on%20SA2%20assumption%20about%20feD2D-clean.doc) Discussion on SA2 assumption of feD2D ZTE Corporation discussion FS\_feD2D\_IoT\_relay\_wearable

[R2-1711449](file:///C:\Data\3GPP\Extracts\R2-1711449%20Discussion%20on%20SA2%20assumptions.docx) Discussion on SA2 assumptions Nokia, Nokia Shanghai Bell discussion Rel-15 FS\_feD2D\_IoT\_relay\_wearable

[R2-1711573](file:///C:\Data\3GPP\Extracts\R2-1711573%20Consideration%20on%20Service%20continuity%20for%20feD2D.doc) Consideration on Service continuity for feD2D ITL discussion Rel-15

[R2-1711692](file:///C:\Data\3GPP\Extracts\R2-1711692%20Consideration%20on%20key%20issues%20from%20SA2.docx) Consideration on key issues from SA2 LG Electronics Inc. discussion Rel-15 FS\_feD2D\_IoT\_relay\_wearable

## 9.2 WI: Shortened TTI and processing time for LTE

(LTE\_STTIandPT-core; leading WG: RAN1; REL-15; started: June 16; target: Dec. 17; WID: [RP-171468](file:///C:\Data\3GPP\archive\TSGR\TSGR_76\Docs\RP-171468.zip))

Time budget: 0.5 TU

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

Including output from email discussion [99#07][LTE/sTTI] – Running CR 36.300 – Ericsson

Including output from email discussion [99#08][LTE/sTTI] – Running CR 36.331 – Ericsson

Including output from email discussion [99#09][LTE/sTTI] – Running CR 36.321 Ericsson

Including output from email discussion [99#34][LTE/sTTI] – SPS for sTTI

[R2-1710007](file:///C:\Data\3GPP\Extracts\R2-1710007_R1-1714764.doc) LS on UE capability signalling for sTTI configurations (R1-1714764; contact: Intel) RAN1 LS in Rel-15 LTE\_sTTIandPT To:RAN4 Cc:RAN2

[R2-1710008](file:///C:\Data\3GPP\RAN2\Docs\R2-1710008.zip) LS on Stage 2 description of short TTI and short processing time (R1-1714768; contact: Ericsson) RAN1 LS in Rel-15 LTE\_sTTIandPT To:RAN2

[R2-1710016](file:///C:\Data\3GPP\Extracts\R2-1710016_R1-1715280.doc) Reply LS on short processing time and short TTI (R1-1715280; contact: Ericsson) RAN1 LS in Rel-15 LTE\_sTTIandPT To:RAN2

[R2-1710396](file:///C:\Data\3GPP\Extracts\R2-1710396%20MAC%20impact%20of%20HARQ%20process%20sharing%20between%20TTI%20and%20sTTI.doc) MAC impact of HARQ process sharing between TTI and sTTI Huawei, HiSilicon discussion Rel-15 LTE\_sTTIandPT-Core

[R2-1710397](file:///C:\Data\3GPP\Extracts\R2-1710397%20SR%20failure%20handling%20for%20sTTI.doc) SR failure handling for sTTI Huawei, HiSilicon discussion Rel-15 LTE\_sTTIandPT-Core

[R2-1710398](file:///C:\Data\3GPP\Extracts\R2-1710398%20Remaining%20issues%20on%20SR%20configuration%20for%20sTTI.doc) Remaining issues on SR configuration for sTTI Huawei, HiSilicon discussion Rel-15 LTE\_sTTIandPT-Core

[R2-1710399](file:///C:\Data\3GPP\Extracts\R2-1710399%20Handling%20of%20SR%20configurations%20for%20CA%20case%20in%20sTTI.doc) Handling of SR configurations for CA case in sTTI Huawei, HiSilicon discussion Rel-15 LTE\_sTTIandPT-Core

[R2-1710400](file:///C:\Data\3GPP\Extracts\R2-1710400%20Handling%20of%20MAC%20CE%20Priority%20Handling%20in%20sTTI.docx) Handling of MAC CE Priority Handling in sTTI Huawei, HiSilicon discussion Rel-15 LTE\_sTTIandPT-Core

[R2-1710401](file:///C:\Data\3GPP\Extracts\R2-1710401%20Impacts%20of%20sTTI%20on%20L2%20Timers.doc) Impacts of sTTI on L2 Timers Huawei, HiSilicon discussion Rel-15 LTE\_sTTIandPT-Core

[R2-1710402](file:///C:\Data\3GPP\Extracts\R2-1710402%20HARQ%20Process%20ID%20Calculation%20to%20support%20SPS%20for%20sTTI.docx) HARQ Process ID Calculation to support SPS for sTTI Huawei, HiSilicon discussion Rel-15 LTE\_sTTIandPT-Core

[R2-1710403](file:///C:\Data\3GPP\Extracts\R2-1710403%20Running%20CR%20for%20SPS%20in%20sTTI%20TS%2036.331.doc) Running CR for SPS in sTTI TS 36.331 Huawei, HiSilicon, Ericsson CR Rel-15 36.331 14.4.0 3075 - B LTE\_sTTIandPT-Core

[R2-1710404](file:///C:\Data\3GPP\Extracts\R2-1710404%20Running%20CR%20for%20SPS%20in%20sTTI%20TS%2036%20321.doc) Running CR for SPS in sTTI TS 36.321 Huawei, HiSilicon, Ericssoon CR Rel-15 36.321 14.4.0 1185 - B LTE\_sTTIandPT-Core

R2-1710490 HARQ process handling with different TTIs lengths Ericsson discussion Rel-15 LTE\_sTTIandPT

[R2-1710491](file:///C:\Data\3GPP\Extracts\R2-1710491%20Impact%20of%20sTTI%20on%20L2%20timers.doc) Impact of sTTI on L2 timers Ericsson discussion Rel-15 LTE\_sTTIandPT

[R2-1710492](file:///C:\Data\3GPP\Extracts\R2-1710492%20-%20Remaining%20issues%20of%20sTTI%20and%20SPS.docx) Remaining issues of sTTI and SPS Ericsson discussion Rel-15 LTE\_sTTIandPT

[R2-1710493](file:///C:\Data\3GPP\Extracts\R2-1710493%20-%20SR%20and%20BSR%20.docx) SR and BSR Ericsson discussion Rel-15 LTE\_sTTIandPT

[R2-1710494](file:///C:\Data\3GPP\Extracts\R2-1710494%20CR%20on%2036321%20for%20Scheduling%20Requests%20with%20short%20TTI.doc) Scheduling Requests with short TTI Ericsson draftCR Rel-15 36.321 14.4.0 B LTE\_sTTIandPT

[R2-1710495](file:///C:\Data\3GPP\Extracts\R2-1710495%20Running%20CR%20on%2036300.doc) Running CR for introduction of shortened TTI and processing time for LTE Ericsson draftCR Rel-15 36.300 14.4.0 B LTE\_sTTIandPT

[R2-1710496](file:///C:\Data\3GPP\Extracts\R2-1710496%20Running%20CR%20on%2036302.doc) Running CR for introduction of shortened TTI and processing time for LTE Ericsson draftCR Rel-15 36.302 14.3.0 B LTE\_sTTIandPT

[R2-1710497](file:///C:\Data\3GPP\Extracts\R2-1710497%20-%20Running%20CR%20on%2036.306.doc) Running CR for introduction of shortened TTI and processing time for LTE Ericsson draftCR Rel-15 36.306 14.4.0 B LTE\_sTTIandPT

[R2-1710498](file:///C:\Data\3GPP\Extracts\R2-1710498%20-%20Running%20MAC%20CR.doc) Running CR for introduction of shortened TTI and processing time for LTE Ericsson draftCR Rel-15 36.321 14.4.0 B LTE\_sTTIandPT

[R2-1710499](file:///C:\Data\3GPP\Extracts\R2-1710499%20-%20Running%20RRC%20CR.doc) Running CR for introduction of shortened TTI and processing time for LTE Ericsson draftCR Rel-15 36.331 14.4.0 B LTE\_sTTIandPT

[R2-1710500](file:///C:\Data\3GPP\Extracts\R2-1710500%20Discussion%20of%20sPUCCH%20Utilization%20Strategy.doc) sPUCCH Utilization Strategy Ericsson discussion Rel-15 LTE\_sTTIandPT

[R2-1710754](file:///C:\Data\3GPP\Extracts\R2-1710754_Separated%20SR_COUNTER%20and%20sr-ProhibitTimer.doc) Separated SR\_COUNTER and sr-ProhibitTimer LG Electronics Mobile Research discussion LTE\_sTTIandPT-Core

[R2-1710815](file:///C:\Data\3GPP\Extracts\R2-1710815%20SR%20procedure%20for%20sTTI.docx) SR procedure for sTTI Nokia, Nokia Shanghai Bell discussion Rel-15 LTE\_sTTIandPT

[R2-1711525](file:///C:\Data\3GPP\Extracts\R2-1711525%20-%20Modelling%20of%20sTTI%20in%20MAC.docx) Modelling of sTTI in MAC Ericsson India Private Limited discussion Rel-15 LTE\_sTTIandPT

[R2-1711586](file:///C:\Data\3GPP\Extracts\R2-1711586_SR_BSR_shortTTI.doc) Remaining Issues on SR and BSR for short TTI Qualcomm Incorporated discussion

## 9.3 Void

## 9.4 Study on Enhanced Support for Aerial Vehicles

(FS\_LTE\_Aerial; leading WG: RAN2; REL-15; started: Mar. 17; target: Dec. 17: SID: [RP-171050](file:///C:\Data\3GPP\Extracts\RP-171050%20RevisedSID%20on%20Enhanced%20LTE%20SupportforAerialVehicles.doc))

Time budget: 1.5 TU

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

### 9.4.1 General

(work plan and TR skeleton)

Including output from email discussion [99#38][LTE/UAV] Running TR36.777 (DOCOMO)

[R2-1710009](file:///C:\Data\3GPP\RAN2\Docs\R2-1710009.zip) LS on TP for key performance indicator, identified problem, evaluation assumptions, channel modelling, and evaluation results (R1-1714860; contact: Ericsson) RAN1 LS in Rel-15 FS\_LTE\_Aerial To:RAN2

[R2-1710022](file:///C:\Data\3GPP\RAN2\Docs\R2-1710022.zip) LS on TP for remaining evaluation assumptions and channel modelling (R1-1715303; contact: Ericsson) RAN1 LS in Rel-15 FS\_LTE\_Aerial To:RAN2

[R2-1711737](file:///C:\Data\3GPP\RAN2\Docs\R2-1711737.zip) TR 36.777 v030 NTT DOCOMO INC. draft TR Rel-15 36.777 0.3.0 FS\_LTE\_Aerial

### 9.4.2 Requirements and parameter identification

(Identify the heights, speeds, latency, reliability, data rate, positioning accuracy, etc , taking into account the regulation viewpoints)

[R2-1711073](file:///C:\Data\3GPP\Extracts\R2-1711073%20On%20the%20requirements%20of%20connectivity%20services%20for%20drones.docx) On the requirements of connectivity services for drones Ericsson discussion Rel-15 FS\_LTE\_Aerial

### 9.4.3 Potential enhancements for UAV interference problem

(Solutions to detect whether UL signal from an air-borne UE increases interference in multiple neighbour cells and whether an air-borne UE incurs interference from multiple cells)

Including output from email discussion [99#37][LTE/UAV] DL and UL Interference detection (DOCOMO)

[R2-1710405](file:///C:\Data\3GPP\Extracts\R2-1710405%20Interference%20Detection%20for%20Drones.docx) Interference Detection for Drones Huawei, HiSilicon discussion Rel-15 FS\_LTE\_Aerial

[R2-1710665](file:///C:\Data\3GPP\Extracts\R2-1710665%20(R15%20UAV%20SI%20AI%20943).docx) Detection of UAV interference InterDigital discussion Rel-15 FS\_LTE\_Aerial [R2-1708734](file:///C:\Data\3GPP\Extracts\R2-1708734%20(R15%20UAV%20SI%20AI%20943).docx)

[R2-1710799](file:///C:\Data\3GPP\Extracts\R2-1710799_aerials_inteference.doc) Network-based UL interference detection for Aerials Kyocera, KDDI, KT Corp discussion

[R2-1711374](file:///C:\Data\3GPP\Extracts\R2-1711374%20Discussion%20for%20potential%20measurement%20enhancements%20for%20aerial%20UE.doc) Discussion for potential measurement enhancements for aerial UE Lenovo, Motorola Mobility discussion Rel-15 FS\_LTE\_Aerial [R2-1708973](file:///C:\Data\3GPP\Extracts\R2-1708973%20Consideration%20for%20interference%20detection%20and%20measurement%20enhancement%20for%20drone%20UE-v4.doc)

[R2-1711378](file:///C:\Data\3GPP\Extracts\R2-1711378.doc) Enhanced Measurement according to Interference Level LG Electronics Finland discussion Rel-15 FS\_LTE\_Aerial

[R2-1711528](file:///C:\Data\3GPP\Extracts\R2-1711528%20Potential%20enhancements%20for%20UAV%20interference%20problem.docx) Potential enhancements for UAV interference problem Ericsson discussion Rel-15 FS\_LTE\_Aerial

[R2-1711738](file:///C:\Data\3GPP\Extracts\R2-1711738_summary%20of%2099%2337LTE-UAV%20DL%20and%20UL%20Interference%20detection_summary.doc) Summary of email discussion [99#37][LTE/UAV] DL and UL Interference detection NTT DOCOMO INC. discussion Rel-15

### 9.4.4 Potential enhancements for handover

(Identify if enhancements in terms of cell selection and handover efficiency as well as robustness in handover signalling can be achieved)

[R2-1710406](file:///C:\Data\3GPP\Extracts\R2-1710406%20Discussion%20on%20Virtual%20drone%20cell.docx) Discussion on Virtual drone cell Huawei, HiSilicon discussion Rel-15 FS\_LTE\_Aerial To:SA3, CT1

[R2-1710407](file:///C:\Data\3GPP\Extracts\R2-1710407%20Simulation%20Results%20of%20Mobility%20Issues%20for%20Drones.docx) Simulation Results of Mobility Issues for Drones Huawei, HiSilicon discussion Rel-15 FS\_LTE\_Aerial To:SA2 Cc:RAN1, RAN4

[R2-1710409](file:///C:\Data\3GPP\Extracts\R2-1710409%20Potential%20enhancements%20for%20drones%20in%20idle%20state.docx) Potential enhancements for drones in idle state Huawei, HiSilicon discussion Rel-15 FS\_LTE\_Aerial [R2-1708542](file:///C:\Data\3GPP\Extracts\R2-1708542%20Potential%20enhancements%20for%20drones%20in%20idle%20state.doc)

[R2-1710796](file:///C:\Data\3GPP\Extracts\R2-1710796_aerials_selection.doc) Considerations for cell selection and reselection with UAVs Kyocera, KDDI, KT Corp discussion To:SA2 Cc:RAN1, RAN4

[R2-1710887](file:///C:\Data\3GPP\Extracts\R2-1710887%20Field%20trial%20results%20for%20aerial%20vehicles.docx) Field trial results on handover performance for aerial vehicles Qualcomm Incorporated discussion Rel-15 FS\_LTE\_Aerial [R2-1708237](file:///C:\Data\3GPP\Extracts\R2-1708237%20Field%20trial%20results%20for%20aerial%20vehicles.docx)

[R2-1710890](file:///C:\Data\3GPP\Extracts\R2-1710890%20Handover%20results%20for%20aerial%20vechicles.docx) Handover performance results for aerial vehicles Qualcomm Incorporated discussion Rel-15 FS\_LTE\_Aerial

[R2-1711027](file:///C:\Data\3GPP\Extracts\R2-1711027.doc) Discussion on measurement for Aerial Vehicles handover Sony discussion Rel-15 FS\_LTE\_Aerial

[R2-1711074](file:///C:\Data\3GPP\Extracts\R2-1711074%20Mobility%20Simulations.docx) Mobility Simulations of Aerial Ues Ericsson discussion Rel-15 FS\_LTE\_Aerial

[R2-1711376](file:///C:\Data\3GPP\Extracts\R2-1711376.doc) Handover Failure Handling of Aerial UE LG Electronics Inc. discussion Rel-15 FS\_LTE\_Aerial [R2-1709462](file:///C:\Data\3GPP\Extracts\R2-1709462.doc)

[R2-1711377](file:///C:\Data\3GPP\Extracts\R2-1711377%20Consideration%20for%20potential%20mobility%20enhancement%20for%20aerial%20UE.doc) Consideration for potential mobility enhancement for aerial UE Lenovo, Motorola Mobility discussion Rel-15 FS\_LTE\_Aerial [R2-1708975](file:///C:\Data\3GPP\Extracts\R2-1708975%20Consideration%20for%20potential%20mobility%20enhancement%20for%20aerial%20UE_v5.doc)

[R2-1711379](file:///C:\Data\3GPP\Extracts\R2-1711379%20Discussion%20for%20status%20management%20for%20aerial%20UE.doc) Discussion for status management for aerial UE Lenovo, Motorola Mobility discussion Rel-15 FS\_LTE\_Aerial

[R2-1711408](file:///C:\Data\3GPP\Extracts\R2-1711408%20Measurement%20report%20mechanism%20for%20Drones.docx) Measurement report mechanism for Drones Huawei, HiSilicon discussion Rel-15 FS\_LTE\_Aerial [R2-1708545](file:///C:\Data\3GPP\Extracts\R2-1708545%20Measurement%20report%20mechanism%20for%20Drones.docx)

[R2-1711445](file:///C:\Data\3GPP\Extracts\R2-1711445_mobility_enh.docx) Potential mobility enhancements for UAVs Nokia, Nokia Shanghai Bell discussion Rel-15 FS\_LTE\_Aerial [R2-1708667](file:///C:\Data\3GPP\Extracts\R2-1708667_mobility_enh.docx)

[R2-1711462](file:///C:\Data\3GPP\Extracts\R2-1711462%20%20Mobility%20enhancements%20for%20Aerial%20vehicles%20–%20finite%20buffer%20scenario%20results.docx) Mobility enhancements for Aerial vehicles – finite buffer scenario results Nokia, Nokia Shanghai Bell discussion Rel-15 FS\_LTE\_Aerial

[R2-1711463](file:///C:\Data\3GPP\Extracts\R2-1711463%20%20Mobility%20enhancements%20for%20Aerial%20vehicles%20–%20full%20buffer%20scenario%20results.docx) Mobility enhancements for Aerial vehicles – full buffer scenario results Nokia, Nokia Shanghai Bell discussion Rel-15 FS\_LTE\_Aerial

[R2-1711825](file:///C:\Data\3GPP\Extracts\R2-1711825_mobility%20performance%20for%20UAV_clean.doc) Mobility Performance for UAV UE NTT DOCOMO, INC discussion Rel-15 FS\_LTE\_Aerial

### 9.4.5 Identify certification

(Identification of an air-borne UE that does not have proper certification for connecting to the cellular network while air-borne)

[R2-1710408](file:///C:\Data\3GPP\Extracts\R2-1710408%20%20Identification%20of%20Air-borne%20UE.doc) Identification of Air-borne UE Huawei, HiSilicon discussion Rel-15 FS\_LTE\_Aerial

[R2-1711026](file:///C:\Data\3GPP\Extracts\R2-1711026.doc) Discussion on identification and certification of Aerial Vehicles Sony discussion Rel-15 FS\_LTE\_Aerial [R2-1709517](file:///C:\Data\3GPP\Extracts\R2-1709517.doc)

[R2-1711075](file:///C:\Data\3GPP\Extracts\R2-1711075%20Identify%20certification.docx) Identify certification for drones Ericsson discussion Rel-15 FS\_LTE\_Aerial

[R2-1711380](file:///C:\Data\3GPP\Extracts\R2-1711380%20Consideration%20for%20identification%20issues%20for%20drone%20UE.doc) Consideration for identification issues for drone UE Lenovo, Motorola Mobility discussion Rel-15 FS\_LTE\_Aerial [R2-1708976](file:///C:\Data\3GPP\Extracts\R2-1708976%20Consideration%20for%20identification%20issues%20for%20drone%20UE-v4.doc)

[R2-1711446](file:///C:\Data\3GPP\Extracts\R2-1711446_air-borne_UE_identification.docx) Air-borne UE identification mechanism Nokia, Nokia Shanghai Bell discussion Rel-15 FS\_LTE\_Aerial

[R2-1711447](file:///C:\Data\3GPP\Extracts\R2-1711447%20TP%20for%20UAV%20identification.docx) TP on air-borne UE identification mechanism Nokia, Nokia Shanghai Bell discussion Rel-15 FS\_LTE\_Aerial

### 9.4.6 Others

[R2-1711375](file:///C:\Data\3GPP\Extracts\R2-1711375.doc) Aerial Traffic Handling using Positioning Identification LG Electronics Inc. discussion Rel-15 FS\_LTE\_Aerial [R2-1709460](file:///C:\Data\3GPP\Extracts\R2-1709460.doc)

[R2-1711739](file:///C:\Data\3GPP\Extracts\R2-1711739_UAV%20field%20test%20result.doc) UAV Field Trial Result NTT DOCOMO INC. discussion FS\_LTE\_Aerial

## 9.5 Further video enhancements for LTE

(LTE\_ViLTE\_enh2-Core; leading WG: RAN2; REL-15; started: Mar. 17; target: Dec. 17: WID: [RP-171392](file:///C:\Data\3GPP\archive\TSGR\TSGR_76\Docs\RP-171392.zip))

Time budget: 0 TU

This AI is a placeholder only - no documents to be submitted to this AI. The WI has no time budget allocated for this meeting and will be discussed again at RAN2#100.

### 9.5.1 General

(work plan)

### 9.5.2 Local caching for UE assistance video request

Including output from email discussion [99#33][LTE/eViLTE] UE assistance information (CMCC)

### 9.5.3 Enhancement to solve the problem of critical data discard

### 9.5.4 Others

## 9.6 QoE Measurement Collection for streaming services in E-UTRAN

(LTE\_QMC\_Streaming; leading WG: RAN2; REL-15; started: Mar. 17; target: Dec. 17: WID: [RP-170956](file:///C:\Data\3GPP\archive\TSGR\TSGR_76\Docs\RP-170956.zip))

Time budget: 0.5 TU

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

[R2-1711286](file:///C:\Data\3GPP\Extracts\36331_CR3104__(Rel-15)_R2-1711286%20Introduction%20of%20QoE%20Measurement%20Collection%20for%20LTE%20(Solution4).doc) Introduction of QoE Measurement Collection for LTE (CP based) Nokia, Nokia Shanghai Bell CR Rel-15 36.331 14.4.0 3104 - B LTE\_QMC\_Streaming

[R2-1711287](file:///C:\Data\3GPP\Extracts\36331_CR3105_(Rel-15)_R2-1711287%20Introduction%20of%20QoE%20Measurement%20Collection%20(Solution5).doc) Introduction of QoE Measurement Collection for LTE Nokia, Nokia Shanghai Bell CR Rel-15 36.331 14.4.0 3105 - B LTE\_QMC\_Streaming

[R2-1711688](file:///C:\Data\3GPP\Extracts\R2-1711688%20Detailed%20analysis%20of%20LTE%20QMC%20CP%20solution%204%20and%205.docx) Detailed analysis of LTE QMC CP solution 4 and 5 Nokia, Nokia Shanghai Bell discussion Rel-15 36.331 LTE\_QMC\_Streaming

### 9.6.1 General

(work plan)

### 9.6.2 QoE measurement collection solutions

Including output from email discussion [99#39][LTE/QMC] RAN controlled CP based solution (Huawei)

[R2-1710505](file:///C:\Data\3GPP\Extracts\R2-1710505%20Solution%20enhancements.doc) Solution enhancement for QoE Measurements Ericsson discussion Rel-15 LTE\_QMC\_Streaming

[R2-1710506](file:///C:\Data\3GPP\Extracts\R2-1710506%20Start%20and%20stop%20of%20measurements.doc) Start and stop of QoE Measurements Ericsson discussion Rel-15 LTE\_QMC\_Streaming

[R2-1710708](file:///C:\Data\3GPP\Extracts\R2-1710708%20Summary%20on%2099%2339%20LTE-QMC%20RAN%20controlled%20CP%20based%20solution.doc) Summary on [99#39][LTE/QMC] RAN controlled CP based solution Huawei discussion Rel-15 LTE\_QMC\_Streaming-Core

[R2-1710709](file:///C:\Data\3GPP\Extracts\R2-1710709%20Discussion%20on%20CP%20solution%20for%20QMC.doc) Discussion on CP solution for QMC Huawei, HiSilicon discussion Rel-15 LTE\_QMC\_Streaming-Core

[R2-1710710](file:///C:\Data\3GPP\Extracts\R2-1710710%20Introduction%20of%20LTE%20QMC.doc) Introduction of QoE Measurement Collection for LTE Huawei, HiSilicon CR Rel-15 36.300 14.4.0 1063 - B LTE\_QMC\_Streaming-Core To:SA3

[R2-1710711](file:///C:\Data\3GPP\Extracts\R2-1710711%20Introduction%20of%20LTE%20QMC.doc) Introduction of QoE Measurement Collection for LTE Huawei, HiSilicon CR Rel-15 36.306 14.4.0 1512 - B LTE\_QMC\_Streaming-Core

[R2-1710712](file:///C:\Data\3GPP\Extracts\R2-1710712%20Introduction%20of%20LTE%20QMC.doc) Introduction of QoE Measurement Collection for LTE Huawei, HiSilicon CR Rel-15 36.331 14.4.0 3087 - B LTE\_QMC\_Streaming-Core

### 9.6.3 Others

## 9.7 LTE connectivity to 5G-CN

(LTE\_5GCN\_connect-Core; leading WG: RAN2; REL-15; started: Mar. 17; target: Jun. 18: WID: [RP-171432](file:///C:\Data\3GPP\Extracts\RP-171432%20Revision%20of%20WID%20LTE%20connectivity%20to%205G-CN.doc))

Time budget: 1.5 TU

At this meeting, due to the commonality with NR, this WI will be handled in the main session.

### 9.7.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

Principles on what to specify in which specs, terminology, etc

[R2-1710002](file:///C:\Data\3GPP\Extracts\R2-1710002_C1-173571.doc) Reply LS to Supported features by 5GC for E-UTRA connected to 5G CN (C1-173571; contact: Huawei) CT1 LS in Rel-15 5GS\_Ph1-CT, NR\_newRAT-Core To:SA2, RAN2 Cc:SA, SA1, SA5, RAN, RAN3 To:SA2, RAN2 Cc:SA, SA1, SA5, RAN, RAN3

=> Noted

[R2-1711105](file:///C:\Data\3GPP\Extracts\R2-1711105%20Work%20Plan%20on%20LTE_5GCN_connect.doc) Work plan on LTE\_5GCN\_connect Huawei, Ericsson Work Plan Rel-15

=> Noted

[R2-1711106](file:///C:\Data\3GPP\Extracts\R2-1711106%20Further%20discussion%20on%20how%20to%20specific%20E-UTRA%20connected%20to%205GC.doc) Further discussion on how to specific E-UTRA connected to 5GC Huawei, HiSilicon discussion Rel-15 LTE\_5GCN\_connect-Core

=> Noted

[R2-1711583](file:///C:\Data\3GPP\Extracts\R2-1711583.doc) Running 36.300 CR for LTE connectivity to 5GCN (Option1) Huawei draftCR Rel-15 36.300 14.4.0 B LTE\_5GCN\_connect-Core

- Nokia suggest to avoid the term ng-eNB within 36.300 unless really needed. There would be just one brief section to clarify the usage of the terminology. Huawei think that for the new chapter it should be ok to use ng-eNB.

- Ericsson suggest to minimise the usage of terminate in ng-eNB.

- Nokia had a proposal in their CR how to avoid the ng-eNB term. We should avoid changing in every place.

- Nokia think the CR doesn't mention that an eNB can be connected to both core.

- LG think that currently we don't describe AC in stage 2 for LTE. Is it needed for eLTE? Nokia have the same view.

=> To be revised to address the comments raised.

=> Remove AC from stage 2 - can be reviewed after more progress is made on AC for LTE/5GC

=> Revised in R2-1712001 (Offline discussion #42)

[R2-1712001](file:///C:\Data\3GPP\Extracts\R2-1712001%20Running%2036.300%20CR%20for%20LTE%20connectivity%20to%205GCN%20v2.doc) Running 36.300 CR for LTE connectivity to 5GCN (Option1) Huawei draftCR Rel-15 36.300 14.4.0 B LTE\_5GCN\_connect-Core

=> Endorsed

* [99bis#xx][LTE/5GC] CR to 36.300 (Huawei)

Capture agreements from this meeting

Intended outcome: Endorsed CR

Deadline: Thursday 2017-10-26

[R2-1711584](file:///C:\Data\3GPP\Extracts\R2-1711584.doc) Running 36.300 CR for LTE connectivity to 5GCN (Option2) Huawei draftCR Rel-15 36.300 14.4.0 B LTE\_5GCN\_connect-Core

Withrawn

R2-1711107 Running 36.300 CR for LTE connectivity to 5GCN (Option1) Huawei CR Rel-15 36.300 14.4.0 1064 - B LTE\_5GCN\_connect-Core Withdrawn

R2-1711108 Running 36.300 CR for LTE connectivity to 5GCN (Option2) Huawei CR Rel-15 36.300 14.4.0 1065 - B LTE\_5GCN\_connect-Core Withdrawn

### 9.7.2 Stage 2 aspects

Including AS support for EPC/5GC selection, impact of flow based QoS, inter-RAT mobility (e.g. between E-UTRA/5GC and E-UTRA/EPC but not mobility in inactive which is addressed by AI 10.4.1.7.4), etc.

Impact to E-UTRA DC due to flow based QoS, operation of flow based QoS at intra system handover and inter system handover, access control, inactive state, and slicing will be discussed when NR has made more progress on these items, and hence will not be discussed at this meeting.

SRB PDCP version

[R2-1710160](file:///C:\Data\3GPP\Extracts\R2-1710160_PDCP_Protocol_Adoption_for_%20LTE%20connectivity%20to%205G-CN_v2.doc) Type of PDCP Protocol Adoption for E-UTRAN connected to 5GCN Qualcomm India Pvt Ltd discussion Rel-15 LTE\_5GCN\_connect-Core

[R2-1711110](file:///C:\Data\3GPP\Extracts\R2-1711110%20NR%20PDCP%20for%20SRB%20for%20UE%20accessing%205GC%20via%20ng-eNB.doc) NR PDCP for SRB for UE accessing 5GC via ng-eNB Huawei, HiSilicon discussion Rel-15 LTE\_5GCN\_connect-Core

- discussed jointly with the previous paper

- LG wonder if spare values in msg 3 mean we cannot use the establishment cause. Qualcomm assume the type of PDCP indication would be independent to the establishment cause. Huawei think the only current option in msg3 is to use a spare code point. Other option would be to create a new message but even that would not give enough space.

- Qualcomm think it may depend on whether the TMSI can indicate the core network type.

- Nokia ask if this is a preference or is it saying this is the core network type. Qualcomm understand it will correspond to the CN type indicated to upper layers.

- LG prefer to use msg5 for the indication and think that eNB may select MME due to node balancing. Think the UE should always use LTE PDCP.

- Qualcomm think that blind detection is not a good option and hence it is better to use an explicit indication. Vivo agree that blind detection is not a good option. Suggest to use LTE PDCP and then reconfigure it.

- Ericsson think such blind detection would be a new function for the eNB.

- Samsung wonder what is the value in using NR PDCP. Suggest to follow the EN-DC approach and let the network reconfigure. OPPO agree with Samsung.

- Lenovo think there could be UE initiated messages that could be lost during the reconfiguration. Qualcomm think it is better for eLTE that the UE has the same PDCP for both CP and UP. It will also help smooth handover between 5GC and EPC.

- Huawei think that NR PDCP must be used to use 5G security.

- Ericsson prefer option 1.

Agreements

1- Msg 5 is used to indicate the CN type. eNB shall initially configure SRB1 with LTE PDCP. Upon receiving CN Type Selection = 5GCN in Message 5, eLTE eNB reconfigures SRB1 with NR-PDCP

FFS: Whether the reconfiguration to NR PDCP is required before SMC.

2- If it is found during further work that changes are required in Message 3 for other reasons, then this decision can be revisited (a solution where eNB initially configures SRB1 with NR-PDCP can be adopted)

[R2-1710620](file:///C:\Data\3GPP\Extracts\R2-1710620-eLTE-inter-CN.docx) CN type change and PDCP for E-UTRA connected to 5GC Intel Corporation discussion Rel-15 LTE\_5GCN\_connect-Core

[R2-1710192](file:///C:\Data\3GPP\Extracts\R2-1710192%20-%20NR%20PDCP%20for%20SRBs.docx) NR PDCP for SRBs Ericsson discussion Rel-15 LTE\_5GCN\_connect-Core

S-TMSI

[R2-1710193](file:///C:\Data\3GPP\Extracts\R2-1710193%20-%20UE%20Network%20identifiers%20and%20impact%20on%20LTE%20connected%20to%205GC.docx) UE network identifier impacts on LTE connected to 5GC Ericsson discussion Rel-15 LTE\_5GCN\_connect-Core

- Intel think the important aspect is whether the S-TMSI space is shared between 5G and EPC.

- Qualcomm think that there is an issue with sharing the S-TMSI space.

- Huawei think it may not be needed in message 3 for the network to know whether the S-TMSI is 5G or EPC. Intel think currently we ensure no collision in S-TMSI but if we allow the same space to be reused then there is a risk of collision.

- Ericsson think it is very unlikely that the space will be shared.

- Lenovo think that if we can accept the collision probability then it would not matter whether they are shared.

=> LS to SA2/CT4 to ask if the 5G S-TMSI size will be the same as in EPC and also ask if the S-TMSI space will be shared between 5G and EPC. Draft LS in R2-1712003 (Offline discussion #43, Ericsson). Can include both NR and eLTE WI codes.

=> Revised in R2-1712008

R2-1712008 [DRAFT] LS on details of network identifiers Ericsson LS out Rel-15 LTE\_5GCN\_connect-Core To:CT4, SA2

[R2-1712003](file:///C:\Data\3GPP\RAN2\Docs\R2-1712003.zip) [DRAFT][Ask if the 5G S-TMSI size will be the same as in EPC and if the S-TMSI space will be shared between 5G and EPC] Ericsson LS out Rel-15 LTE\_5GCN\_connect-Core To:SA2, CT4

* [99bis#xx][LTE/5GC] LS to SA2/CT4 (Ericsson)

Intended outcome: Approved LS

Deadline: Thursday 2017-10-19

[R2-1710194](file:///C:\Data\3GPP\Extracts\R2-1710194-%20DRAFT%20LS%20on%20Network%20Identifiers.doc) Draft LS on UE network identifiers Ericsson LS out Rel-15 NR\_newRAT-Core

Inter-RAT mobility

[R2-1710190](file:///C:\Data\3GPP\Extracts\R2-1710190%20-%20IDLE_INACTIVE_mobility_to_legacy_RATs.docx) IDLE/INACTIVE mobility to GERAN/UTRAN/CDMA2000 Ericsson discussion Rel-15 LTE\_5GCN\_connect-Core [R2-1707797](file:///C:\Data\3GPP\Extracts\R2-1707797%20-%20IDLE_INACTIVE_mobility_to_legacy_RATs.docx)

P3

- Huawei is not sure that redirection to 2G/3G should be supported, as the UE will need to register after the change to 2G/3G. Qualcomm think this is ok if there is no CN impact.

- Intel also wonder whether this includes redirection from one CN to the other CN. This could be asked in the LS.

- Ericsson think the main intention is to support he RAN functionality of redirection.SA2 can consider the UE behaviour when it gets to the target.

P4

- Qualcomm think that ping pong between 5GC and 2G/3G will cause a lot of signalling and we should have a mechanism to minimise this.

- DT is concerned that this adds another layer of planning.

- Intel understand that the RAN has flexibility to set the idle mobility info it can use SPID or not.

P5

- Qualcomm think that in PLMN selection then eLTE and NR are considered as the same priority, but in this proposal then they would be different. Ericsson think the proposal does not contradict. eLTE is prioritised and will be used if the target cell supports eLTE but if it doesn't support only then would the UE change to EPC.

Agreements:

1 RAN2 understanding based on SA2 decisions is that inter-RAT active mode handover or cell change order is not supported between LTE/5GC and 2G/3G systems.

2 Inter-RAT active mode measurement configuration and reporting on 2G/3G RATs are supported in the same way as today.

3 RAN functionality of release with redirect info to 2G/3G RATs is supported in the same way as today. For redirection to 2G then UE only accepts redirection to 2G if AS security protected (NAS configuration is not required).

4 Idle mode mobility to 2G/3G/LTE/NR is supported including IDLE mode mobility control info for all RAT (i.e. behaviour exactly the same as LTE/EPC and the network is responsible to set dedicated frequency priorities appropriately)

5 A single LTE RAT is used in the cell reselection priorities regardless if the RAT support 5GC or not (i.e. behaviour exactly the same as LTE/EPC and the network is responsible to set dedicated frequency priorities appropriately)

[R2-1711112](file:///C:\Data\3GPP\Extracts\R2-1711112%20Discussion%20on%20mobility%20scenario%20for%20E-UTRA%20connected%20to%205GC.doc) Discussion on mobility scenario for E-UTRA connected to 5GC Huawei, HiSilicon discussion Rel-15 LTE\_5GCN\_connect-Core [R2-1708398](file:///C:\Data\3GPP\Extracts\R2-1708398%20Discussion%20on%20mobility%20scenario%20for%20E-UTRA%20connected%20to%205GC.doc)

P1

- Huawei explain the source RAT must decide the target CN as the procedure to be triggered is different.

- Ericsson wonders how the source knows about the target node CN information. Huawei think this can be left to RAN3 but assume either OAM or X2. Qualcomm think X2 would not be possible for this case.

- Nokia think this suggests a service based handover rather than radio based.

P2

- Ericsson think that an explicit indicator is not needed in the HO command.

- Intel think it could be possible to infer from other parameters but need more discussion whether we do that.

Agreements:

1 RAN2 understand that the source eNB/ng-eNB decides handover procedure to trigger (e.g. via the same CN type or to the other CN type)

2 UE has to know the target CN type from the handover command during intra-LTE inter-system HO, intra-LTE intra-system HO

FFS: Stage 3 detail whether this is an explicit indication or can be inferred from other information.

[R2-1710949](file:///C:\Data\3GPP\Extracts\R2-1710949_Mobility%20issue%20in%20LTE%20connected%20to%20NextGen%20Core.doc) Mobility issue in LTE connected to NextGen Core vivo discussion Rel-15 NR\_newRAT-Core [R2-1708436](file:///C:\Data\3GPP\Extracts\R2-1708436_Mobility%20issue%20in%20LTE%20connected%20to%20NextGen%20Core.docx)

[R2-1711024](file:///C:\Data\3GPP\Extracts\R2-1711024_Handover%20involving%205GC%20and%20EPC_v2.doc) Handover involving EPC and 5GC Sony discussion Rel-15 LTE\_5GCN\_connect-Core [R2-1709516](file:///C:\Data\3GPP\Extracts\R2-1709516_Handover%20involving%205GC%20and%20EPC_v2.doc)

5GC availability/CN type selection

[R2-1710305](file:///C:\Data\3GPP\Extracts\R2-1710305.docx) Further Consideration on CN Type Selection CATT discussion Rel-15 LTE\_5GCN\_connect-Core

[R2-1710789](file:///C:\Data\3GPP\Extracts\R2-1710789_lte_5gcn_selection_v08.doc) Further considerations on the CN selection for E-UTRAN connected to 5G CN Samsung discussion Rel-15 LTE\_5GCN\_connect-Core

[R2-1710157](file:///C:\Data\3GPP\Extracts\R2-1710157_Preventing%20Legacy%20LTE%20UEs%20from%20camping%20on%20eLTE%20Cells%20&%20PLMNs%20connected%20to%20New%205G%20Core.doc) Preventing Legacy LTE UEs from camping on eLTE Cells & PLMNs connected to New 5G Core Network only Qualcomm India Pvt Ltd discussion Rel-15 LTE\_5GCN\_connect-Core [R2-1707786](file:///C:\Data\3GPP\Extracts\R2-1707786_Preventing%20Legacy%20LTE%20UEs%20from%20camping%20on%20eLTE%20Cells%20&%20PLMNs%20connected%20to%20New%205G%20Core.doc)

[R2-1710182](file:///C:\Data\3GPP\Extracts\%5bNR-CP%5dR2-1710182%20Further%20Discussion%20on%20UE%20Preference%20and%20CN%20Selection.doc) Discussion on UE preference and CN Selection OPPO discussion R2-1710175

[R2-1710376](file:///C:\Data\3GPP\Extracts\R2-1710376.doc) CN Type Modification Spreadtrum Communications discussion Rel-15 [R2-1707975](file:///C:\Data\3GPP\Extracts\R2-1707975.doc)

[R2-1710420](file:///C:\Data\3GPP\Extracts\R2-1710420Multi-PLMN%20aspects%20of%20E-UTRA%20cell%20connected%20to%205GC.docx) Multi-PLMN aspects of E-UTRA cell connected to 5GC ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710790](file:///C:\Data\3GPP\Extracts\R2-1710790_lte_5gcn_indication_v09.doc) CN type indication for E-UTRAN connected to 5G CN Samsung discussion Rel-15 LTE\_5GCN\_connect-Core

[R2-1710950](file:///C:\Data\3GPP\Extracts\R2-1710950_CN%20selection%20for%20LTE%20connected%20to%205GC.doc) CN selection for LTE connected to 5GC vivo discussion Rel-15 NR\_newRAT-Core

[R2-1711109](file:///C:\Data\3GPP\Extracts\R2-1711109%20Handling%20on%20E-UTRA%20cell%20where%20some%20PLMNs%20only%20have%20access%20to%205GC%20v1.0.doc) Handling on E-UTRA cell where some PLMNs only have access to 5GC Huawei, HiSilicon discussion Rel-15 LTE\_5GCN\_connect-Core

Other

[R2-1710155](file:///C:\Data\3GPP\Extracts\R2-1710155%20-%20Draft%20LS%20to%20SA3%20and%20CT1%20on%20AS%20security%20aspects%20for%20eLTE_v7.DOC) Draft LS on AS Security Aspects of LTE connectivity to 5G-CN Qualcomm India Pvt Ltd LS out Rel-15 LTE\_5GCN\_connect-Core

[R2-1710159](file:///C:\Data\3GPP\Extracts\R2-1710159_Access_Stratum_Security_Aspects_of_%20LTE%20connectivity%20to%205G-CN_v7.doc) Access Stratum Security aspects of E-UTRAN connected to 5GCN Qualcomm India Pvt Ltd discussion Rel-15 LTE\_5GCN\_connect-Core

[R2-1710183](file:///C:\Data\3GPP\Extracts\%5bNR-CP%5dR2-1710183%20Discussion%20on%20ANR%20Functionality%20for%20eLTE.doc) Discussion on ANR Functionality for eLTE OPPO discussion R2-1710177

[R2-1710184](file:///C:\Data\3GPP\Extracts\R2-1710184%20-%20Security%20aspects%20of%20LTE%20connected%20to%205G-CN.docx) Security aspects of supporting LTE connected to 5GC Ericsson discussion Rel-15 LTE\_5GCN\_connect-Core [R2-1707790](file:///C:\Data\3GPP\Extracts\R2-1707790%20-%20Security%20aspects%20of%20LTE%20connected%20to%205G-CN.docx)

[R2-1710185](file:///C:\Data\3GPP\Extracts\R2-1710185%20-%20Draft%20LS%20on%20Security%20aspects.doc) Draft LS to SA3 on security aspects Ericsson LS out Rel-15 LTE\_5GCN\_connect-Core [R2-1707791](file:///C:\Data\3GPP\Extracts\R2-1707791%20-%20Draft%20LS%20on%20Security%20aspects.doc)

[R2-1710186](file:///C:\Data\3GPP\Extracts\R2-1710186%20-%20QoS%20for%20LTE%20connected%20to%205GC.docx) QoS for LTE connected to 5GC Ericsson discussion Rel-15 LTE\_5GCN\_connect-Core [R2-1707792](file:///C:\Data\3GPP\Extracts\R2-1707792%20-%20QoS%20for%20LTE%20connected%20to%205GC.docx)

[R2-1710187](file:///C:\Data\3GPP\Extracts\R2-1710187-%20Inactive%20state%20in%20LTE.docx) Inactive state in LTE Ericsson discussion Rel-15 LTE\_5GCN\_connect-Core

[R2-1710188](file:///C:\Data\3GPP\Extracts\R2-1710188%20-%20Barring%20legacy%20UEs%20from%205GC%20only%20cells.docx) Barring legacy UEs from 5GC only cells Ericsson discussion Rel-15 LTE\_5GCN\_connect-Core

[R2-1710191](file:///C:\Data\3GPP\Extracts\R2-1710191%20-%20Message%203.5%20in%20LTE%20connected%20to%205GC.docx) Message 3.5 in LTE connected to 5GC Ericsson discussion Rel-15 LTE\_5GCN\_connect-Core [R2-1707840](file:///C:\Data\3GPP\Extracts\R2-1707840%20-%20MSG3point5%20for%20LTE.docx)

[R2-1710201](file:///C:\Data\3GPP\Extracts\%5bNR-CP%5dR2-1710201%20Discussion%20on%20Cell%20Barring%20Mechanism%20for%20eLTE.doc) Discussion on Cell Barring Mechanism for eLTE OPPO discussion R2-1710176

[R2-1710421](file:///C:\Data\3GPP\Extracts\R2-1710421Consideration%20on%20mobility%20for%20E-UTRA%20connected%20to%205GC.docx) Consideration on mobility for E-UTRA connected to 5GC ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710692](file:///C:\Data\3GPP\Extracts\R2-1710692_Considerations%20on%20LTE%20connectivity%20to%205G-CN.doc) Considerations on LTE connectivity to 5G-CN Qualcomm India Pvt Ltd discussion LTE\_5GCN\_connect-Core [R2-1707785](file:///C:\Data\3GPP\Extracts\R2-1707785_Considerations%20on%20LTE%20connectivity%20to%205G-CN.doc)

[R2-1710951](file:///C:\Data\3GPP\Extracts\R2-1710951_Consideration%20on%20SRB%20configuration%20in%20eLTE.doc) Consideration on SRB configuration in eLTE vivo discussion Rel-15 NR\_newRAT-Core

[R2-1710994](file:///C:\Data\3GPP\Extracts\R2-1710994%20Capturing%20eLTE%20in%20LTE%20Stage-2.docx) Capturing LTE connected to 5GC in TS36.300 Nokia, Nokia Shanghai Bell discussion Rel-15 LTE\_5GCN\_connect-Core

[R2-1711111](file:///C:\Data\3GPP\Extracts\R2-1711111%20Support%20of%205GS%20security%20in%20E-UTRA%20connected%20to%205GC.doc) Support of 5GS security in E-UTRA connected to 5GC Huawei, HiSilicon discussion Rel-15 LTE\_5GCN\_connect-Core [R2-1708403](file:///C:\Data\3GPP\Extracts\R2-1708403%20Support%20of%205GS%20security%20in%20E-UTRA%20connected%20to%205GC.doc)

[R2-1711113](file:///C:\Data\3GPP\RAN2\Docs\R2-1711113.zip) Flow based QoS for E-UTRA connected to 5GC Huawei, HiSilicon discussion Rel-15 LTE\_5GCN\_connect-Core

[R2-1711114](file:///C:\Data\3GPP\Extracts\R2-1711114%20Assistant%20information%20to%20perform%20CN%20selection.doc) Assistant information to perform CN selection Huawei, HiSilicon discussion Rel-15 LTE\_5GCN\_connect-Core

[R2-1711122](file:///C:\Data\3GPP\Extracts\R2-1711122_RRC%20procedures%20for%20LTE%20connectivity%20to%205G-CN.doc) RRC procedures for LTE connectivity to 5G-CN LG Electronics France discussion Rel-15 LTE\_5GCN\_connect-Core

[R2-1711127](file:///C:\Data\3GPP\Extracts\R2-1711127_Support%20for%20PLMN%20selection%20while%20in%20INACTIVE%20state%20in%20eLTE.doc) Support for PLMN selection while in INACTIVE state in eLTE LG Electronics Inc. discussion Rel-15 LTE\_5GCN\_connect-Core [R2-1709112](file:///C:\Data\3GPP\Extracts\R2-1709112_Support%20for%20PLMN%20selection%20while%20in%20INACTIVE%20state%20in%20eLTE.doc)

[R2-1711145](file:///C:\Data\3GPP\Extracts\R2-1711145_INACTIVE%20state%20in%20eLTE.doc) INACTIVE state in eLTE LG Electronics Inc. discussion Rel-15 LTE\_5GCN\_connect-Core [R2-1709106](file:///C:\Data\3GPP\Extracts\R2-1709106_INACTIVE%20state%20in%20eLTE_V2.doc)

[R2-1711157](file:///C:\Data\3GPP\Extracts\R2-1711157_Assistance%20information%20delivery%20for%20E-UTRA%20connected%20to%205GC.docx) Assistance information delivery for E-UTRA connected to 5GC LG Electronics Inc. discussion Rel-15 LTE\_5GCN\_connect

Late

R2-1710175 Discussion on UE preference and CN Type Determination OPPO discussion

R2-1710176 Discusson on CN type based Cell Barring in eLTE OPPO discussion To:RAN1

R2-1710177 Discussion on ANR support in eLTE OPPO discussion

R2-1710338 RRC Inactive State aspects for E-UTRAN connected to 5GCN Qualcomm India Pvt Ltd discussion Rel-15 LTE\_5GCN\_connect, LTE\_5GCN\_connect-Core Withdrawn

## 9.8 Positioning Accuracy Enhancements for LTE

(LCS\_LTE\_acc\_enh-Core; leading WG: RAN2; REL-15; started: Mar. 17; target: Jun. 18: WID: [RP-171508](file:///C:\Data\3GPP\archive\TSGR\TSGR_76\Docs\RP-171508.zip))

Time budget: 1 TU

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

### 9.8.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

[R2-1710023](file:///C:\Data\3GPP\Extracts\R2-1710023_R1-1715306.doc) LS on RAN1 agreements on UE GNSS carrier phase measurement (R1-1715306; contact: Nokia) RAN1 LS in Rel-15 UTRA\_LTE\_iPos\_enh2 To:RAN2 Cc:RAN4, RAN5

[R2-1711312](file:///C:\Data\3GPP\Extracts\R2-1711312%20%5bDRAFT%5d%20Reply%20LS%20on%20encrypting%20broadcasted%20positioning%20data%20.doc) [DRAFT] Reply LS on encrypting broadcasted positioning data Huawei, HiSilicon LS out Rel-15 LCS\_LTE\_acc\_enh-Core

[R2-1711582](file:///C:\Data\3GPP\Extracts\R2-1711582%20Work%20Plan%20LTE_iPos_enh_r15.docx) Updated work plan for UE Positioning Accuracy Enhancements for LTE work item Nokia, Nokia Shanghai Bell discussion Rel-15 LCS\_LTE\_acc\_enh-Core

### 9.8.2 GNSS positioning enhancements

RTK payload transmission, transparent or not? Supported RTK techniques, SSR, VRS, PPP, etc? The details on the support of UE based and UE assisted; The details about unicast and broadcast of RTK assistance data;

Including output from email discussion [99#47][LTE/Positioning] RTK assistance data encoding (Huawei)

[R2-1710536](file:///C:\Data\3GPP\Extracts\R2-1710536.docx) GNSS positioning enhancements: ways forward to support SSR concept in Release 15 ESA discussion Rel-15 LCS\_LTE\_acc\_enh-Core To:RAN1, RAN2, RAN4

[R2-1710537](file:///C:\Data\3GPP\Extracts\R2-1710537.docx) GNSS positioning enhancements: detailed description of SSR messages for multi GNSS PPP ESA discussion Rel-15 LCS\_LTE\_acc\_enh-Core To:RAN5, RAN2, CT1

[R2-1711031](file:///C:\Data\3GPP\Extracts\R2-1711031_(Running%20LPP%20CR%20for%20RTK%20GNSS%20positioning).doc) Running LPP CR for RTK GNSS positioning Qualcomm Incorporated draftCR Rel-15 36.355 14.3.0 B LCS\_LTE\_acc\_enh-Core To:RAN2, RAN3

[R2-1711291](file:///C:\Data\3GPP\Extracts\R2-1711291.docx) Addition of new IE to support UE-assisted RTK-GNSS measurements Ericsson CR Rel-15 36.355 14.3.0 0188 - B LCS\_LTE\_acc\_enh-Core To:RAN2, CT1, CT4 Cc:RAN, CT, SA, SA1

[R2-1711311](file:///C:\Data\3GPP\Extracts\R2-1711311%20Email%20discussion%20on%20RTK%20assistance%20data%20encoding.doc) Email discussion on RTK assistance data encoding Huawei discussion Rel-15 LCS\_LTE\_acc\_enh-Core

[R2-1711313](file:///C:\Data\3GPP\Extracts\R2-1711313%20Discussion%20on%20unicast%20RTK%20positioning%20.doc) Discussion on unicast RTK positioning Huawei, HiSilicon discussion Rel-15 LCS\_LTE\_acc\_enh-Core

[R2-1711314](file:///C:\Data\3GPP\Extracts\36355_CRxxxx_(REL-15)_R2-1711314_Introducation%20of%20one%20container%20for%20RTK%20assistance%20data%20transmission.doc) Introducation of one container for RTK assistance data transmission Huawei, HiSilicon draftCR Rel-15 36.355 14.3.0 B LCS\_LTE\_acc\_enh-Core

[R2-1711315](file:///C:\Data\3GPP\Extracts\36355_CRxxxx_(REL-15)_R2-1711315_Introducation%20of%20two%20containers%20for%20RTK%20assistance%20data%20transmission.doc) Introducation of two containers for RTK assistance data transmission Huawei, HiSilicon draftCR Rel-15 36.355 14.3.0 B LCS\_LTE\_acc\_enh-Core

[R2-1711813](file:///C:\Data\3GPP\Extracts\R2-1711813.docx) GNSS positioning enhancements: ways forward to support SSR concept in Release 15 ESA discussion Rel-15 LCS\_LTE\_acc\_enh-Core Withdrawn

[R2-1711814](file:///C:\Data\3GPP\Extracts\R2-1711814.docx) GNSS positioning enhancements: detailed description of SSR messages for multi GNSS PPP ESA discussion Rel-15 LCS\_LTE\_acc\_enh-Core Withdrawn

### 9.8.3 Support for IMU positioning

The details of IMU raw data; the scenario and benefits on how to use IMU raw data;

[R2-1710073](file:///C:\Data\3GPP\Extracts\R2-1710073_(Draft%20IMU).doc) Introduction of IMU Positioning ZTE Corporation draftCR Rel-15 36.305 14.3.0 B LCS\_LTE\_acc\_enh-Core To:RAN4 Cc:RAN3

[R2-1710075](file:///C:\Data\3GPP\Extracts\R2-1710075_IMU%20discussion.doc) Discussion on IMU positioning ZTE Corporation discussion

[R2-1710640](file:///C:\Data\3GPP\Extracts\R2-1710640.docx) Considerations for supporting IMU based positioning Fraunhofer IIS discussion Rel-15

=> Revised in [R2-1711939](file:///C:\Data\3GPP\Extracts\R2-1711939.docx)

[R2-1711939](file:///C:\Data\3GPP\Extracts\R2-1711939.docx) Considerations for supporting IMU based positioning Fraunhofer IIS discussion Rel-15

[R2-1711034](file:///C:\Data\3GPP\Extracts\R2-1711034_(IMU%20Positioning).doc) Mitigating Movement of a UE during Positioning using IMUs Qualcomm Incorporated discussion

[R2-1711476](file:///C:\Data\3GPP\Extracts\R2-1711476%20-%20IMU%20sensor%20positioning_final.docx) IMU Sensor based positioning Intel Corporation, Ericsson, Sony discussion Rel-15 LCS\_LTE\_acc\_enh-Core

### 9.8.4 UE-based OTDOA positioning

What additional assistance information is required? Note, as second priority

[R2-1710071](file:///C:\Data\3GPP\Extracts\R2-1710071.doc) Discussion on UE-based OTDOA positioning ZTE Corporation discussion

[R2-1711036](file:///C:\Data\3GPP\Extracts\R2-1711036_(UE-Based%20OTDOA).doc) Introduction of UE-Based OTDOA Positioning Qualcomm Incorporated discussion Rel-15 LCS\_LTE\_acc\_enh-Core [R2-1708523](file:///C:\Data\3GPP\Extracts\R2-1708523_(UE-Based%20OTDOA).doc)

[R2-1711038](file:///C:\Data\3GPP\Extracts\R2-1711038_(Draft%20Stage%202%20UEB%20OTDOA).doc) Draft CR 36.305: Introduction of UE-based OTDOA Positioning Qualcomm Incorporated draftCR Rel-15 36.355 14.3.0 B LCS\_LTE\_acc\_enh-Core [R2-1708525](file:///C:\Data\3GPP\Extracts\R2-1708525_(Draft%20Stage%202%20UEB%20OTDOA).doc)

[R2-1711316](file:///C:\Data\3GPP\Extracts\R2-1711316%20Discussion%20on%20OTDOA%20positioning.doc) Discussion on OTDOA positioning Huawei, HiSilicon discussion Rel-15 LCS\_LTE\_acc\_enh-Core

[R2-1711689](file:///C:\Data\3GPP\Extracts\R2-1711689%20Consideration%20on%20UE-based%20OTDOA%20positioning.docx) Consideration on UE-based OTDOA positioning LG Electronics Inc. discussion Rel-15 LCS\_LTE\_acc\_enh-Core [R2-1709276](file:///C:\Data\3GPP\Extracts\R2-1709276%20Consideration%20on%20UE-based%20OTDOA%20positioning.docx)

### 9.8.5 Broadcasting of assistance data

SIB design for the transmission of A-GNSS, RTK and, as second priority, UE-based OTDOA assistance information. Encryption of assistance data broadcasting (SA3 input is needed);

[R2-1711042](file:///C:\Data\3GPP\Extracts\R2-1711042_(Broadcast%20of%20AD).doc) Broadcast of Positioning Assistance Data Qualcomm Incorporated discussion Rel-15 LCS\_LTE\_acc\_enh-Core [R2-1708539](file:///C:\Data\3GPP\Extracts\R2-1708539_(Broadcast%20of%20AD).doc)

[R2-1711154](file:///C:\Data\3GPP\Extracts\R2-1711154%20positioning%20assistant%20data%20broadcast.docx) The positioning assistance data broadcasting CMCC discussion Rel-15 LCS\_LTE\_acc\_enh-Core

[R2-1711290](file:///C:\Data\3GPP\Extracts\R2-1711290.docx) Encryption of positioning broadcast information Ericsson discussion Rel-15

[R2-1711292](file:///C:\Data\3GPP\Extracts\R2-1711292.doc) draft LS on encrypting broadcasted positioning data Ericsson LS out Rel-15

[R2-1711293](file:///C:\Data\3GPP\Extracts\R2-1711293%20.docx) Positioning assistance data broadcasting Ericsson discussion Rel-15

[R2-1711294](file:///C:\Data\3GPP\Extracts\R2-1711294.docx) GNSS assistance data via cellular networks for accurate positioning Ericsson discussion Rel-15

[R2-1711295](file:///C:\Data\3GPP\Extracts\R2-1711295.doc) draft LS on provisioning of positioning assistance data via LPPa for broadcast Ericsson LS out Rel-15

[R2-1711317](file:///C:\Data\3GPP\Extracts\R2-1711317%20Discussion%20on%20the%20broadcasting%20of%20assistance%20data.doc) Discussion on the broadcasting of assistance data Huawei, HiSilicon discussion Rel-15 LCS\_LTE\_acc\_enh-Core

[R2-1711318](file:///C:\Data\3GPP\Extracts\36331_CRxxxx_(REL-15)_R2-1711318_Introduction%20of%20a%20single%20SIB%20for%20RTK%20positioning.doc) Introduction of a single SIB for RTK positioning Huawei, HiSilicon draftCR Rel-15 36.331 14.4.0 B LCS\_LTE\_acc\_enh-Core

[R2-1711319](file:///C:\Data\3GPP\Extracts\36331_CRxxxx_(REL-15)_R2-1711319_Introduction%20of%20multiple%20SIBs%20for%20RTK%20positioning.doc) Introduction of multiple SIBs for RTK positioning Huawei, HiSilicon draftCR Rel-15 36.331 14.4.0 B LCS\_LTE\_acc\_enh-Core

[R2-1711320](file:///C:\Data\3GPP\Extracts\R2-1711320%20Discussion%20on%20encrypting%20broadcasted%20assistance%20data.doc) Discussion on encryption of broadcasted assistance data Huawei, HiSilicon discussion Rel-15 LCS\_LTE\_acc\_enh-Core

[R2-1711585](file:///C:\Data\3GPP\Extracts\R2-1711585%20Broadcast%20A-GNSS%20assistance%20data.docx) Broadcast A-GNSS assistance data Nokia, Nokia Shanghai Bell discussion Rel-15 LCS\_LTE\_acc\_enh-Core

[R2-1711650](file:///C:\Data\3GPP\Extracts\R2-1711650%20Considerations%20of%20providing%20assistance%20data.doc) Considerations of providing assistance data LG Electronics Inc. discussion Rel-15

## 9.9 Enhancing CA Utilization

(LTE\_euCA-Core; leading WG: RAN2; REL-15; started: Mar. 17; target: Jun. 18: WID: [RP-170805](file:///C:\Data\3GPP\archive\TSGR\TSGR_75\Docs\RP-170805.zip))

Time budget: 1 TU

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

### 9.9.1 General

Including incoming LSs, work plan, rapporteur inputs, running CRs

[R2-1710995](file:///C:\Data\3GPP\Extracts\R2-1710995%20Stage-2%20running%20CR%20of%20euCA.docx) Stage-2 running CR Nokia, Nokia Shanghai Bell discussion Rel-15 LTE\_euCA-Core

### 9.9.2 Delay reduction for SCell set-up

[R2-1710138](file:///C:\Data\3GPP\Extracts\R2-1710138_Fast%20SCell%20activation%20for%20enhanced%20CA%20utilization_v6.doc) Fast SCell activation for enhanced CA utilization Qualcomm India Pvt Ltd discussion Rel-15 LTE\_euCA-Core [R2-1707787](file:///C:\Data\3GPP\Extracts\R2-1707787_Fast%20SCell%20activation%20for%20enhanced%20CA%20utilization.doc)

[R2-1710152](file:///C:\Data\3GPP\Extracts\R2-1710152_FastSCellConfigurationAndActivation_QuickMeasReporting_v1.doc) Fast SCell Configuration and Activation Through network assisted RRC\_Idle mode measurements Qualcomm India Pvt Ltd discussion Rel-15 LTE\_euCA-Core [R2-1707788](file:///C:\Data\3GPP\Extracts\R2-1707788_FastSCellConfigurationAndActivation_QuickMeasReporting.doc)

[R2-1710412](file:///C:\Data\3GPP\Extracts\R2-1710412%20Down-selection%20of%20IDLE%20Mode%20Measurement%20Report%20alternatives%20for%20fast%20SCell%20set-up.docx) Down-selection of IDLE Mode Measurement Report alternatives for fast SCell set-up Huawei, HiSilicon discussion Rel-15 LTE\_euCA-Core

[R2-1710414](file:///C:\Data\3GPP\Extracts\R2-1710414%20Analysis%20on%20the%20Security%20issue%20of%20idle%20mode%20Measurement%20Report.doc) Analysis on the Security issue of idle mode Measurement Report Huawei,HiSilicon discussion Rel-15 LTE\_euCA-Core

[R2-1710753](file:///C:\Data\3GPP\Extracts\R2-1710753_Initial%20status%20of%20Scell%20for%20enhancing%20CA%20utilization.doc) Initial status of SCell for enhancing CA utilization LG Electronics Mobile Research discussion LTE\_euCA-Core

[R2-1710770](file:///C:\Data\3GPP\Extracts\R2-1710770%20-%20Draft%20LS%20to%20RAN1%20and%20RAN4%20On%20usage%20of%20L1%20Siganling%20and%20timeline%20for%20SCell%20State%20Transition_v4.doc) Draft LS to RAN1 and RAN4 about usage of L1 Siganling and timeline for SCell State Transition Qualcomm India Pvt Ltd LS out LTE\_euCA-Core

[R2-1710901](file:///C:\Data\3GPP\Extracts\R2-1710901.doc) IDLE mode measurement reporting for fast SCell set-up KT Corp. discussion

[R2-1710996](file:///C:\Data\3GPP\Extracts\R2-1710996_Faster%20idle%20mode%20measurements.doc) Faster idle mode measurements Nokia, Nokia Shanghai Bell discussion Rel-15 LTE\_euCA-Core

[R2-1710997](file:///C:\Data\3GPP\Extracts\R2-1710997_Faster%20activation%20for%20SCells.doc) Faster activation for Scells Nokia, Nokia Shanghai Bell discussion Rel-15 LTE\_euCA-Core

[R2-1710998](file:///C:\Data\3GPP\Extracts\R2-1710998_Draft%20LS%20to%20RAN4%20on%20enhanced%20CA%20utilization.doc) Draft LS to RAN4 on RAN2 agreements for enhanced CA utilization WID Nokia, Nokia Shanghai Bell discussion Rel-15 LTE\_euCA-Core

[R2-1711534](file:///C:\Data\3GPP\Extracts\R2-1711534%20CA%20establ%20from%20idle%20and%20suspended.docx) CA establishment from Idle and Suspended Ericsson discussion Rel-15 LTE\_euCA-Core

[R2-1711535](file:///C:\Data\3GPP\Extracts\R2-1711535%20euCA%20direct%20activation.docx) Direct activation at configuration Ericsson discussion Rel-15 LTE\_euCA-Core

[R2-1711536](file:///C:\Data\3GPP\Extracts\R2-1711536%20euCA%20measuremnt%20improvements.docx) Measurement improvements for euCA Ericsson discussion Rel-15 LTE\_euCA-Core

[R2-1711641](file:///C:\Data\3GPP\Extracts\R2-1711641%20%20Delay%20reduction%20for%20SCell%20Activation.docx) Delay reduction for SCell Activation Huawei, HiSilicon discussion Rel-15 LTE\_euCA-Core

### 9.9.3 Signalling overhead reduction for configuration activation

[R2-1710154](file:///C:\Data\3GPP\Extracts\R2-1710154_ScellConfigurationOptimization_CA%20HO%20Optimization_v1.doc) Signalling Optimization for SCell Configuration and Handover Qualcomm India Pvt Ltd discussion Rel-15 LTE\_euCA-Core [R2-1707789](file:///C:\Data\3GPP\Extracts\R2-1707789_ScellConfigurationOptimization_CA%20HO%20Optimization.doc)

[R2-1710411](file:///C:\Data\3GPP\Extracts\R2-1710411%20Signalling%20overhead%20reduction%20for%20SCell%20(de)Activation.docx) Signalling overhead reduction for SCell (de)Activation Huawei, HiSilicon discussion Rel-15 LTE\_euCA-Core [R2-1708549](file:///C:\Data\3GPP\Extracts\R2-1708549%20Signalling%20overhead%20reduction%20for%20SCell%20(de)Activation.doc)

[R2-1710999](file:///C:\Data\3GPP\Extracts\R2-1710999%20Common%20SCell%20configuration.docx) Common SCell configuration Nokia, Nokia Shanghai Bell discussion Rel-15 LTE\_euCA-Core

[R2-1711000](file:///C:\Data\3GPP\Extracts\R2-1711000_Draft%20LS%20to%20RAN3%20on%20enhanced%20CA%20utilization.doc) Draft LS to RAN3 on RAN2 agreements for enhanced CA utilization WID Nokia, Nokia Shanghai Bell discussion Rel-15 LTE\_euCA-Core

[R2-1711457](file:///C:\Data\3GPP\Extracts\R2-1711457%20Signalling%20overhead%20reduction%20for%20SCell%20Configuration.docx) Signalling overhead reduction for SCell Configuration Huawei, HiSilicon discussion Rel-15 LTE\_euCA-Core

### 9.9.4 Others

## 9.10 Enhancements on LTE-based V2X Services

(LTE\_eV2X-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Jun. 18: WID: [RP-171740](file:///C:\Data\3GPP\Extracts\RP-171740%20Revision%20of%20V2X%20phase%202%20WID.doc))

Time budget: 1 TU

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

### 9.10.1 General

Including incoming LSs, work plan and rapporteur inputs.

[R2-1710014](file:///C:\Data\3GPP\Extracts\R2-1710014_R1-1715174.doc) LS on RAN1 agreements on mode 3 sidelink CA (R1-1715174; contact: HiSilicon) RAN1 LS in Rel-15 LTE\_eV2X To:RAN2

[R2-1710017](file:///C:\Data\3GPP\Extracts\R2-1710017_R1-1715282.doc) LS to RAN2 on supported use case for Rel-15 V2X CA on PC5 (R1-1715282; contact: Huawei) RAN1 LS in Rel-15 LTE\_eV2X-Core To:RAN2

[R2-1710018](file:///C:\Data\3GPP\Extracts\R2-1710018_R1-1715287.doc) LS to RAN on PC5 operation with short TTI for V2X phase 2 based on LTE (R1-1715287; contact: Huawei, CATT) RAN1 LS in Rel-15 To:RAN Cc:RAN2, RAN4

[R2-1710061](file:///C:\Data\3GPP\Extracts\R2-1710061_S1-173531.doc) Reply LS on support of CACC and platooning applications by 3GPP systems (S1-173531; contact: LGE) SA1 LS in Rel-15 eV2X To:SAE DSRC Technical Committee Cc:SA2, RAN2, RAN1, SAE Cellular V2X Technical Committee

[R2-1710066](file:///C:\Data\3GPP\RAN2\Docs\R2-1710066.zip) LS on FS\_REAR study outcome (S2-176446; contact: Huawei) SA2 LS in Rel-15 FS\_feD2D\_IoT\_relay\_wearable, FS\_REAR To:RAN, RAN1, RAN2, RAN3 Cc:SA3, CT1

### 9.10.2 Carrier aggregation (up to 8 PC5 carriers)

Focus should be on RAN2 aspects.

Support of use case 2?

How to handle limited Rx chains?

Including output from email discussion [99#48][eV2X] Selection of Tx carriers (Huawei)

[R2-1710083](file:///C:\Data\3GPP\Extracts\R2-1710083%20Considerations%20on%20resource%20allocation%20for%20PC5%20CA.doc) Consideration on resource allocation for PC5 CA Huawei, HiSilicon discussion Rel-15 LTE\_eV2X-Core

[R2-1710084](file:///C:\Data\3GPP\Extracts\R2-1710084%20Packet%20duplication%20for%20PC5%20CA.doc) Packet duplication for PC5 CA Huawei, HiSilicon discussion Rel-15 LTE\_eV2X-Core

[R2-1710085](file:///C:\Data\3GPP\Extracts\R2-1710085%20Discussion%20on%20the%20Tx%20carrier%20selection%20for%20PC5%20CA.doc) Discussion on the Tx carrier selection for PC5 CA Huawei, HiSilicon discussion Rel-15 LTE\_eV2X-Core

[R2-1710086](file:///C:\Data\3GPP\Extracts\R2-1710086%20On%20UEs%20with%20limited%20Rx%20capability%20in%20PC5%20CA.doc) On UEs with limited Rx capability in PC5 CA Huawei, HiSilicon discussion Rel-15 LTE\_eV2X-Core

[R2-1710089](file:///C:\Data\3GPP\Extracts\R2-1710089%20Summary%20of%20%5b99%2348%5d%5beV2X%5d%20Selection%20of%20Tx%20carriers.doc) Summary of [99#48][eV2X] Selection of Tx carriers Huawei, HiSilicon discussion Rel-15 LTE\_eV2X-Core

[R2-1710145](file:///C:\Data\3GPP\Extracts\R2-1710145%20-%20Resource%20selection%20in%20CA-based%20eV2x.doc) Resource selection in CA-based eV2x OPPO discussion Rel-15 LTE\_eV2X-Core

[R2-1710146](file:///C:\Data\3GPP\Extracts\R2-1710146%20-%20Carrier%20selection%20in%20CA-based%20eV2x.doc) Carrier selection in CA-based eV2x OPPO discussion Rel-15 LTE\_eV2X-Core

[R2-1710147](file:///C:\Data\3GPP\Extracts\R2-1710147%20-%20Packet%20duplication%20in%20CA-based%20eV2x.doc) Packet duplication in CA-based eV2x OPPO discussion Rel-15 LTE\_eV2X-Core [R2-1707699](file:///C:\Data\3GPP\Extracts\R2-1707699%20-%20Packet%20duplication%20in%20CA-based%20eV2x.doc)

[R2-1710171](file:///C:\Data\3GPP\Extracts\%5beV2X%5d%20R2-1710171%20Discussion%20on%20Carrier%20Set%20Configuration%20for%20PC5%20CA%20in%20Mode%203.doc) Discussion on Carrier Set Configuration for PC5 CA in eV2X in Mode-3 OPPO discussion [R2-1708040](file:///C:\Data\3GPP\Extracts\R2-1708040%20%20Discussion%20on%20Carrier%20Set%20Configuration%20and%20Selection%20for%20PC5%20CA%20in%20eV2X_v06.doc)

[R2-1710650](file:///C:\Data\3GPP\Extracts\R2-1710650%20Packet%20Duplication%20for%20CA%20based%20eV2X.docx) Packet duplication for CA-based eV2x Intel Corporation discussion Rel-15 LTE\_eV2X-Core

[R2-1710651](file:///C:\Data\3GPP\Extracts\R2-1710651%20Carrier%20Selection%20for%20CA%20over%20PC5%20.docx) Carrier selection for CA over PC5 Intel Corporation discussion Rel-15 LTE\_eV2X-Core

[R2-1710684](file:///C:\Data\3GPP\Extracts\R2-1710684-CA%20for%20V2X%20Phase%202.doc) Carrier Aggregation for V2X Phase 2 Qualcomm Incorporated discussion Rel-15 LTE\_eV2X-Core

[R2-1710685](file:///C:\Data\3GPP\Extracts\R2-1710685-About%20CA%20Packet%20Duplication%20in%20V2X%20Phase%202.doc) Carrier Aggregation Use Cases in V2X Phase 2 Qualcomm Incorporated, CATT discussion Rel-15 LTE\_eV2X-Core

[R2-1710714](file:///C:\Data\3GPP\Extracts\R2-1710714_carrier%20selection.doc) Carrier selection mechanism in eV2X CATT discussion

[R2-1710716](file:///C:\Data\3GPP\Extracts\R2-1710716_SPS.doc) SPS in eV2X when CA is configured CATT discussion

[R2-1710894](file:///C:\Data\3GPP\Extracts\R2-1710894%20V2X%20CA.docx) Discussion on activation of V2X carrier aggregation Nokia, Nokia Shanghai Bell discussion Rel-15 LTE\_eV2X-Core

[R2-1711011](file:///C:\Data\3GPP\Extracts\R2-1711011%20Discussion%20on%20carrer%20selection%20in%20PC5%20CA.doc) Discussion on carrier selection in PC5 CA ZTE Corporation discussion Rel-15 LTE\_eV2X-Core

[R2-1711013](file:///C:\Data\3GPP\Extracts\R2-1711013%20Discussion%20on%20data%20duplication%20for%20PC5%20CA.doc) Discussion on data duplication for PC5 CA ZTE Corporation discussion LTE\_eV2X-Core

[R2-1711399](file:///C:\Data\3GPP\Extracts\R2-1711399%20Modelling%20sidelink%20parallel%20transmissions%20for%20V2X.doc) Modelling sidelink parallel transmissions for V2X communication LG Electronics Inc. discussion Rel-15 LTE\_eV2X-Core

[R2-1711493](file:///C:\Data\3GPP\Extracts\R2-1711493%20-%20Sidelink%20Carrier%20Selection%20Criteria.doc) Sidelink Carrier Selection Criteria Ericsson discussion Rel-15 LTE\_eV2X-Core

[R2-1711494](file:///C:\Data\3GPP\Extracts\R2-1711494%20-%20On%20the%20Need%20of%20Sidelink%20PCell%20and%20SCell.doc) On the Need of Sidelink PCell and SCell Ericsson discussion Rel-15 LTE\_eV2X-Core

[R2-1711496](file:///C:\Data\3GPP\Extracts\R2-1711496%20-%20Packet%20duplication%20for%20PC5.doc) Packet duplication for PC5 Ericsson discussion Rel-15 LTE\_eV2X-Core

[R2-1711685](file:///C:\Data\3GPP\Extracts\R2-1711685%20Consideration%20on%20packet%20duplication.doc) Consideration on packet duplication LG Electronics Inc. discussion Rel-15 LTE\_eV2X-Core

[R2-1711693](file:///C:\Data\3GPP\Extracts\R2-1711693%20Consideration%20on%20limited%20Rx%20capability.docx) Consideration on limited Rx capability LG Electronics Inc. discussion Rel-15 LTE\_eV2X-Core

[R2-1711694](file:///C:\Data\3GPP\Extracts\R2-1711694%20Layer%20design%20aspect%20for%20carrier%20selection.docx) Layer design aspect for carrier selection LG Electronics Inc. discussion Rel-15 LTE\_eV2X-Core

[R2-1711775](file:///C:\Data\3GPP\Extracts\R2-1711775.docx) Discussion on SPS support with enhanced Carrier Aggregation Samsung R&D Institute UK discussion [R2-1709624](file:///C:\Data\3GPP\Extracts\R2-1709624.docx)

[R2-1711812](file:///C:\Data\3GPP\Extracts\R2-1711812.docx) Packet Duplication for the Sidelink Carrier Aggregation Samsung R&D Institute UK discussion

### 9.10.3 Radio resource pool sharing between UEs using mode 3 and mode 4

Focus should be on RAN2 aspects.

[R2-1710087](file:///C:\Data\3GPP\Extracts\R2-1710087%20Discussion%20on%20resource%20pool%20sharing%20between%20mode3%20and%20mode4%20UEs.doc) Discussion on resource pool sharing between mode3 and mode4 UEs Huawei, HiSilicon discussion Rel-15 LTE\_eV2X-Core [R2-1707969](file:///C:\Data\3GPP\Extracts\R2-1707969%20Discussion%20on%20resource%20pool%20sharing%20between%20mode3%20and%20mode4%20UEs.doc)

[R2-1710088](file:///C:\Data\3GPP\Extracts\R2-1710088%20On%20resource%20pool%20sharing%20between%20R15%20UEs%20and%20R14%20UEs.doc) On resource pool sharing between R15 UEs and R14 UEs Huawei, HiSilicon discussion Rel-15 LTE\_eV2X-Core

[R2-1710148](file:///C:\Data\3GPP\Extracts\R2-1710148%20-%20Resource%20pool%20sharing%20in%20eV2x.doc) Resource pool sharing in eV2x OPPO discussion Rel-15 LTE\_eV2X-Core

[R2-1710652](file:///C:\Data\3GPP\Extracts\R2-1710652%20Resource%20pool%20sharing%20between%20mode%203%20and%20mode%204.docx) Resource pool sharing between mode 3 and 4 Intel Corporation discussion Rel-15 LTE\_eV2X-Core

[R2-1710682](file:///C:\Data\3GPP\Extracts\R2-1710682-Resource%20pool%20sharing%20between%20Mode%203%20and%20Mode%204.doc) Resource pool sharing between Mode 3 and Mode 4 Qualcomm Incorporated discussion Rel-15 LTE\_eV2X-Core [R2-1708681](file:///C:\Data\3GPP\Extracts\R2-1708681-Resource%20pool%20sharing%20between%20Mode%203%20and%20Mode%204.doc)

[R2-1710715](file:///C:\Data\3GPP\Extracts\R2-1710715_shared%20resource.doc) Discussion on mode 3 and mode 4 shared resource pool CATT discussion

[R2-1710787](file:///C:\Data\3GPP\Extracts\R2-1710787_reubmission%20of%20R2-1709008.docx) Discussion on resource pool sharing between mode 3 and mode 4 UEs Samsung Electronics France SA discussion Rel-15 [R2-1709008](file:///C:\Data\3GPP\Extracts\R2-1710787_reubmission%20of%20R2-1709008.docx)

[R2-1710895](file:///C:\Data\3GPP\Extracts\R2-1710895%20V2X%20sharing%20pools_%20v2.docx) Resource pool sharing between mode 3 and mode 4 Nokia, Nokia Shanghai Bell discussion Rel-15 LTE\_eV2X-Core

[R2-1711014](file:///C:\Data\3GPP\Extracts\R2-1711014%20Consideration%20on%20resource%20pool%20sharing%20between%20UEs%20using%20mode%203%20and%20mode%204.doc) Consideration on resource pool sharing between UEs using mode 3 and mode 4 ZTE Corporation discussion LTE\_eV2X-Core [R2-1708510](file:///C:\Data\3GPP\Extracts\R2-1708510%20Consideration%20on%20resource%20pool%20sharing%20between%20UEs%20using%20mode%203%20and%20mode%204.doc)

[R2-1711497](file:///C:\Data\3GPP\Extracts\R2-1711497%20-%20Pool%20sharing%20between%20mode%203%20and%20mode%204.doc) Pool sharing between mode 3 and mode 4 Ericsson discussion Rel-15 LTE\_eV2X-Core

[R2-1711684](file:///C:\Data\3GPP\Extracts\R2-1711684%20Radio%20resource%20pool%20sharing%20between%20UEs%20using%20mode%203%20and%20UEs%20using%20mode%204.doc) Radio resource pool sharing between UEs using mode 3 and UEs using mode 4 LG Electronics Inc. discussion Rel-15 LTE\_eV2X-Core [R2-1709133](file:///C:\Data\3GPP\Extracts\R2-1709133%20Radio%20resource%20pool%20sharing%20between%20UEs%20using%20mode%203%20and%20UEs%20using%20mode%204.doc)

[R2-1711733](file:///C:\Data\3GPP\Extracts\R2-1711733_resubmission%20of%20R2-1708297.doc) Discussion about exceptional pool for resource pool sharing between UEs using mode 3 and UEs using mode 4 Samsung R&D Institute UK discussion Rel-15 LTE\_eV2X-Core [R2-1708297](file:///C:\Data\3GPP\Extracts\R2-1711733_resubmission%20of%20R2-1708297.doc)

[R2-1711749](file:///C:\Data\3GPP\Extracts\R2-1711749.docx) Supporting reliability during resource sharing Samsung R&D Institute UK discussion [R2-1709430](file:///C:\Data\3GPP\Extracts\R2-1709430.docx)

[R2-1711754](file:///C:\Data\3GPP\Extracts\R2-1711754_PoolSharing.doc) Mode3/Mode 4 resource pool sharing on V2X phase 2 Samsung R&D Institute UK discussion To:RAN1

### 9.10.4 Others

Including RAN2 aspects, if any, on the WI objectives 1b (64 QAM), 1c (delay reduction at layer 1), 2 (transmit diversity), and 3 (short TTI).

[R2-1710090](file:///C:\Data\3GPP\Extracts\R2-1710090%20Consideration%20on%20latency%20related%20topics%20in%20LTE%20eV2X.doc) Consideration on latency related aspects in LTE eV2X Huawei, HiSilicon discussion Rel-15 LTE\_eV2X-Core

[R2-1710149](file:///C:\Data\3GPP\Extracts\R2-1710149%20-%20Resource%20selection%20for%20sTTI%20in%20eV2x.doc) Resource selection for sTTI in eV2x OPPO discussion Rel-15 LTE\_eV2X-Core [R2-1707702](file:///C:\Data\3GPP\Extracts\R2-1707702%20-%20Resource%20selection%20for%20sTTI%20in%20eV2x.doc)

[R2-1710150](file:///C:\Data\3GPP\Extracts\R2-1710150%20-%20Latency%20reduction%20in%20eV2x.doc) Latency reduction in eV2x OPPO discussion Rel-15 LTE\_eV2X-Core

[R2-1710683](file:///C:\Data\3GPP\Extracts\R2-1710683-Latency%20reduction%20for%20V2X%20Phase%202.doc) Reduction of time between packet arrival and transmisison Qualcomm Incorporated discussion Rel-15 LTE\_eV2X-Core [R2-1708683](file:///C:\Data\3GPP\Extracts\R2-1708683-Latency%20reduction%20for%20V2X%20Phase%202.doc)

[R2-1711015](file:///C:\Data\3GPP\Extracts\R2-1711015%20Considerations%20for%20latency%20reduction_clean.doc) Consideration on latency reduction ZTE Corporation discussion LTE\_eV2X-Core

[R2-1711016](file:///C:\Data\3GPP\Extracts\R2-1711016_Discussion%20on%20support%20of%2064QAM%20over%20sidelink.doc) Discussion on support of 64QAM over sidelink ZTE Corporation discussion LTE\_eV2X-Core [R2-1708512](file:///C:\Data\3GPP\Extracts\R2-1708512%20Discussion%20on%20support%20of%2064QAM%20over%20sidelink.doc)

[R2-1711495](file:///C:\Data\3GPP\Extracts\R2-1711495%20-%20Latency%20reduction%20for%20eV2V.doc) Latency reduction for eV2V Ericsson discussion Rel-15 LTE\_eV2X-Core

[R2-1711686](file:///C:\Data\3GPP\Extracts\R2-1711686%20RAN2%20aspects%20regarding%20support%20of%2064QAM%20and%20TX%20diversity.doc) RAN2 aspects regarding support of 64QAM and TX diversity LG Electronics Inc. discussion Rel-15 LTE\_eV2X-Core

[R2-1711744](file:///C:\Data\3GPP\Extracts\R2-1711744_Mode4Latency.doc) Latency reduction on V2X phase 2 for UEs using Mode 4 Samsung R&D Institute UK discussion [R2-1709427](file:///C:\Data\3GPP\Extracts\R2-1709427.doc)

[R2-1711759](file:///C:\Data\3GPP\Extracts\R2-1711759_SidelinkSPS.doc) SPS enhancements for V2X phase 2 Samsung R&D Institute UK discussion

## 9.11 High capacity stationary wireless and 1024 QAM

(LTE\_1024QAM\_DL-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Mar. 18: WID: [RP-171738](file:///C:\Data\3GPP\Extracts\RP-171738.doc))

Time budget: 0.5 TU

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

### 9.11.1 General

Including incoming LSs, work plan, rapporteur inputs, running CRs

### 9.11.2 UE capability and potential new categories

### 9.11.3 Corresponding higher-layer procedures and signalling

## 9.12 Enhancements to LTE operation in unlicensed spectrum

(LTE\_unlic-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Jun. 18: WID: [RP-170848](file:///C:\Data\3GPP\archive\TSGR\TSGR_75\Docs\RP-170848.zip))

Time budget: 1 TU

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

### 9.12.1 General

Including incoming LSs, work plan, rapporteur inputs, running CRs

[R2-1710013](file:///C:\Data\3GPP\Extracts\R2-1710013_R1-1715080.doc) LS on RAN1 agreements on Enhancements to LTE operation in unlicensed spectrum (R1-1715080; contact: Nokia) RAN1 LS in Rel-15 LTE\_unlic To:RAN2

[R2-1711066](file:///C:\Data\3GPP\Extracts\R2-1711066%20status%20of%20enhancements%20to%20LTE%20operation%20in%20unlicensed%20spectrum.docx) Summary status of LT\_unlic-Core and stage-2 TP draft Nokia discussion Rel-15 LTE\_unlic-Core To:RAN, RAN1, RAN2, RAN3 Cc:SA3, CT1

### 9.12.2 Autonomous uplink access on Frame structure type 3

[R2-1710363](file:///C:\Data\3GPP\Extracts\R2-1710363%20Confirmation%20on%20AUL%20activation%20and%20deactivation.doc) Confirmation on AUL activation and deactivation Huawei, HiSilicon discussion Rel-15 LTE\_unlic-Core

[R2-1710364](file:///C:\Data\3GPP\Extracts\R2-1710364%20Threshold%20for%20AUL%20in%20FeLAA.doc) Threshold for AUL in FeLAA Huawei, HiSilicon discussion Rel-15 LTE\_unlic-Core

[R2-1710365](file:///C:\Data\3GPP\Extracts\R2-1710365%20Issues%20related%20to%20SR%20in%20FeLAA.doc) Issues related to SR in FeLAA Huawei, HiSilicon discussion Rel-15 LTE\_unlic-Core

[R2-1710366](file:///C:\Data\3GPP\Extracts\R2-1710366%20MAC%20aspect%20of%20autonomous%20uplink%20access.doc) MAC aspects of autonomous uplink access Huawei, HiSilicon discussion Rel-15 LTE\_unlic-Core

[R2-1710367](file:///C:\Data\3GPP\Extracts\R2-1710367%20Multiplexing%20of%20data%20for%20AUL.doc) Multiplexing of data for AUL Huawei, HiSilicon discussion Rel-15 LTE\_unlic-Core

[R2-1710368](file:///C:\Data\3GPP\Extracts\R2-1710368%20HARQ%20with%20autonomous%20uplink%20access%20on%20LAA%20SCell.doc) HARQ with autonomous uplink access on LAA SCell Huawei, HiSilicon discussion Rel-15 LTE\_unlic-Core

[R2-1710648](file:///C:\Data\3GPP\RAN2\Docs\R2-1710648.zip) HARQ aspect on AUL Intel Corporation discussion Rel-15 LTE\_unlic-Core

[R2-1710649](file:///C:\Data\3GPP\RAN2\Docs\R2-1710649.zip) Other apescts on AUL Intel Corporation discussion Rel-15 LTE\_unlic-Core

[R2-1711207](file:///C:\Data\3GPP\Extracts\R2-1711207%20Resource%20allocation%20for%20Autonomous%20UL%20Access.doc) Resource allocation for AUL Nokia discussion Rel-15 LTE\_unlic-Core

[R2-1711208](file:///C:\Data\3GPP\Extracts\R2-1711208%20LAA%20HARQ%20operation.doc) LAA HARQ operation Nokia discussion Rel-15 LTE\_unlic-Core

[R2-1711488](file:///C:\Data\3GPP\Extracts\R2-1711488%20-%20Autonomous%20Uplink%20Access%20for%20LAA.doc) Autonomous Uplink Access for LAA Ericsson discussion Rel-15 LTE\_unlic-Core

[R2-1711489](file:///C:\Data\3GPP\Extracts\R2-1711489%20-%20HARQ%20Design%20for%20Autonomous%20UL%20Access.doc) HARQ Design for Autonomous UL Access Ericsson discussion Rel-15 LTE\_unlic-Core

[R2-1711490](file:///C:\Data\3GPP\Extracts\R2-1711490%20-%20Channel%20Access%20Priority%20Classes%20for%20feLAA.doc) Channel Access Priority Classes for feLAA Ericsson discussion Rel-15 LTE\_unlic-Core

[R2-1711736](file:///C:\Data\3GPP\Extracts\R2-1711736_eLAA_CB_UL.doc) Further details of Autonomous Uplink Access for eLAA Qualcomm Incorporated discussion

### 9.12.3 Other operation on Frame structure type 3

[R2-1711491](file:///C:\Data\3GPP\Extracts\R2-1711491%20-%20RAN2%20Impact%20on%20Multiple%20Starting%20and%20Ending%20Positions%20in%20a%20Subframe.doc) RAN2 Impact on Multiple Starting and Ending Positions in a Subframe Ericsson discussion Rel-15 LTE\_unlic-Core

### 9.12.4 Others

## 9.13 Further NB-IoT enhancements

(NB\_IOTenh2-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Jun. 18: WID: [RP-172063](file:///C:\Data\3GPP\TSGR\TSGR_77\Docs\RP-172063.zip))

Time budget: 1 TU

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

Some sub-items in 9.13 and 9.14 may be treated jointly.

[R2-1710020](file:///C:\Data\3GPP\Extracts\R2-1710020_R1-1715300.doc) LS on narrowband measurement accuracy enhancement (R1-1715300; contact: Huawei) RAN1 LS in Rel-15 NB\_IOTenh2 To:RAN4 Cc:RAN2

[R2-1710021](file:///C:\Data\3GPP\Extracts\R2-1710021_R1-1715301.doc) LS on TDD NB-IoT (R1-1715301; contact: Huawei) RAN1 LS in Rel-15 NB\_IOTenh2 To:RAN2

[R2-1710034](file:///C:\Data\3GPP\Extracts\R2-1710034_R3-173401.doc) LS on UE differentiation of NB-IOT (R3-173401; contact: ZTE) RAN3 LS in Rel-15 NB\_IOTenh2-Core To:SA2 Cc:RAN2Withdrawn

### 9.13.1 Early Data Transmission

Early Data transmission for NB-IoT is treated jointly with MTC under AI 9.14.2. Do not use this AI for any item that can be discussed jointly.

[R2-1711402](file:///C:\Data\3GPP\Extracts\R2-1711402.doc) Early Data Transmission Failure Handling in NB-IoT LG Electronics Inc. discussion Rel-15 NB\_IOTenh2-Core [R2-1709457](file:///C:\Data\3GPP\Extracts\R2-1709457.doc)

[R2-1711633](file:///C:\Data\3GPP\Extracts\R2-1711633%20NPRACH%20resource%20partition%20for%20early%20data%20transmission.docx) NPRACH resource partition for early data transmission MediaTek Inc. discussion

### 9.13.2 System Acquisition Enhancements

System acquisition Enhancements for NB-IoT is treated jointly with MTC under AI 9.14.3. Do not use this AI for any item that can be discussed jointly.

[R2-1710794](file:///C:\Data\3GPP\Extracts\R2-1710794%20Skipping%20MIB-NB%20Acquisition%20for%20NB-IOT%20UE.docx) Skipping MIB-NB Acquisition for NB-IOT UE MediaTek Inc. discussion

### 9.13.3 Relaxed Monitoring for cell reselection

Relaxed monitoring for cell reselection for MTC and NB-IoT is treated jointly under this AI.

Including output from email discussion [99#41][NB-IoT/MTC] Measurement relaxation (Ericsson)

[R2-1710151](file:///C:\Data\3GPP\Extracts\R2-1710151.docx) Relaxed monitoring for NB-IoT Gemalto N.V. discussion

[R2-1710162](file:///C:\Data\3GPP\Extracts\R2-1710162.doc) Introduction of relaxed monitoring in NB-IoT Gemalto N.V. CR Rel-14 36.304 14.4.0 0389 - B NB\_IOTenh-Core

[R2-1710164](file:///C:\Data\3GPP\Extracts\R2-1710164.doc) Introduction of relaxed monitoring in NB-IoT Gemalto N.V. CR Rel-14 36.306 14.4.0 1509 - B NB\_IOTenh-Core

[R2-1710165](file:///C:\Data\3GPP\Extracts\R2-1710165.doc) Introduction of relaxed monitoring in NB-IoT Gemalto N.V. CR Rel-14 36.331 14.4.0 3074 - B NB\_IOTenh-Core

[R2-1710727](file:///C:\Data\3GPP\Extracts\R2-1710727%20Email%20report%2099_41%20Measurement%20relaxation.doc) Email report 99\_41 Measurement relaxation Ericsson report Rel-14 NB\_IOTenh-Core

[R2-1710728](file:///C:\Data\3GPP\Extracts\R2-1710728%20Relaxed%20Monitoring%20in%20NB-IoT.doc) Relaxed Monitoring in NB-IoT Ericsson discussion Rel-14 NB\_IOTenh-Core [R2-1708273](file:///C:\Data\3GPP\Extracts\R2-1708273%20Relaxed%20monitoring%20in%20NB-IoT.doc)

[R2-1710729](file:///C:\Data\3GPP\Extracts\R2-1710729%20Introduction%20of%20relaxed%20monitoring%20in%20NB-IoT%20in%2036.304.doc) Introduction of relaxed monitoring in NB-IoT in 36.304 Ericsson draftCR Rel-14 36.304 14.4.0 B NB\_IOTenh-Core

[R2-1710730](file:///C:\Data\3GPP\Extracts\R2-1710730%20Introduction%20of%20relaxed%20monitoring%20in%20NB-IoT%20in%2036.306.doc) Introduction of relaxed monitoring in NB-IoT in 36.306 Ericsson draftCR Rel-14 36.306 14.4.0 B NB\_IOTenh-Core

[R2-1710731](file:///C:\Data\3GPP\Extracts\R2-1710731%20Introduction%20of%20relaxed%20monitoring%20in%20NB-IoT%20in%2036.331.doc) Introduction of relaxed monitoring in NB-IoT in 36.331 Ericsson draftCR Rel-14 36.331 14.4.0 B NB\_IOTenh-Core

[R2-1710732](file:///C:\Data\3GPP\Extracts\R2-1710732%20Relaxed%20monitoring%20in%20MTC.doc) Relaxed monitoring in MTC Ericsson discussion Rel-15 LTE\_eMTC4-Core [R2-1708278](file:///C:\Data\3GPP\Extracts\R2-1708278%20Relaxed%20monitoring%20in%20MTC.doc)

[R2-1710904](file:///C:\Data\3GPP\Extracts\R2-1710904%20Consideration%20on%20relaxed%20monitoring%20for%20cell%20reselection%20in%20FeNB-IoT%20and%20eFeMTC.doc) Further consideration on relaxed monitoring for cell reselection in FeNB-IoT and eFeMTC ZTE Wistron Telecom AB discussion Rel-15 NB\_IOTenh2-Core

[R2-1711321](file:///C:\Data\3GPP\Extracts\R2-1711321_Introduction_of_relaxed_monitoring_in_36304.doc) Introduction of relaxed monitoring for NB-IoT in 36.304 Huawei, HiSilicon CR Rel-14 36.304 14.4.0 0384 - C NB\_IOTenh-Core, TEI14 [R2-1708306](file:///C:\Data\3GPP\Extracts\36304_CR0384_(Rel-14)_R2-1708306_Introduction_of_relaxed_monitoring.doc)

[R2-1711322](file:///C:\Data\3GPP\Extracts\R2-1711322_Introduction_of_relaxed_monitoring_in_36306.doc) Introduction of relaxed monitoring for NB-IoT in 36.306 Huawei, HiSilicon CR Rel-14 36.306 14.4.0 1492 - C NB\_IOTenh-Core, TEI14 [R2-1708307](file:///C:\Data\3GPP\Extracts\36306_CR1492_(Rel-14)_R2-1708307_Introduction_of_relaxed_monitoring.doc)

[R2-1711323](file:///C:\Data\3GPP\Extracts\R2-1711323_Introduction_of_relaxed_monitoring_in_36331.doc) Introduction of relaxed monitoring for NB-IoT in 36.331 Huawei, HiSilicon CR Rel-14 36.331 14.4.0 2987 - C NB\_IOTenh-Core, TEI14 [R2-1708308](file:///C:\Data\3GPP\Extracts\36331_CR2987_(Rel-14)_R2-1708308_Introduction_of_relaxed_monitoring.doc)

[R2-1711652](file:///C:\Data\3GPP\Extracts\R2-1711652%20Determination%20of%20stationary%20UE%20in%20NB-IoT.doc) Determination of stationary UE in NB-IoT LG Electronics Inc. discussion Rel-15

### 9.13.4 Semi-Persistent Scheduling

Including output from email discussion [99#42][NB-IoT] SPS options (Huawei)

[R2-1710908](file:///C:\Data\3GPP\Extracts\R2-1710908%20Further%20consideration%20on%20SPS%20in%20FeNB-IoT.doc) Further consideration on SPS in FeNB-IoT ZTE Wistron Telecom AB discussion Rel-15 NB\_IOTenh2-Core

[R2-1711329](file:///C:\Data\3GPP\Extracts\R2-1711329%20Summary%20of%20email%20discussion%20%5b99%2342%5d%5bNB-IoT%5d%20on%20SPS%20options.doc) Summary of email discussion [99#42][NB-IoT] on SPS options Huawei report Rel-15 NB\_IOTenh2-Core

[R2-1711330](file:///C:\Data\3GPP\Extracts\R2-1711330%20Uplink%20scheduling%20request%20in%20connected%20mode.doc) Scheduling request in connected mode Huawei, HiSilicon, Neul discussion Rel-15 NB\_IOTenh2-Core

[R2-1711572](file:///C:\Data\3GPP\Extracts\R2-1711572%20Further%20consideration%20on%20SPS%20for%20NB-IoT.docx) Further consideration on SPS for NB-IoT LG Electronics Inc. discussion Rel-15 NB\_IOTenh2-Core

[R2-1711631](file:///C:\Data\3GPP\Extracts\R2-1711631%20NB-IOT%20SPS.doc) M2M SPS MediaTek Beijing Inc. discussion

[R2-1711656](file:///C:\Data\3GPP\Extracts\R2-1711656%20-%20Configuring%20and%20activating%20SPS%20for%20NB-IoT.docx) Configuring and activating SPS for NB-IoT Ericsson discussion Rel-15 NB\_IOTenh2-Core

### 9.13.5 RRC Connection Release Enhancements

Including output from email discussion [99#43][NB-IoT] RRC Connection release (MediaTek)

[R2-1710735](file:///C:\Data\3GPP\Extracts\R2-1710735%20Quick%20RRC%20connection%20release.doc) Quick RRC connection release Ericsson discussion Rel-15 NB\_IOTenh2-Core [R2-1708279](file:///C:\Data\3GPP\Extracts\R2-1708279%20Quick%20RRC%20connection%20release.doc)

[R2-1710736](file:///C:\Data\3GPP\Extracts\R2-1710736%20Introduction%20of%20DataInactivityTimer%20without%20NAS%20recovery%20in%2036.306.doc) Introduction of DataInactivityTimer without NAS recovery in 36.306 Ericsson draftCR Rel-15 36.306 14.4.0 B NB\_IOTenh2-Core

[R2-1710737](file:///C:\Data\3GPP\Extracts\R2-1710737%20Introduction%20of%20DataInactivityTimer%20without%20NAS%20recovery%20in%2036.321.doc) Introduction of DataInactivityTimer without NAS recovery in 36.321 Ericsson draftCR Rel-15 36.321 14.4.0 B NB\_IOTenh2-Core

[R2-1710738](file:///C:\Data\3GPP\Extracts\R2-1710738%20Introduction%20of%20DataInactivityTimer%20without%20NAS%20recovery%20in%2036.331.doc) Introduction of DataInactivityTimer without NAS recovery in 36.331 Ericsson draftCR Rel-15 36.331 14.4.0 B NB\_IOTenh2-Core

[R2-1710739](file:///C:\Data\3GPP\Extracts\R2-1710739%20Introduction%20of%20uplink%20HARQ-ACK%20feedback%20in%20NB-IoT%20in%2036.306.doc) Introduction of uplink HARQ-ACK feedback in NB-IoT in 36.306 Ericsson draftCR Rel-15 36.306 14.4.0 B NB\_IOTenh2-Core

[R2-1710740](file:///C:\Data\3GPP\Extracts\R2-1710740%20Introduction%20of%20uplink%20HARQ-ACK%20feedback%20in%20NB-IoT%20in%2036.321.doc) Introduction of uplink HARQ-ACK feedback in NB-IoT in 36.321 Ericsson draftCR Rel-15 36.321 14.4.0 B NB\_IOTenh2-Core

[R2-1710741](file:///C:\Data\3GPP\Extracts\R2-1710741%20Introduction%20of%20uplink%20HARQ-ACK%20feedback%20in%20NB-IoT%20in%2036.331.doc) Introduction of uplink HARQ-ACK feedback in NB-IoT in 36.331 Ericsson draftCR Rel-15 36.331 14.4.0 B NB\_IOTenh2-Core

[R2-1710795](file:///C:\Data\3GPP\Extracts\R2-1710795%20Report%20of%20Email%20Discussion%20%5b99%2343%5d%5bNB-IoT%5d%20RRC%20Connection%20Release.docx) Report of Email Discussion [99#43][NB-IoT] RRC Connection Release MediaTek Inc. report

[R2-1710911](file:///C:\Data\3GPP\Extracts\R2-1710911%20Further%20consideration%20on%20quick%20release%20of%20RRC%20connection%20in%20FeNB-IoT.doc) Further consideration on quick release of RRC connection in FeNB-IoT ZTE Wistron Telecom AB discussion Rel-15 NB\_IOTenh2-Core

[R2-1711331](file:///C:\Data\3GPP\Extracts\R2-1711331%20RRC_connection_release_enhancements.doc) RRC Connection Release Enhancement Huawei, HiSilicon, Neul discussion Rel-15 NB\_IOTenh2-Core

[R2-1711346](file:///C:\Data\3GPP\Extracts\R2-1711346_Quick%20release%20of%20RRC%20connection%20for%20NB-IoT.doc) Quick release of RRC connection for NB-IoT LG Electronics Inc. discussion Rel-15 36.321 NB\_IOTenh2-Core

[R2-1711351](file:///C:\Data\3GPP\Extracts\36331_draftCR_(Rel-15)_R2-1711351_Change%20of%20release%20cause%20in%20case%20of%20dataInactivityTimer%20expiry.doc) Change of release cause in case of DataInactivityTimer expiry LG Electronics Inc. draftCR Rel-15 36.331 14.4.0 C NB\_IOTenh2-Core

R2-1711355 Reliable use of DataInactivityTimer LG Electronics Inc. discussion Rel-15 36.321 NB\_IOTenh2-Core [R2-1709166](file:///C:\Data\3GPP\Extracts\R2-1709166_Reliable%20use%20of%20dataInactivityTimer.doc) Withdrawn

[R2-1711356](file:///C:\Data\3GPP\Extracts\R2-1711356_Reliable%20use%20of%20dataInactivityTimer.doc) Reliable use of DataInactivityTimer LG Electronics Inc. discussion Rel-15 36.321 NB\_IOTenh2-Core [R2-1709166](file:///C:\Data\3GPP\Extracts\R2-1709166_Reliable%20use%20of%20dataInactivityTimer.doc)

[R2-1711454](file:///C:\Data\3GPP\Extracts\R2-1711454%20-%20Spec%20changes%20for%20RRC%20Connection%20Release%20via%20DCI.doc) Potential specification impact of RRC connection release via DCI Qualcomm Incorporated discussion Rel-15

### 9.13.6 UE differentiation

Including output from email discussion [99#44][NB-IoT] UE differentiation (Huawei)

[R2-1710751](file:///C:\Data\3GPP\Extracts\R2-1710751%20Further%20input%20to%20UE%20differentiation%20in%20NB-IoT.docx) Further input to UE differentiation in NB-IoT Ericsson discussion Rel-15 NB\_IOTenh2-Core [R2-1708287](file:///C:\Data\3GPP\Extracts\R2-1708287%20UE%20differentiation%20in%20NB-IoT.docx)

[R2-1711327](file:///C:\Data\3GPP\Extracts\R2-1711327_Email%20discussion%20on%20UE%20differentiation.doc) Report of email discussion [99#44][NB-IoT] on UE differentiation Huawei report Rel-15 NB\_IOTenh2-Core

[R2-1711328](file:///C:\Data\3GPP\Extracts\R2-1711328%20Draft%20LS%20on%20UE%20differentiation%20in%20NB-IoT.doc) [DRAFT] LS on UE differentiation for Rel-15 NB-IoT Huawei [to be RAN2] LS out Rel-15 NB\_IOTenh2-Core

[R2-1711485](file:///C:\Data\3GPP\Extracts\R2-1711485%20UE%20differentation.docx) Data characteristics for UE differentiation Nokia, Nokia Shanghai Bell discussion Rel-15 NB\_IOTenh2-Core

[R2-1711636](file:///C:\Data\3GPP\Extracts\R2-1711636%20further%20discussion%20on%20NB-IOT%20UE%20differentiation.docx) Further discussion on NB-IOT UE differentiation MediaTek Inc. discussion

### 9.13.7 Small Cell Support

[R2-1710957](file:///C:\Data\3GPP\Extracts\R2-1710957%20Consideration%20on%20supporting%20small%20cell%20in%20FeNB-IoT.doc) Consideration on supporting small cell in FeNB-IoT ZTE Wistron Telecom AB discussion Rel-15 NB\_IOTenh2-Core

[R2-1711262](file:///C:\Data\3GPP\Extracts\R2-1711262.docx) 2-Step RACH support for Small Cells. Gemalto N.V. discussion

[R2-1711333](file:///C:\Data\3GPP\Extracts\R2-1711333%20Small%20cell%20support%20in%20NB-IoT.doc) Small cell support in NB-IoT Huawei, HiSilicon, Neul discussion Rel-15 NB\_IOTenh2-Core

### 9.13.8 TDD

[R2-1710485](file:///C:\Data\3GPP\Extracts\R2-1710485.docx) Study of Impacts on Timers due to TDD support Ericsson discussion Rel-15

[R2-1710486](file:///C:\Data\3GPP\Extracts\R2-1710486.docx) Study of Paging, SI Acquisition and SIB Scheduling impacts due to TDD Ericsson discussion Rel-15

[R2-1710487](file:///C:\Data\3GPP\Extracts\R2-1710487.docx) Study of TDD NPRACH and RA-RNTI impacts due to TDD Ericsson discussion Rel-15

[R2-1710978](file:///C:\Data\3GPP\Extracts\R2-1710978%20Consideration%20on%20TDD%20support%20in%20FeNB-IoT.doc) Consideration on TDD support in FeNB-IoT ZTE Wistron Telecom AB discussion Rel-15 NB\_IOTenh2-Core

[R2-1711326](file:///C:\Data\3GPP\Extracts\R2-1711326%20Power%20saving%20signal%20or%20channel.doc) Power saving signal or channel in NB-IoT and eMTC Huawei, HiSilicon, Neul discussion Rel-15 NB\_IOTenh2-Core

[R2-1711332](file:///C:\Data\3GPP\Extracts\R2-1711332%20TDD%20support%20in%20NB-IoT.doc) TDD support in NB-IoT Huawei, HiSilicon, Neul discussion Rel-15 NB\_IOTenh2-Core

### 9.13.9 Other

E.g. Support for RLC-UM, Wake-Up Signal, Support for physical layer SR, Measurement Accuracy Enhancements, NPRACH reliability, NPRACH range, other

[R2-1710742](file:///C:\Data\3GPP\Extracts\R2-1710742%20Introduction%20of%20further%20NB-IoT%20enhancements%20in%2036.306.doc) Introduction of further NB-IoT enhancements in 36.306 Ericsson CR Rel-15 36.306 14.4.0 1513 - B NB\_IOTenh2-Core

[R2-1710743](file:///C:\Data\3GPP\Extracts\R2-1710743%20Introduction%20of%20further%20NB-IoT%20enhancements%20in%2036.322.doc) Introduction of further NB-IoT enhancements in 36.322 Ericsson CR Rel-15 36.322 14.1.0 0131 - B NB\_IOTenh2-Core

[R2-1710744](file:///C:\Data\3GPP\Extracts\R2-1710744%20Measurement%20accuracy%20improvements.doc) Measurement accuracy improvements Ericsson discussion Rel-15 NB\_IOTenh2-Core [R2-1708280](file:///C:\Data\3GPP\Extracts\R2-1708280%20Measurement%20accuracy%20improvements.doc)

[R2-1710745](file:///C:\Data\3GPP\Extracts\R2-1710745%20Introduction%20of%20measurement%20accuracy%20improvements%20in%2036.306.doc) Introduction of measurement accuracy improvements in 36.306 Ericsson draftCR Rel-15 36.306 14.4.0 B NB\_IOTenh2-Core

[R2-1710746](file:///C:\Data\3GPP\Extracts\R2-1710746%20Introduction%20of%20measurement%20accuracy%20improvements%20in%2036.331.doc) Introduction of measurement accuracy improvements in 36.331 Ericsson draftCR Rel-15 36.331 14.4.0 B NB\_IOTenh2-Core

[R2-1710750](file:///C:\Data\3GPP\Extracts\R2-1710750%20RLC%20UM%20for%20NB-IoT%20for%20SRBs.docx) RLC UM for NB-IoT for SRBs Ericsson discussion Rel-15 NB\_IOTenh2-Core [R2-1708283](file:///C:\Data\3GPP\Extracts\R2-1708283%20RLC%20UM%20for%20NB-IoT.docx)

[R2-1710980](file:///C:\Data\3GPP\Extracts\R2-1710980%20Consideration%20on%20wake-up%20signaling%20in%20FeNB-IoT.doc) Consideration on wake-up signaling in FeNB-IoT ZTE Wistron Telecom AB discussion Rel-15 NB\_IOTenh2-Core

[R2-1710981](file:///C:\Data\3GPP\Extracts\R2-1710981%20Consideration%20on%20SR%20and%20PHR%20transmission%20enhancement%20in%20FeNB-IoT.doc) Consideration on SR and PHR transmission enhancement in FeNB-IoT ZTE Wistron Telecom AB discussion Rel-15 NB\_IOTenh2-Core

[R2-1710984](file:///C:\Data\3GPP\Extracts\R2-1710984%20Consideration%20on%20UE%20power%20consumption%20reduction%20in%20FeNB-IoT.doc) Consideration on UE power consumption reduction in FeNB-IoT ZTE Wistron Telecom AB discussion Rel-15 NB\_IOTenh2-Core

[R2-1711161](file:///C:\Data\3GPP\Extracts\R2-1711161_Access%20barring%20for%20CE%20level%20in%20NB-IOT.docx) Access barring for CE level in NB-IOT LG Electronics Inc. discussion Rel-15 NB\_IOTenh-Core [R2-1709312](file:///C:\Data\3GPP\Extracts\R2-1709312.docx) Withdrawn

[R2-1711343](file:///C:\Data\3GPP\Extracts\R2-1711343_Stopping%20contention%20resolution%20timer%20based%20on%20retransmission%20scheduling.doc) Stopping contention resolution timer based on retransmission scheduling LG Electronics Inc. discussion Rel-15 36.321 NB\_IOTenh2-Core [R2-1709172](file:///C:\Data\3GPP\Extracts\R2-1709172_Stopping%20contention%20resolution%20timer%20based%20on%20retransmission%20scheduling.doc)

[R2-1711344](file:///C:\Data\3GPP\Extracts\36321_CR1158_(Rel-15)_R2-1711344_Stopping%20contention%20resolution%20timer%20based%20on%20retransmission%20scheduling.doc) Stopping contention resolution timer based on retransmission scheduling LG Electronics Inc. CR Rel-15 36.321 14.4.0 1158 - F LTE\_eMTC4-Core, NB\_IOTenh2-Core [R2-1709139](file:///C:\Data\3GPP\Extracts\36321_CR1158_(Rel-15)_R2-1709139_Stopping%20contention%20resolution%20timer%20based%20on%20retransmission%20scheduling.doc)

[R2-1711401](file:///C:\Data\3GPP\Extracts\R2-1711401.doc) Enhanced RRC Connection Re-establishment in NB-IoT LG Electronics Inc. discussion Rel-15 NB\_IOTenh2-Core [R2-1709456](file:///C:\Data\3GPP\Extracts\R2-1709456.doc)

[R2-1711638](file:///C:\Data\3GPP\Extracts\R2-1711638_Access%20barring%20for%20CE%20level%20in%20NB-IOT.docx) Access barring for CE level in NB-IOT LG Electronics UK discussion NB\_IOTenh2-Core [R2-1709312](file:///C:\Data\3GPP\Extracts\R2-1709312.docx)

[R2-1711657](file:///C:\Data\3GPP\Extracts\R2-1711657%20-%20NB-IoT%20PHY%20Scheduling%20Request.doc) NB-IoT PHY Scheduling Request Ericsson discussion Rel-15 NB\_IOTenh2-Core

[R2-1711658](file:///C:\Data\3GPP\Extracts\R2-1711658%20-%20NPRACH%20reliability%20and%20range%20enhancement.docx) NPRACH reliability and range enhancement for NB-IoT Ericsson discussion Rel-15 NB\_IOTenh2-Core

## 9.14 Even further enhanced MTC for LTE

(LTE\_eMTC4-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Jun. 18: WID: [RP-171427](file:///C:\Data\3GPP\archive\TSGR\TSGR_76\Docs\RP-171427.zip))

Time budget: 2 TU

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

### 9.14.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

[R2-1710019](file:///C:\Data\3GPP\Extracts\R2-1710019_R1-1715299.doc) LS on UL HARQ-ACK feedback for Rel-15 LTE efeMTC (R1-1715299; contact: ZTE) RAN1 LS in Rel-15 LTE\_eMTC4 To:RAN2

[R2-1710044](file:///C:\Data\3GPP\Extracts\R2-1710044_R1-1715080.doc) LS on new UE power class for Rel-15 efeMTC (R4-1708835; contact: Ericsson) RAN4 LS in Rel-15 LTE\_eMTC4 To:RAN2 Cc:RAN1

### 9.14.2 Early data transmission

Early Data transmission for NB-IoT and MTC is treated jointly under this AI.

Including output from email discussion [99#45][NB-IoT/MTC] Early data transmission (Qualcomm)

[R2-1710521](file:///C:\Data\3GPP\Extracts\R2-1710521%20-%20Early%20Data%20Transmission%20over%20NAS.docx) Early Data Transmission over NAS Ericsson discussion Rel-15 LTE\_eMTC4-Core

[R2-1710522](file:///C:\Data\3GPP\Extracts\R2-1710522%20-%20UP%20solution%20for%20early%20data%20transmission.docx) UP solution for early data transmission Ericsson discussion Rel-15 LTE\_eMTC4-Core

[R2-1710523](file:///C:\Data\3GPP\Extracts\R2-1710523%20-%20General%20aspects%20of%20early%20data%20transmission.docx) General aspects of early data transmission Ericsson discussion Rel-15 LTE\_eMTC4-Core

[R2-1710642](file:///C:\Data\3GPP\Extracts\R2-1710642_Early%20data.doc) Early data transmission discussion for eFeMTC and FeNB-IoT Intel Corporation discussion Rel-15 LTE\_eMTC4-Core

[R2-1710791](file:///C:\Data\3GPP\Extracts\R2-1710791_EDT.doc) Details of Early data transmission for eFeMTC Kyocera discussion

[R2-1710888](file:///C:\Data\3GPP\Extracts\R2-1710888%20Email%20disc%20report%20%5b99%2345%5d%20Early%20data%20transmission.docx) Email discussion report: [99#45][NB-IoT/MTC] Early data transmission Qualcomm Incorporated discussion Rel-15 LTE\_eMTC4-Core, NB\_IOTenh2-Core

[R2-1710889](file:///C:\Data\3GPP\Extracts\R2-1710889%20Draft%20LS%20on%20EDT%20to%20RAN3,SA2,SA3,CT1.doc) [Draft] LS on Early Data Transmission Qualcomm Incorporated LS out Rel-15 LTE\_eMTC4-Core, NB\_IOTenh2-Core

[R2-1710896](file:///C:\Data\3GPP\Extracts\R2-1710896%20early%20data%20transmission.docx) Network initiated early UL data transmission Nokia, Nokia Shanghai Bell discussion Rel-15 LTE\_eMTC4-Core

[R2-1710987](file:///C:\Data\3GPP\Extracts\R2-1710987%20Further%20consideration%20on%20early%20data%20transmission%20in%20eFeMTC%20and%20FeNB-IoT.doc) Further consideration on early data transmission in eFeMTC and FeNB-IoT ZTE Wistron Telecom AB discussion Rel-15 LTE\_eMTC4-Core

[R2-1711158](file:///C:\Data\3GPP\Extracts\R2-1711158_Early%20data%20transmission%20for%20User%20plane%20CIoT%20optimisation.docx) Early data transmission for User plane CIoT optimisation LG Electronics Inc. discussion Rel-15 LTE\_feMTC [R2-1709307](file:///C:\Data\3GPP\Extracts\R2-1709307.docx)

[R2-1711159](file:///C:\Data\3GPP\Extracts\R2-1711159_Early%20data%20transmission%20for%20Control%20plane%20CIoT%20optimisation.docx) Early data transmission for Control plane CIoT optimisation LG Electronics Inc. discussion Rel-15 LTE\_feMTC [R2-1709309](file:///C:\Data\3GPP\Extracts\R2-1709309.docx)

[R2-1711324](file:///C:\Data\3GPP\Extracts\R2-1711324%20General%20discussion%20on%20early%20data%20transmission.doc) General discussion on early data transmission Huawei, HiSilicon, Neul discussion Rel-15 NB\_IOTenh2-Core, LTE\_eMTC4-Core

[R2-1711325](file:///C:\Data\3GPP\Extracts\R2-1711325%20Early%20data%20transmission.doc) Early data transmission for NB-IoT and eMTC Huawei, HiSilicon, Neul discussion Rel-15 NB\_IOTenh2-Core, LTE\_eMTC4-Core

[R2-1711403](file:///C:\Data\3GPP\Extracts\R2-1711403.doc) Early Data Transmission Failure Handling in MTC LG Electronics Inc. discussion Rel-15 LTE\_eMTC4-Core [R2-1709458](file:///C:\Data\3GPP\Extracts\R2-1709458.doc)

[R2-1711469](file:///C:\Data\3GPP\Extracts\R2-1711469%20Draft%20LS%20on%20EDT%20to%20RAN1.doc) [Draft] LS on Early Data Transmission Qualcomm Incorporated LS out Rel-15 LTE\_eMTC4-Core, NB\_IOTenh2-Core To:SA2

[R2-1711555](file:///C:\Data\3GPP\Extracts\R2-1711555.doc) PRACH for EDT requests Sierra Wireless, S.A. discussion Rel-15

[R2-1711629](file:///C:\Data\3GPP\Extracts\R2-1711629%20Reliability%20and%20Early%20Data%20Transmission.doc) Reliability and Early Data transmission MediaTek Beijing Inc. discussion

### 9.14.3 System acquisition time enhancements

System acquisition Enhancements for NB-IoT and MTC is treated jointly under this AI.

Including output from email discussion [99#46][MTC] Skipping SIB1-BR (Sierra Wireless)

[R2-1710518](file:///C:\Data\3GPP\Extracts\R2-1710518%20-%20Reduced%20System%20Acquisition%20Time.docx) Reduced system acquisition time Ericsson discussion Rel-15 LTE\_eMTC4-Core

[R2-1710519](file:///C:\Data\3GPP\Extracts\R2-1710519%20-%20Skipping%20SIB1-BR%20acquisition.docx) Skipping SIB1-BR acquisition Ericsson discussion Rel-15 LTE\_eMTC4-Core

[R2-1710520](file:///C:\Data\3GPP\Extracts\R2-1710520%20-%20DRAFT%20LS%20reply%20on%20Reduced%20System%20Acquisition%20Time.doc) DRAFT LS reply on system acquisition time reduction for Rel-15 LTE-MTC Ericsson LS out Rel-15 LTE\_eMTC4-Core

[R2-1710988](file:///C:\Data\3GPP\Extracts\R2-1710988%20Further%20consideration%20on%20system%20acquisition%20time%20reduction%20in%20eFeMTC%20and%20FeNB-IoT.doc) Further consideration on system acquisition time reduction in eFeMTC and FeNB-IoT ZTE Wistron Telecom AB discussion Rel-15 LTE\_eMTC4-Core

[R2-1711215](file:///C:\Data\3GPP\Extracts\R2-1711215.doc) Accumulation across SIB1-BR/SI modification period Huawei, HiSilicon discussion Rel-15 LTE\_eMTC4-Core

[R2-1711216](file:///C:\Data\3GPP\Extracts\R2-1711216.doc) [DRAFT] Reply LS on System acquisition time reduction for Rel-15 LTE MTC Huawei, HiSilicon LS out Rel-15 LTE\_eMTC4-Core

[R2-1711217](file:///C:\Data\3GPP\Extracts\R2-1711217.doc) Skip system information reading for MTC upon cell reselection Huawei, HiSilicon discussion Rel-15 LTE\_eMTC4-Core

[R2-1711334](file:///C:\Data\3GPP\Extracts\R2-1711334%20System%20information%20enhancements%20in%20NB-IoT.doc) System information acquisition enhancements for NB-IoT Huawei, HiSilicon, Neul discussion Rel-15 NB\_IOTenh2-Core, LTE\_eMTC4-Core

[R2-1711477](file:///C:\Data\3GPP\Extracts\R2-1711477.doc) [99#46] [MTC] Skipping SIB1-BR Sierra Wireless, S.A. (email rapporteur) discussion Rel-15

[R2-1711481](file:///C:\Data\3GPP\Extracts\R2-1711481.doc) One and two-bit indications in MIB of SIB1-BR changes Sierra Wireless, S.A. discussion Rel-15

[R2-1711649](file:///C:\Data\3GPP\Extracts\R2-1711649%20Optimization%20of%20SI%20acquisition%20in%20MTC.doc) Optimization of SI acquisition in MTC LG Electronics Inc. discussion Rel-15 [R2-1709283](file:///C:\Data\3GPP\Extracts\R2-1709283%20Optimization%20of%20SI%20acquisition%20in%20MTC.doc)

[R2-1711651](file:///C:\Data\3GPP\Extracts\R2-1711651%20Clarification%20of%20parameters%20for%20skipping%20MIB-NB.doc) Clarification of parameters for skipping MIB-NB LG Electronics Inc. discussion Rel-15

[R2-1711826](file:///C:\Data\3GPP\Extracts\R2-1711826.docx) NB-IoT\_UE SI on demand Vodafone Group Plc. discussion

### 9.14.4 Relaxed monitoring for cell reselection

Relaxed monitoring for cell reselection for MTC is treated jointly with NB-IoT under AI 9.13.3. Do not use this AI for any item that can be discussed jointly.

### 9.14.5 Access/load control of idle mode UEs

[R2-1710354](file:///C:\Data\3GPP\Extracts\R2-1710354%20-%20Improved%20Access%20and%20Load%20Control%20for%20Idle%20Mode%20UEs.doc) Improved Access and Load Control for Idle Mode UEs Fujitsu discussion Rel-15 LTE\_eMTC4-Core

[R2-1710532](file:///C:\Data\3GPP\Extracts\R2-1710532%20-%20Improved%20Idle%20Mode%20Load%20control%20for%20efeMTC%20UEs.docx) Improved Idle Mode Load control for efeMTC UEs Ericsson discussion Rel-15 LTE\_eMTC4-Core

[R2-1710644](file:///C:\Data\3GPP\Extracts\R2-1710644%20access%20barring.docx) CE level based access barring and load control for eFeMTC Intel Corporation discussion Rel-15 LTE\_eMTC4-Core

[R2-1710792](file:///C:\Data\3GPP\Extracts\R2-1710792_Load-balancing.doc) CE-based access barring and load balancing for idle mode UEs for eFeMTC Kyocera discussion

[R2-1710991](file:///C:\Data\3GPP\Extracts\R2-1710991%20Further%20consideration%20on%20access%20control%20in%20eFeMTC.doc) Further consideration on access control in eFeMTC ZTE Wistron Telecom AB discussion Rel-15 LTE\_eMTC4-Core

[R2-1711160](file:///C:\Data\3GPP\Extracts\R2-1711160_Access%20barring%20for%20CE%20level%20in%20feMTC.docx) Access barring for CE level in feMTC LG Electronics Inc. discussion Rel-15 LTE\_feMTC [R2-1709311](file:///C:\Data\3GPP\Extracts\R2-1709311.docx)

[R2-1711218](file:///C:\Data\3GPP\Extracts\R2-1711218.doc) Improved access/load control of idle mode Ues Huawei, HiSilicon discussion Rel-15 LTE\_eMTC4-Core

[R2-1711418](file:///C:\Data\3GPP\Extracts\R2-1711418%20-%20Improved%20Idle%20Mode%20Load%20control%20for%20efeMTC%20UEs%20in%2036.331.doc) Improved Idle Mode Load Control for efeMTC UEs Ericsson draftCR Rel-15 36.331 14.4.0 B LTE\_eMTC4-Core

### 9.14.6 Uplink HARQ-ACK feedback

[R2-1710524](file:///C:\Data\3GPP\Extracts\R2-1710524%20-%20Uplink%20HARQ-ACK%20feedback%20for%20MTC%20in%2036.306.doc) Uplink HARQ-ACK feedback for MTC Ericsson draftCR Rel-15 36.306 14.4.0 B LTE\_eMTC4-Core

[R2-1710525](file:///C:\Data\3GPP\Extracts\R2-1710525%20-%20Uplink%20HARQ-ACK%20feedback%20for%20MTC%20in%2036.321.doc) Uplink HARQ-ACK feedback for MTC Ericsson draftCR Rel-15 36.321 14.4.0 B LTE\_eMTC4-Core

[R2-1710526](file:///C:\Data\3GPP\Extracts\R2-1710526%20-%20Uplink%20HARQ-ACK%20feedback%20for%20MTC%20in%2036.331.doc) Uplink HARQ-ACK feedback for MTC Ericsson draftCR Rel-15 36.331 14.4.0 B LTE\_eMTC4-Core To:CT1

[R2-1710643](file:///C:\Data\3GPP\Extracts\R2-1710643%20UL%20HARQ.docx) UL HARQ feedback in efeMTC Intel Corporation discussion Rel-15 LTE\_eMTC4-Core To:SA1, CT1 Cc:SA2

[R2-1710992](file:///C:\Data\3GPP\Extracts\R2-1710992%20Consideration%20on%20Uplink%20HARQ-ACK%20feedback%20in%20eFeMTC.doc) Consideration on Uplink HARQ-ACK feedback in eFeMTC ZTE Wistron Telecom AB discussion Rel-15 LTE\_eMTC4-Core

[R2-1711219](file:///C:\Data\3GPP\Extracts\R2-1711219.doc) Uplink HARQ-ACK feedback for Rel-15 MTC Huawei, HiSilicon discussion Rel-15 LTE\_eMTC4-Core

[R2-1711300](file:///C:\Data\3GPP\Extracts\R2-1711300_DRX%20enhancement%20using%20HARQ%20feedback.doc) DRX enhancement using HARQ feedback LG Electronics Inc. discussion Rel-15 36.321 LTE\_eMTC4-Core [R2-1709141](file:///C:\Data\3GPP\Extracts\R2-1709141_DRX%20enhancement%20using%20HARQ%20feedback.doc)

[R2-1711310](file:///C:\Data\3GPP\Extracts\36321_draftCR_(Rel-15)_R2-1711310_DRX%20enhancement%20using%20HARQ%20feedback.doc) DRX enhancement using HARQ feedback LG Electronics Inc. draftCR Rel-15 36.321 14.4.0 B LTE\_eMTC4-Core

[R2-1711359](file:///C:\Data\3GPP\Extracts\R2-1711359_RA%20enhancement%20using%20HARQ%20feedback.doc) RA enhancement using HARQ feedback LG Electronics Inc. discussion Rel-15 36.321 LTE\_eMTC4-Core [R2-1709140](file:///C:\Data\3GPP\Extracts\R2-1709140_RA%20enhancement%20using%20HARQ%20feedback.doc)

### 9.14.7 Increased PDSCH spectral efficiency

[R2-1710528](file:///C:\Data\3GPP\Extracts\R2-1710528%20-%20Introducing%2064QAM%20for%20PDSCH%20in%2036306.doc) Increased PDSCH spectral efficiency Ericsson draftCR Rel-15 36.306 14.4.0 B LTE\_eMTC4-Core

[R2-1710529](file:///C:\Data\3GPP\Extracts\R2-1710529%20-%20Introducing%2064QAM%20for%20PDSCH.doc) Increased PDSCH spectral efficiency Ericsson draftCR Rel-15 36.331 14.4.0 B LTE\_eMTC4-Core

[R2-1711220](file:///C:\Data\3GPP\Extracts\R2-1711220.doc) Increased PDSCH spectral efficiency for Rel-15 MTC Huawei, HiSilicon discussion Rel-15 LTE\_eMTC4-Core

[R2-1711221](file:///C:\Data\3GPP\Extracts\R2-1711221.doc) [DRAFT] LS on signalling support of 64QAM for Rel-15 efeMTC Huawei, HiSilicon LS out Rel-15 LTE\_eMTC4-Core

### 9.14.8 Increased PUSCH spectral efficiency

[R2-1710530](file:///C:\Data\3GPP\Extracts\R2-1710530%20-%20Increased%20PUSCH%20spectral%20efficiency%20in%2036306.doc) Increased PUSCH spectral efficiency Ericsson draftCR Rel-15 36.306 14.4.0 B LTE\_eMTC4-Core

[R2-1710531](file:///C:\Data\3GPP\Extracts\R2-1710531%20-%20Increased%20PUSCH%20spectral%20efficiency%20in%2036331.doc) Increased PUSCH spectral efficiency Ericsson draftCR Rel-15 36.331 14.4.0 B LTE\_eMTC4-Core

[R2-1711553](file:///C:\Data\3GPP\Extracts\R2-1711553.doc) Signaling for Sub-PRB capability indication Sierra Wireless, S.A. discussion Rel-15

### 9.14.9 Other

Including higher UE velocity, lower UE power class, wake-up signaling, CRS muting etc.

[R2-1710515](file:///C:\Data\3GPP\Extracts\R2-1710515%20-%20Lower%20power%20class%20UE.docx) Lower power class UE Ericsson discussion Rel-15 LTE\_eMTC4-Core

[R2-1710516](file:///C:\Data\3GPP\Extracts\R2-1710516%20-%20Introducing%2014%20dBm%20UE%20power%20class%20in%2036331.doc) Introducing 14 dBm UE power class Ericsson draftCR Rel-15 36.331 14.4.0 B LTE\_eMTC4-Core

[R2-1710517](file:///C:\Data\3GPP\Extracts\R2-1710517%20-%20Introducing%2014%20dBm%20UE%20power%20class%20in%2036304.doc) Introducing 14 dBm UE power class Ericsson draftCR Rel-15 36.304 14.4.0 B LTE\_eMTC4-Core

[R2-1710527](file:///C:\Data\3GPP\Extracts\R2-1710527.docx) CRS muting Ericsson discussion Rel-15 LTE\_eMTC4-Core [R2-1708633](file:///C:\Data\3GPP\Extracts\R2-1708633%20-%20CRS%20muting.docx)

[R2-1710533](file:///C:\Data\3GPP\Extracts\R2-1710533%20-%20Higher%20Velocity%20for%20CEModeA%20UE%20in%20eFeMTC.doc) Higher velocity for CEModeA UE in eFeMTC Ericsson discussion LTE\_eMTC4-Core

[R2-1710641](file:///C:\Data\3GPP\Extracts\R2-1710641%20WUS.docx) WUS consideration for efeMTC Intel Corporation discussion Rel-15 LTE\_eMTC4-Core

[R2-1710749](file:///C:\Data\3GPP\Extracts\R2-1710749%20Wake-up%20signal%20for%20NB-IoT%20and%20eMTC.doc) Wake-up signal for NB-IoT & eMTC Ericsson discussion Rel-15 NB\_IOTenh2-Core, LTE\_eMTC4-Core [R2-1708284](file:///C:\Data\3GPP\Extracts\R2-1708284%20NB-IoT%20power%20consumption%20reduction%20for%20paging%20and%20connected-mode%20DRX.doc)

[R2-1711005](file:///C:\Data\3GPP\Extracts\R2-1711005%20Consideration%20on%20supporting%20lower%20UE%20power%20class%20in%20efeMTC.doc) Consideration on supporting lower UE power class in eFeMTC ZTE Wistron Telecom AB discussion Rel-15 LTE\_eMTC4-Core

[R2-1711214](file:///C:\Data\3GPP\Extracts\R2-1711214.doc) Power saving signal or channel in NB-IoT and eMTC Huawei, HiSilicon, Neul discussion Rel-15 LTE\_eMTC4-Core

[R2-1711222](file:///C:\Data\3GPP\Extracts\R2-1711222.doc) Lower UE power class for Rel-15 MTC Huawei, HiSilicon discussion Rel-15 LTE\_eMTC4-Core

[R2-1711223](file:///C:\Data\3GPP\Extracts\R2-1711223.doc) [DRAFT] Reply LS on new UE power class for Rel-15 efeMTC Huawei, HiSilicon LS out Rel-15 LTE\_eMTC4-Core

[R2-1711455](file:///C:\Data\3GPP\Extracts\R2-1711455%20%20Introduction%20of%20support%20for%20eMTC%2014%20dBm%20UE%20in%2036.306.doc) Introducing 14 dBm UE power class Ericsson draftCR Rel-15 36.306 14.4.0 B LTE\_eMTC4-Core

## 9.15 Highly Reliable Low Latency Communication for LTE

LTE\_HRLLC-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Jun. 18: WID: [RP-171489](file:///C:\Data\3GPP\archive\TSGR\TSGR_76\Docs\RP-171489.zip)

Time budget: 0.5 TU

For this meeting, items with RAN2 only impact will be discussed (e.g. packet duplication). Items that are related to RAN1 will be discussed from RAN2#100. (This guidance is intended to clarify the WID which is contradictory in allocating 0.5 TU to RAN2 but also saying that RAN2 work doesn’t start until RAN2#100)

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

[R2-1710501](file:///C:\Data\3GPP\Extracts\R2-1710501%20Work%20Plan%20for%20URLLC.doc) Work Plan for URLLC Ericsson discussion Rel-15 LTE\_HRLLC-Core

[R2-1710502](file:///C:\Data\3GPP\Extracts\R2-1710502%20-%20Packet%20duplication%20in%20LTE.docx) Packet duplication in LTE Ericsson discussion Rel-15 LTE\_HRLLC-Core

[R2-1710503](file:///C:\Data\3GPP\Extracts\R2-1710503%20-%20URLLC%20Techniques%20for%20Latency.doc) RAN2 Techniques for Latency Ericsson discussion Rel-15 LTE\_HRLLC-Core

[R2-1710504](file:///C:\Data\3GPP\Extracts\R2-1710504%20-%20RAN2%20Techniques%20for%20reliability.docx) RAN2 Techniques for reliability Ericsson discussion Rel-15 LTE\_HRLLC-Core

[R2-1711001](file:///C:\Data\3GPP\Extracts\R2-1711001%20PDCP%20data%20duplication%20in%20LTE.docx) PDCP data duplication in LTE Nokia, Nokia Shanghai Bell discussion Rel-15 LTE\_HRLLC-Core

[R2-1711115](file:///C:\Data\3GPP\Extracts\R2-1711115%20Discussion%20on%20packet%20duplication.doc) Discussion on packet duplication Huawei, HiSilicon discussion Rel-15 LTE\_HRLLC-Core

[R2-1711116](file:///C:\Data\3GPP\Extracts\R2-1711116%20Potential%20enhancement%20for%20HRLLC%20based%20on%20sTTI.doc) Potential enhancement for HRLLC based on sTTI Huawei, HiSilicon discussion Rel-15 LTE\_HRLLC-Core

[R2-1711117](file:///C:\Data\3GPP\Extracts\R2-1711117%20Latency%20analysis%20for%20LTE%20HRLLC.doc) Latency analysis for LTE HRLLC Huawei, HiSilicon discussion Rel-15 LTE\_HRLLC-Core

[R2-1711118](file:///C:\Data\3GPP\Extracts\R2-1711118%20RAN2%20impacts%20of%20UL%20grant-free.doc) RAN2 impacts of UL grant-free Huawei, HiSilicon discussion Rel-15 LTE\_HRLLC-Core

## 9.16 UL data compression in LTE

(LTE\_UDC-Core; leading WG: RAN2; Rel-15; started Sep 17; target: Mar 18; WID [RP-172076](file:///C:\Data\3GPP\TSGR\TSGR_77\Docs\RP-172076.zip))

Time budget: 1.0 TU

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

[R2-1710410](file:///C:\Data\3GPP\Extracts\R2-1710410.doc) Buffer Size Allocation Ericsson discussion Rel-15

[R2-1710413](file:///C:\Data\3GPP\Extracts\R2-1710413.doc) UDC Buffer Size Selection Ericsson CR Rel-15 36.331 14.4.0 3076 - B LTE\_UDC-Core

[R2-1710453](file:///C:\Data\3GPP\Extracts\R2-1710453.doc) Pre-Defined Dictionary for UDC Ericsson discussion Rel-15

[R2-1710471](file:///C:\Data\3GPP\Extracts\R2-1710471.doc) Selection of Pre-defined Dictionary for UDC Ericsson CR Rel-15 36.323 14.4.0 0202 - B LTE\_UDC-Core

[R2-1710472](file:///C:\Data\3GPP\Extracts\R2-1710472.doc) Pre-Defined Dictionary Configuration for UDC Ericsson CR Rel-15 36.331 14.4.0 3077 - B LTE\_UDC-Core To:WG1

[R2-1710703](file:///C:\Data\3GPP\Extracts\R2-1710703%20Discussion%20on%20the%20scope%20of%20the%20WI%20UDC.doc) Discussion on the scope of the WI UDC Huawei, HiSilicon discussion Rel-15 LTE\_UDC-Core

[R2-1710704](file:///C:\Data\3GPP\Extracts\R2-1710704%20Discussion%20on%20buffer%20size%20impact%20for%20UDC.doc) Discussion on buffer size impact for UDC Huawei, HiSilicon discussion Rel-15 LTE\_UDC-Core

[R2-1710705](file:///C:\Data\3GPP\Extracts\R2-1710705%20Discussion%20on%20pre-defined%20dictionary%20for%20UDC.doc) Discussion on pre-defined dictionary for UDC Huawei, HiSilicon discussion Rel-15 LTE\_UDC-Core

[R2-1710706](file:///C:\Data\3GPP\Extracts\R2-1710706%20Discussion%20on%20compressed%20data%20format%20for%20UDC.doc) Discussion on compressed data format for UDC Huawei, HiSilicon discussion Rel-15 LTE\_UDC-Core

[R2-1710707](file:///C:\Data\3GPP\Extracts\R2-1710707%20Discussion%20on%20signaling%20procedures%20for%20UDC.doc) Discussion on signaling procedures for UDC Huawei, HiSilicon discussion Rel-15 LTE\_UDC-Core

[R2-1710718](file:///C:\Data\3GPP\Extracts\R2-1710718.doc) Work Plan for UDC CATT Work Plan Rel-15

[R2-1710719](file:///C:\Data\3GPP\Extracts\36300_CRxxxx_(Rel-15)_R2-1710719.doc) Introduction of DEFLATE based UDC Solution CATT draftCR Rel-15 36.300 14.4.0 B LTE\_UDC-Core

[R2-1710720](file:///C:\Data\3GPP\Extracts\R2-1710720.docx) Consideration on UDC Header Content CATT discussion Rel-15 LTE\_UDC-Core

[R2-1710721](file:///C:\Data\3GPP\Extracts\R2-1710721.doc) Consideration on Signalling and Procedures for UDC CATT discussion Rel-15 LTE\_UDC-Core

[R2-1710722](file:///C:\Data\3GPP\Extracts\36331_CRxxxx_(Rel-15)_R2-1710722.doc) Introduction of DEFLATE based UDC Solution CATT draftCR Rel-15 36.331 14.4.0 B LTE\_UDC-Core

[R2-1710723](file:///C:\Data\3GPP\Extracts\R2-1710723.docx) PDCP impact analysis CATT discussion Rel-15 LTE\_UDC-Core

[R2-1710724](file:///C:\Data\3GPP\Extracts\36323_CRxxxx_(Rel-15)_R2-1710724.doc) Introduction of DEFLATE based UDC Solution CATT draftCR Rel-15 36.323 14.4.0 B LTE\_UDC-Core

[R2-1710725](file:///C:\Data\3GPP\Extracts\R2-1710725.docx) Initial Consideration on Pre-defined Dictionary for UDC CATT discussion Rel-15 LTE\_UDC-Core

[R2-1710989](file:///C:\Data\3GPP\Extracts\R2-1710989%20Discussion%20on%20Byte-alignment%20operation%20for%20UDC%20v3.doc) Discussion on Byte-alignment Operation for UDC MediaTek Inc. discussion Rel-15 LTE\_UDC-Core

[R2-1710990](file:///C:\Data\3GPP\Extracts\R2-1710990%20Discussion%20on%20UDC%20Configuration%20v3.doc) Discussion on UDC Configurations MediaTek Inc. discussion Rel-15 LTE\_UDC-Core

## 9.17 Other LTE Rel-15 WIs

This agenda item may be used for documents relating to Rel-15 WIs with no allocated RAN2 time but which might have minor RAN2 impact (e.g. CT/SA WIs for which we have received an LS requesting RAN2 action)

This AI is to enable documents to be submitted for information. No time budget is allocated for this meeting and will be discussed starting from RAN2#100.

## 9.18 LTE TEI15 enhancements

Small Technical Enhancements affecting LTE Rel-15 that do not belong to any Rel-15 WI.

Note: A TEI enhancement proposal should be treated for only one meeting cycle and involve only one WG. Otherwise, a WI should be proposed at RAN plenary!

Time budget: 0 TU

This AI is to enable TEI15 proposals to be submitted for information. No time budget is allocated for this meeting and will be discussed starting from RAN2#100.

[R2-1710912](file:///C:\Data\3GPP\Extracts\R2-1710912%20Overview%20on%20new%20LTE%20measurements.doc) Overview on new LTE measurements Huawei, HiSilicon, China Telecom discussion Rel-15 TEI15 [R2-1709465](file:///C:\Data\3GPP\Extracts\R2-1709465%20Overview%20on%20new%20LTE%20measurements.doc)

[R2-1710913](file:///C:\Data\3GPP\Extracts\R2-1710913%20Discussion%20on%20new%20measurement%20on%20PRB%20usage%20distribution.doc) Discussion on new measurement on PRB usage distribution Huawei, HiSilicon, China Telecom discussion Rel-15 TEI15 [R2-1709467](file:///C:\Data\3GPP\Extracts\R2-1709467%20Discussion%20on%20PRB%20usage%20distribution%20measurement.doc)

[R2-1710914](file:///C:\Data\3GPP\Extracts\R2-1710914%20Discussion%20on%20new%20measurement%20on%20IP%20throughput%20distribution.doc) Discussion on new measurement on IP throughput distribution Huawei, HiSilicon, China Telecom discussion Rel-15 TEI15 [R2-1709468](file:///C:\Data\3GPP\Extracts\R2-1709468%20Discussion%20on%20IP%20throughput%20distribution%20measurement.doc)

[R2-1710915](file:///C:\Data\3GPP\Extracts\R2-1710915%20Introduction%20of%20new%20measurement%20on%20PRB%20usage%20distribution.doc) Introduction of new measurement on PRB usage distribution Huawei, HiSilicon, China Telecom CR Rel-15 36.314 14.0.0 0042 - B TEI15

[R2-1710916](file:///C:\Data\3GPP\Extracts\R2-1710916%20Introduction%20of%20new%20measurement%20on%20IP%20throughput%20distribution.doc) Introduction of new measurement on IP throughput distribution Huawei, HiSilicon, China Telecom CR Rel-15 36.314 14.0.0 0043 - B TEI15

[R2-1711006](file:///C:\Data\3GPP\Extracts\R2-1711006_nonCSG_HO.docx) Inbound mobility to the shared non-CSG small cells SoftBank Corp. discussion Rel-15 TEI15

[R2-1711255](file:///C:\Data\3GPP\Extracts\R2-1711255%20-%20CP%20latency%20reduction.docx) Control Plane latency reduction Ericsson other Rel-15 TEI15

[R2-1711257](file:///C:\Data\3GPP\Extracts\36331_CRYYYY_R2-1711257%20-%20Control%20Plane%20latency%20reduction.doc) Control Plane latency reduction Ericsson draftCR Rel-15 36.331 14.4.0 B TEI15

[R2-1711258](file:///C:\Data\3GPP\Extracts\36306_CRYYYY_R2-1711258%20-%20Control%20Plane%20latency%20reduction.doc) Control Plane latency reduction Ericsson draftCR Rel-15 36.306 14.4.0 B TEI15

[R2-1711345](file:///C:\Data\3GPP\Extracts\R2-1711345%20Discussion%20on%20new%20measurement%20on%20number%20of%20active%20UEs.doc) Discussion on new measurements on number of active UEs China Telecommunications discussion

[R2-1711349](file:///C:\Data\3GPP\Extracts\R2-1711349%20Introduction%20of%20new%20measurement%20on%20number%20of%20active%20UEs.doc) Introduction of new measurement on number of active UEs China Telecommunications CR Rel-15 36.314 14.0.0 0044 - B TEI15

[R2-1711474](file:///C:\Data\3GPP\Extracts\R2-1711474.doc) Marking and unmarking the UE for high-speed-dedicated LTE network Intel Corporation discussion Rel-15 TEI15

[R2-1711810](file:///C:\Data\3GPP\Extracts\R2-1711810.doc) Considerations on Cell Reselection in High Speed Railway Scenario CATT discussion Rel-15 TEI15

# 10 WI: New Radio (NR) Access Technology

(NR\_newRAT-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Jun. 18: WID: [RP-172115](file:///C:\Data\3GPP\TSGR\TSGR_77\Docs\RP-172115.zip))

## 10.1 Organisational

Incoming LSs, work plan, status from other groups, etc.

Liaisons to RAN2

[R2-1710005](file:///C:\Data\3GPP\Extracts\R2-1710005_C1-173749.doc) Reply LS on NR Idle Mode procedures (C1-173749; contact: Qualcomm) CT1 LS in Rel-15 5GS\_Ph1-CT To:SA2, RAN2, SA1 Cc:RAN3

=> Noted

[R2-1710010](file:///C:\Data\3GPP\Extracts\R2-1710010_R1-1716875.doc) Reply LS on BWP operation in NR (R1-1716875; contact: Samsung) RAN1 LS in Rel-15 NR\_newRAT-Core To:RAN2

=> Noted

[R2-1710025](file:///C:\Data\3GPP\Extracts\R2-1710025_R1-1715315.doc) Reply LS response on Random Access (R1-1715315; contact: Samsung) RAN1 LS in Rel-15 NR\_newRAT-Core To:RAN2

=> Noted

[R2-1710029](file:///C:\Data\3GPP\RAN2\Docs\R2-1710029.zip) LS on RRC parameters for NR (R1-1715338; contact: Ericsson) RAN1 LS in Rel-15 NR\_newRAT To:RAN2

=> Noted

[R2-1710031](file:///C:\Data\3GPP\Extracts\R2-1710031_R1-1716907.doc) Reply LS on multiple SSBs within a wideband carrier (R1-1716907; contact: Ericsson) RAN1 LS in Rel-15 To:RAN2 Cc:RAN4

=> Noted

[R2-1710032](file:///C:\Data\3GPP\Extracts\R2-1710032_R1-1716918.doc) LS on NR Paging Occasion (R1-1716918; contact: Huawei) RAN1 LS in Rel-15 NR\_newRAT To:RAN1 Cc:RAN2

- DOCOMO ask whether we should discuss this before December.

- LG have a paper addressing this question and think the LTE definition can be reused.

- Huawei understand that RAN1 is proceeding without this information.

=> Offline to discuss what we can reply (if not possible to reply then can be included in the schedule for November meeting) (Offline discussion #06, LG)

[R2-1712014](file:///C:\Data\3GPP\Extracts\R2-1712014%20Summary%20of%20offline%20discussion_%2306%20NR%20Paging%20Ocassion.doc) Summary of offline discussion #06 on NR Paging Occasion LG Electronics Inc

=> Noted

[R2-1712015](file:///C:\Data\3GPP\Extracts\R2-1712015%20response%20LS%20to%20RAN1%20on%20paging.doc) [DRAFT] Response LS on NR Paging Occasion LGE LS out Rel-15 NR\_newRAT-Core To:RAN1=> Can keep reference to current LTE.

=> Remove second paragraph

=> Respond to RAN1 that the "PO defines a number of slots where the UE has to monitor the PDCCH (reference stage 2). RAN2 has not decided whether or not the message is in the same slot(s). RAN2 assume that RAN1 can make this decision. RAN2 think that paging design should consider UE power consumption"

=> Approved in [R2-1712023](file:///C:\Data\3GPP\Extracts\R2-1712023%20response%20LS%20to%20RAN1%20on%20paging.doc)

[R2-1710033](file:///C:\Data\3GPP\Extracts\R2-1710033_R1-1716924.doc) Reply LS on UE categories and capabilities (R1-1716924; contact: NTT DOCOMO) RAN1 LS in Rel-15 To:RAN2 Cc:RAN4

- Intel think the RAN1 response if that the explicit category is not needed if the peak data rate supported by the UE is greater than the calculated data rate. Wonder on other company understanding. Ericsson this is answered that a UE that supports DC will not support a data rate lower than the calculated data rate.

- MediaTek think it is open for the non DC case.

=> Noted

[R2-1710035](file:///C:\Data\3GPP\Extracts\R2-1710035_R3-173422.doc) LS on support of Trace and MDT in NG-RAN in rel-15 (R3-173422; contact: Huawei) RAN3 LS in Rel-15 NR\_newRAT-Core To:RAN2, SA5

- Huawei understand that MDT is not in the scope of NR. Qualcomm wonder whether this is just for NR or also eLTE.

- ZTE wonder if we have agreed that MDT is not supported in NR. Huawei think there is no MDT in the WID.

=> Respond to MDT is not part or the NR WID scope. For LTE connected to 5GC then MDT can be supported over the radio interface the same as LTE connected to EPC.

=> Draft LS in R2-1711931 (Offline discussion #07, Huawei)

[R2-1711931](file:///C:\Data\3GPP\Extracts\R2-1711931%20Reply%20LS%20to%20RAN3%20on%20MDT.doc) [DRAFT] Reply LS to RAN3 on MDT Huawei LS out Rel-15 NR\_newRAT-Core To:RAN3 Cc:SA5

=> Approved in R2-1712041

[R2-1710036](file:///C:\Data\3GPP\Extracts\R2-1710036_R3-173427.doc) LS on definition of RAN Notification Area in inactive state (R3-173427; contact: Nokia) RAN3 LS in Rel-15 NR\_newRAT To:RAN2

- ZTE ask what package means. Nokia explain that RAN3 would like to support all 3 options.

- LG think option 3 is not one that we have discussed and also would prefer to have a single solution.

- Vodafone think this assumes that the cell id coding is the same as today, but think that for NR is might be bigger than for LTE and this may have an impact.

=> Offline discussion to see how we can respond to RAN3. If not conclusion then can be discussed on Thursday based on contributions. (Offline discussion #08, Nokia)

[R2-1710037](file:///C:\Data\3GPP\Extracts\R2-1710037_R4-1708284.doc) Reply LS on shared baseband capabilities for MR-DC (R4-1708284; contact: Huawei) RAN4 LS in Rel-15 NR\_newRAT-Core To:RAN2 Cc:RAN1

=> Noted

[R2-1710039](file:///C:\Data\3GPP\Extracts\R2-1710039_R4-1708694.doc) Reply LS on UE measurement capabilities across LTE and NR (R4-1708694; contact: Huawei) RAN4 LS in Rel-15 NR\_newRAT-Core To:RAN2 Cc:RAN1

=> Noted

[R2-1710045](file:///C:\Data\3GPP\Extracts\R2-1710045_R4-1708864.doc) LS on Mixed numerologies FDM operation (R4-1708864; contact: Intel) RAN4 LS in Rel-15 NR\_newRAT To:RAN1, RAN2

- Ericsson think the LS was sent before the RAN1 down prioritisation of mixed numerologies, that only one BWP is active at a time.

- Intel think the RAN1 agreement is aligned with the RAN4 assumption.

=> Draft LS to RAN4 to indicate that there is no additional RAN2 impact due to the RAN4 agreements. Draft LS in [R2-1711932](file:///C:\Data\3GPP\Extracts\R2-1711932_reply%20LS.docx) (Offline discussion #09, Intel)

[R2-1711932](file:///C:\Data\3GPP\Extracts\R2-1711932_reply%20LS.docx) [DRAFT] Reply LS on Mixed numerologies FDM operation Intel LS out Rel-15 NR\_newRAT-Core To:RAN4 Cc:RAN1

=> Approved in R2-1712027

[R2-1710047](file:///C:\Data\3GPP\Extracts\R2-1710047_R4-1709108.doc) LS on Definitions of Intra-frequency and Inter-frequency Measurements (R4-1709108; contact: Ericsson) RAN4 LS in Rel-15 NR\_newRAT To:RAN2 Cc:RAN1

=> Noted

[R2-1710051](file:///C:\Data\3GPP\Extracts\R2-1710051_R4-1709890.doc) LS on scenarios of multiple SSB (R4-1709890; contact: Huawei) RAN4 LS in Rel-15 NR\_newRAT To:RAN2 Cc:RAN1

=> Noted

[R2-1710048](file:///C:\Data\3GPP\Extracts\R2-1710048_R4-1709136.doc) LS on uplink and downlink channel bandwidth for NR (R4-1709136; contact: Intel) RAN4 LS in Rel-15 NR\_newRAT To:RAN1, RAN2

=> Noted

[R2-1710054](file:///C:\Data\3GPP\Extracts\R2-1710054_R4-1710045.doc) LS on NR band numbering (R4-1710045; contact: Ericsson) RAN4 LS in Rel-15 NR\_newRAT-Core To:RAN2, RAN3

=> Noted

[R2-1710055](file:///C:\Data\3GPP\Extracts\R2-1710055_R4-1710079.doc) Reply LS to RAN2 for NR UE categories and UE capabilities (R4-1710079; contact: Ericsson) RAN4 LS in Rel-15 NR\_newRAT To:RAN2 Cc:RAN, RAN1

- Intel wonder if the RAN4 question that says " per-cell, per-cell-group and per-UE " means we need to provide capability per cell group.

=> Noted

[R2-1710058](file:///C:\Data\3GPP\RAN2\Docs\R2-1710058.zip) LS on IMT-2020 submission ([RP-172099](file:///C:\Data\3GPP\TSGR\TSGR_77\Docs\RP-172099.zip); contact: NEC) RAN LS in Rel-15 To:SA, RAN1, RAN2, RAN3, RAN4, RAN5 Cc:CT, RAN6

=> Noted

[R2-1710059](file:///C:\Data\3GPP\RAN2\Docs\R2-1710059.zip) LS on single Tx switched UL ([RP-172100](file:///C:\Data\3GPP\TSGR\TSGR_77\Docs\RP-172100.zip); contact: Qualcomm, Intel) RAN LS in Rel-15 NR\_newRAT To:RAN4, RAN2 Cc:RAN1, RAN3

=> Noted

[R2-1710065](file:///C:\Data\3GPP\Extracts\R2-1710065_S2-176158.doc) LS on coexistence between RRC inactive and dual connectivity (S2-176158; contact: Qualcomm) SA2 LS in Rel-15 5GS\_Ph1 To:RAN2, RAN3

- Intel think we agreed not to enhance in Rel-15 and propose to inform SA2 of this.

- ZTE have a similar understanding as Intel.

- Ericsson think we should come back to this later after the RRC Connection Reconfiguration is settled.

- Samsung think a lot of time was spent on this in the last meeting and we decided not to do it for Rel-15. Huawei have the same view as Samsung. LG also have the same view

=> Respond to SA2 that we decided not to work on this optimisation for Rel-15.

[R2-1710242](file:///C:\Data\3GPP\Extracts\R2-1710242_S2-176689.doc) LS on simultaneous transmission and/or reception over EPC/E-UTRAN and 5GC/NR (S2-176689; contact: Intel) SA2 LS in Rel-15 To:RAN1, RAN2, RAN4

- Ericsson think this is not a priority. Intel think that SA2 stage 2 completion is December.

- Vivo think we can discuss restrictions based on contributions.

=> Noted

[R2-1710244](file:///C:\Data\3GPP\Extracts\R2-1710244_S2-176691.doc) LS on UE/RAN Radio information and Compatibility Request Response (S2-176691; contact: Qualcomm) SA2 LS in Rel-15 5GS\_Ph1 To:RAN2, RAN3

- Qualcomm suggest that it is safest to respond that it is possible that there are some radio capabilities related to voice support, then they will support this procedure in the network.

- DOCOMO think that such capabilities might exist but think the capability match procedure might not be needed.

- Qualcomm think this might be less of an issue for NR compared to LTE.

- Ericsson think we have not yet discussed voice capability yet.

=> Respond that so far we have not discussed voice capabilities much but we cannot say at this stage that there will be not radio capabilities related to voice support.

=> Draft LS in R2-1711934 (Offline discussion #11, Qualcomm)

[R2-1711934](file:///C:\Data\3GPP\Extracts\R2-1711934.doc) [DRAFT] Reply LS on UE/RAN Radio information and Compatibility Request Response Qualcomm LS out Rel-15 NR\_newRAT-Core To:SA2 Cc:RAN3

=> Action should be SA2

=> Approved in R2-1712049

[R2-1711007](file:///C:\Data\3GPP\Extracts\R2-1711007_S2-176475.doc) Response LS on default DRB establishment for PDU session (S2-176475; contact: InterDigital) SA2 LS in Rel-15 5GS\_Ph1 To:RAN2 Cc:RAN3

=> Noted

[R2-1711842](file:///C:\Data\3GPP\RAN2\Docs\R2-1711842.zip) LS on RRC parameters for NR, RAN WG 1

- This is not yet considered in the TP submitted to this meeting

=> Noted

Liaisons to RAN2 with copy of agreements to take into account

[R2-1710011](file:///C:\Data\3GPP\Extracts\R2-1710011_R1-1714995.doc) LS on NR UL transmission without UL grant (R1-1714995; contact: NTT DOCOMO) RAN1 LS in Rel-15 NR\_newRAT To:RAN2

=> Noted without presentation

[R2-1710012](file:///C:\Data\3GPP\Extracts\R2-1710012_R1-1714996.doc) LS on Further agreements for Bandwidth part operation (R1-1714996; contact: LGE) RAN1 LS in Rel-15 NR\_newRAT To:RAN2 Cc:RAN4

=> Noted without presentation

[R2-1710015](file:///C:\Data\3GPP\Extracts\R2-1710015_R1-1715260.doc) LS on initial access with SUL (R1-1715260; contact: Huawei) RAN1 LS in Rel-15 NR\_newRAT-Core To:RAN2

=> Noted

[R2-1710024](file:///C:\Data\3GPP\Extracts\R2-1710024_R1-1715313.doc) LS on power sharing for LTE-NR Dual Connectivity (R1-1715313; contact: Ericsson) RAN1 LS in Rel-15 NR\_newRAT To:RAN4, RAN2

=> Noted without presentation

Liasons with RAN2 in CC

[R2-1710004](file:///C:\Data\3GPP\Extracts\R2-1710004_C1-173748.doc) Reply LS on algorithm selection in E-UTRA-NR Dual Connectivity (C1-173748; contact: Ericsson) CT1 LS in Rel-15 EDCE5 To:SA3, CT4 Cc:SA2, RAN2, RAN3

[R2-1710026](file:///C:\Data\3GPP\Extracts\R2-1710026_R1-1715316.doc) LS on NR initial access and mobility (R1-1715316; contact: NTT DOCOMO) RAN1 LS in Rel-15 NR\_newRAT-Core To:RAN4 Cc:RAN2

[R2-1710030](file:///C:\Data\3GPP\Extracts\R2-1710030_R1-1716906.doc) Reply LS on Channel Raster and Synchronization Channel Raster (R1-1716906; contact: Ericsson) RAN1 LS in Rel-15 NR\_newRAT-Core To:RAN4 Cc:RAN2

[R2-1710046](file:///C:\Data\3GPP\Extracts\R2-1710046_R4-1709017.doc) LS on RSRP Measurements for Mobility in NR (R4-1709017; contact: Ericsson) RAN4 LS in Rel-15 NR\_newRAT To:RAN1 Cc:RAN2

[R2-1710049](file:///C:\Data\3GPP\Extracts\R2-1710049_R4-1709175.doc) LS on Channel Raster and Synchronization Channel Raster (R4-1709175; contact: Qualcomm) RAN4 LS in Rel-15 To:RAN1 Cc:RAN2

[R2-1710052](file:///C:\Data\3GPP\Extracts\R2-1710052_R4-1709899.doc) UE timing advance adjustment step size (R4-1709899; contact: Ericsson) RAN4 LS in Rel-15 NR\_newRAT To:RAN1 Cc:RAN2

[R2-1710053](file:///C:\Data\3GPP\Extracts\R2-1710053_R4-1709910.doc) LS on RSSI Definition in Signal Quality Measurements for Mobility in NR (R4-1709910; contact: Ericsson) RAN4 LS in Rel-15 NR\_newRAT To:RAN1 Cc:RAN2

[R2-1710060](file:///C:\Data\3GPP\Extracts\R2-1710060_RP-172113.doc) LS on NR UE Category ([RP-172113](file:///C:\Data\3GPP\Extracts\R2-1710060_RP-172113.doc); contact: MediaTek) RAN LS in Rel-15 NR\_newRAT To:RAN1 Cc:RAN2, RAN4

[R2-1710062](file:///C:\Data\3GPP\RAN2\Docs\R2-1710062.zip) Reply LS on unified Access Control for 5G NR (S1-173552; contact: Nokia) SA1 LS in Rel-15 SMARTER, NR\_newRAT To:CT1, SA2, RAN2 Cc:CT6

=> Above LSs noted without presentation

New LS in (during RAN2#99bis)

- New LSs in

[R2-1711964](file:///C:\Data\3GPP\Extracts\R2-1711964_R1-1718829.doc) Reply LS on mixed numerologies FDM operation (R1-1718829; contact: Intel) RAN1 LS in Rel-15 NR\_newRAT-Core To:RAN4 Cc:RAN2

=> Noted

[R2-1711987](file:///C:\Data\3GPP\Extracts\R2-1711987_R4-1711581.doc) NR UE information elements (R4-1711581; contact: Nokia) RAN4 LS in Rel-15 NR\_newRAT-Core To:RAN2

=> Noted

[R2-1712017](file:///C:\Data\3GPP\Extracts\R2-1712017_R4-1710373.doc) Reply LS on NR handover related parameters (R4-1710373; contact: Intel) RAN4 LS in Rel-15 NR\_newRAT-Core To:RAN2 Cc:RAN1

=> Noted

Rapporteur inputs

[R2-1710077](file:///C:\Data\3GPP\Extracts\R2-1710077.doc) RAN WG’s progress on NR WI in the August and September meetings 2017 NTT DOCOMO, INC. (Rapporteur) discussion Rel-15 NR\_newRAT-Core

=> Noted

[R2-1710114](file:///C:\Data\3GPP\RAN2\Docs\R2-1710114.zip) RAN2 TS status check towards Stage-2/3 freeze in Dec. 2017 NTT DOCOMO, INC. (Rapporteur) discussion Rel-15 NR\_newRAT-Core

=> Can be updated for the next meeting.

[R2-1710251](file:///C:\Data\3GPP\Extracts\R2-1710251.doc) UE RF related parameters and features for NR NTT DOCOMO, INC. discussion Rel-15 NR\_newRAT-Core

=> Noted

[R2-1710252](file:///C:\Data\3GPP\Extracts\R2-1710252.doc) [DRAFT] LS on UE RF related parameters for NR NTT DOCOMO, INC. LS out Rel-15 NR\_newRAT-Core

- Ericsson suggest to elaborate on the ARFCN and ask what the ARFCN points to.

=> Revised in [R2-1711935](file:///C:\Data\3GPP\Extracts\R2-1711935.doc) (Offline discussion #12, DOCOMO)

[R2-1711935](file:///C:\Data\3GPP\Extracts\R2-1711935.doc) [DRAFT] LS on UE RF related parameters for NR NTT DOCOMO, INC. LS out Rel-15 NR\_newRAT-Core To:RAN4 Cc:RAN3

=> Remove background on ARFCN and just ask for definition of ARFCN for purpose of indicating the centre of the carrier and the location of the SSB.

=> Revised in [R2-1712022](file:///C:\Data\3GPP\Extracts\R2-1712022.doc)

[R2-1712022](file:///C:\Data\3GPP\Extracts\R2-1712022.doc) [DRAFT] LS on UE RF related parameters for NR NTT DOCOMO, INC. LS out Rel-15 NR\_newRAT-Core To:RAN4 Cc:RAN3

=> Approved in [R2-1712028](file:///C:\Data\3GPP\Extracts\R2-1712028.doc)

## 10.2 Stage 2 and common UP/CP aspects

For this meeting, proposals to the stage 2 should be submitted with a TP to show the impact to the stage 2 specifications.

### 10.2.1 Stage 2 TSs and running CR

Latest TS 38.300, TS 37.340 and running CR to 36.300, other rapporteur inputs, anything related to specification methodology. Please submit any new text proposals to the appropriate agenda item.

[R2-1710693](file:///C:\Data\3GPP\Extracts\R2-1710693%2038300-101.doc) NG-RAN Stage 2 Rapporteur (Nokia) draft TS Rel-15 38.300 1.0.1 NR\_newRAT-Core

- Nokia explain it included a few updates compared to last version.

=> Endorsed in R2-171936

=> Revised in R2-1711972

R2-1711972 NG-RAN Stage 2 Rapporteur (Nokia) draft TS Rel-15 38.300 1.1.1 NR\_newRAT-Core

* [99bis#xx][NR] Stage 2 TS (Nokia)

Capture agreements from this meeting

Intended outcome: Updated TS to next meeting

Deadline: Thursday 2017-11-09

[R2-1711526](file:///C:\Data\3GPP\RAN2\Docs\R2-1711526.zip) TS 37.340 v1.0.2 Rapporteur (ZTE Corporation) draft TS Rel-15 37.340 1.0.2 NR\_newRAT-Core

- ZTE explain it included a few updates compared to last version.

=> Endorsed in R2-171937

[R2-1710333](file:///C:\Data\3GPP\Extracts\R2-1710333%20Consideration%20on%20the%20intra-NR%20Dual%20connectivity.docx) Consideration on the intra-NR Dual connectivity ZTE Corporation discussion Rel-15 NR\_newRAT-Core

=> Current agreements on NR-NR DC to be captured in a running TP/CR for 37.340 (not to be included in the Dec 17 spec)

=> Revisit the discussion after Dec 17

### 10.2.2 User Plane

No documents should be submitted to 10.2.2. Please submit to 10.2.2.x.

#### 10.2.2.1 Bearer type harmonisation

Any remaining stage 2 aspects relating to bearer type harmonisation

This agenda item is relevant to EN-DC completion and standalone operation.

Maximum 1 tdoc per company

[R2-1710140](file:///C:\Data\3GPP\Extracts\R2-1710140%20-%20Impact%20on%20PDCP%20version%20reconfiguration%20due%20to%20SidelinkUEInformation.doc) Impact on PDCP version reconfiguration due to SidelinkUEInformation OPPO discussion Rel-15 NR\_newRAT-Core

- Intel accept that this can happen sometimes but think that handover can be used in cases that the network thinks it could happen. Ericsson agrees with Intel an think the without handover case can only be used in cases that the network is confident that there are no UL packets in transmission.

- LG think this is a problem for any UE initiated UL messages.

- Qualcomm ask how the network can know if there is a message in the UEs buffer or not. Lenovo agree that the network cannot know and also think it is a problem for the network knowing which PDCP to expect and hence it is not a problem for the UE.

- Samsung have the same opinion as Intel that this can be handled by network implementation. CATT think the handover option is there and can be used for all cases.

=> Noted

[R2-1711517](file:///C:\Data\3GPP\Extracts\R2-1711517%20Security%20algorithms%20for%20NR%20PDCP%20at%20EN-DC%20capable%20eNB.doc) Security algorithms for NR PDCP at EN-DC capable eNB Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

- ZTE suggest that the algorithm could be associated with the key that is used.

- IDC wonder why the algorithm is not associated with the PDCP version rather than the termination point.

- Vodafone think the proposal is against what we have agreed before.

- MediaTek think there is no advantage in restricting the usage of algorithms as UE anyway always needs to support all algorithms. Qualcomm explain it relates to the architecture in the UE and could mean to support the NR algorithms in the LTE side of the modem.

- Intel wonder what is the expectation for unified split bearers as the UE doesn’t know the anchor point.

- OPPO wonder if the LTE algorithm can support 9kbyte PDU size for NR-PDCP.

- Ericsson think we should also discuss how many algorithms can be configured in the UE.

- CATT think this is just a recommendation for the network. Qualcomm think that the intent is to avoid mis-configuration of the UE.

- LG think it should be possible to configure NR algorithm for NR PDCP in the master eNB.

=> Offline discussion to conclude the support for LTE and NR security algorithms on the LTE side (i.e. for cases where the (LTE or NR)PDCP used KeNB). Also discuss the signalling required to configure the algorithms. (Offline discussion #13, Qualcomm)

- Update from offline: Address online during email discussion#30 report.

[R2-1710325](file:///C:\Data\3GPP\Extracts\R2-1710325%20Remaining%20issues%20of%20Bearer%20Type%20Harmonization.doc) Remaining issues of bearer type harmonization ZTE Corporation discussion Rel-15 NR\_newRAT-Core

- Huawei think if the UE supports EN-DC then the network can assume that the UE support NR-PDCP. ZTE think that the aspect related to RoHC profile support then some capabilities would be needed.

P2

- Ericsson think that the 2C option should be supported and think from the signalling and UE side there is no reason not to support it.

- Huawei have the same view as Ericsson. Intel also have the same view and think that no restriction is needed from the UE point of view. Samsung also have the same view.

- LG think from UE point of view this is a like a single radio bearer but think the combination of LTE PDCP and NR RLC/MAC should be avoided.

- Vivo think this would have an impact in UE due to the BSR reporting.

- OPPO is not sure that the new bearer type is needed. For example there could be Xn interface impact.

- Nokia don’t see a use case and prefer to have a note in stage 3 saying that this configuration is not allowed. Ericsson think there is a use case for this. Nokia think that a network that really wants to do can just not use one leg.

Agreements:

1: In order to support bearer harmonization configuration in MeNB, NR PDCP capabilities (if any are defined) are duplicated in UE-EUTRA-Capability (as well as NR capabilities).

=> Discuss offline whether to add 2C support into the stage 2 description, or to add restriction into the stage 3 that 2C cannot be configured. (Offline discussion #14, ZTE)

[R2-1712005](file:///C:\Data\3GPP\Extracts\R2-1712005.doc) Summary of offline discussion #14: Support of 2c/2x architecture ZTE discussion Rel-15 NR\_newRAT-Core

=> This case is marked FFS in the bearer type change table agreed from the email discussion.

[R2-1711988](file:///C:\Data\3GPP\Extracts\R2-1711988.doc) [DRAFT] LS on support of 2c/2x architecture ZTE LS out Rel-15 NR\_newRAT-Core To:RAN3

=> Add sentence to say if RAN3 agree then RAN2 will update RAN2 stage 2 specs and stage 3 RRC (inter-node messages) accordingly.

=> In RAN2 there is no consensus on whether these additional configurations should actually be supported by stage 2 specs and stage 3 RRC (inter-node messages), as some further work would anyway be needed, e.g.:

=> Approved in R2-1712050

Withdrawn

R2-1711614 RLC UM support for split bearers in MR-DC NEC discussion Rel-15 NR\_newRAT-Core Withdrawn

#### 10.2.2.2 Bearer type change

Output from email discussion [99#18][NR] Bearer Type Change (Huawei)

This agenda item is relevant to EN-DC completion and standalone

operation.

Maximum 1 tdoc per company.

[R2-1711090](file:///C:\Data\3GPP\Extracts\R2-1711090%20Summary%20of%2099_18%20Bearer%20Type%20Change%20(Huawei)_v4.doc) Summary of 99#18 Bearer Type Change Huawei discussion Rel-15 NR\_newRAT-Core

[R2-1711831](file:///C:\Data\3GPP\Extracts\R2-1711831%20Summary%20of%2099_18%20Bearer%20Type%20Change%20(Huawei)_v5.doc) Summary of 99#18 Bearer Type Change Huawei discussion Rel-15 NR\_newRAT-Core

P2

- LG think in this case the PDCP anchor is always changed.

- Ericsson think the UE doesn't see the change in the network termination point, only that the cell group changes. ZTE thinks this is related to the support of the 2C option

P4

- Think a one-step configuration should be supported if it comes for free. Huawei think this does not come for free. LG also think that does not come for free and think it cannot be a one-step procedure.

- Nokia think this also relates to lossless conversion from LTE to NR PDCP.

- IDC think using the handover is sufficient.

- Ericsson did not see any complexity in doing this changing from LTE-PDCP to NR-PDCP and make it a split bearer at that time.

- Intel think that LTE-PDCP was only for bearers that will never be split. Would prefer to stick that that agreement.

- LG think that a DU change is not considered as an SN change. Ericsson think we should clarify the SCG change term.

P9

- LG see this an optimisation and think it would be better to optimise the release procedure rather than have a re-establish followed by release. Samsung also agree with LG.

- OPPO think this is for LTE RLC and has more impact to change the legacy RLC procedure.

- Huawei think the proposal is describing current behaviours and changing RLC would be an optimisation. LG think the RLC release is up to UE implementation today. We will specify release for NR RLC but we will do it differently for LTE RLC.

- Samsung think this is a tiny modelling issue.

Agreements

1: The bearer type change between MCG split bearer and SCG split bearer is supported.

2: PDCP version change for DRB shall only be performed via handover procedure.

3: MCG bearer cannot be directly changed to other bearer type if LTE PDCP version is used for MCG bearer, i.e. the network has to use handover to change PDCP version of MCG bearer to NR PDCP and then do bearer type change from MCG bearer to other bearers.

4 RAN2 confirm Table 1 for the case when both MCG key and SCG key are changed.

5 RAN2 confirm that Table 2 correctly represents the previous agreements on L2 handling for different bearer type change upon S-KgNB security key change

6 For physical parameter reconfiguration of SCell or release/addition of some of SCell(s), this could be a reconfiguration procedure without PDCP/RLC impact and without MAC reset

7 LTE RLC is re-established first and then released for the bearer type change from MCG bearer to SCG bearer, and split bearer to SCG bearer

8 L2 handling for Bearer type change with and without security key change indicated in Table 4 is confirmed (apart from aspects related to offline discussion #14). The table doesn’t consider the case that PDCP SN length is changed.

9 Capture table 4 as informative text in Annex of TS37.340;

=> Proposal 2 can be discussed offline as part of offline discussion #14

=> Proposal 7 on PSCell change can be discussed offline (Offline discussion #15, CATT)

[R2-1712000](file:///C:\Data\3GPP\Extracts\R2-1712000.docx) Offline discussion #15 on PSCell change CATT discussion

-

Agreements

1 Handling 2 is supported (RA access, MAC reset, RLC re-established, PDCP recovery (for AM DRB), No security key change) are allowed in the specification for PSCell change. Trigger conditions for PDCP recovery will be captured in RRC spec. If PDCP is in master node then MN is involved

FFS: Handling PDCP in case of RLC-UM mode and SRBs for handling 2.

2 Optimisation for support of RA access without MAC reset is not required for PSCell change.

[R2-1711265](file:///C:\Data\3GPP\Extracts\R2-1711265%20Lossless%20conversion%20from%20LTE%20PDCP%20to%20NR%20PDCP.docx) Lossless conversion from LTE PDCP to NR PDCP Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

- Ericsson think this can be supported but we also need to consider the maximum PDU size which is different for NR and LTE.

- Intel ask if this is by reconfiguration or by handover. Nokia think this could be a reconfiguration but if that is not supported then it could be a handover.

- LG think we have a very simple procedure of release and add, and we have agreed that it is only done with handover. Vivo agree with LG and also think that re-establishment for LTE and NR PDCP is a very different procedure. Huawei have the same view as LG and Vivo.

- Samsung agree with the proposal but agree that some restriction is needed. Qualcomm also support the proposal.

- Sharp also support the proposal.

- CATT would like to understand the benefit compared to release and add. Nokia think it is a lossless change.

- OPPO support this and think release/add should be avoided as much as possible.

- Intel don’t see the use case of doing this by reconfiguration, can only see the handover use case.

- LG think we already agreed for version change that we would do release and add.

Agreements

1 For DRBs, change from LTE PDCP to NR PDCP is done (via handover) using a release and add of the DRB (in a single message) or full configuration.

[R2-1710141](file:///C:\Data\3GPP\Extracts\R2-1710141%20-%20Discussion%20on%20bearer%20type%20change.doc) Discussion on bearer type change OPPO discussion Rel-15 NR\_newRAT-Core

[R2-1710788](file:///C:\Data\3GPP\Extracts\R2-1710788%20Remaining%20issues%20for%20Allowed%20Bearer%20type%20changes.doc) Remaining issues for Allowed Bearer type changes Samsung R&D Institute India discussion Rel-15

[R2-1710507](file:///C:\Data\3GPP\Extracts\R2-1710507%20-%20Bearer%20type%20change%20in%20Dual%20Connectivity.docx) Bearer type change in dual connectivity Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711672](file:///C:\Data\3GPP\Extracts\R2-1711672%20Considerations%20on%20PDCP%20version%20change.doc) Consideration on PDCP version change Qualcomm Incorporated discussion Rel-15

[R2-1711816](file:///C:\Data\3GPP\Extracts\R2-1711816_PDCP_versionChange_w_HO.doc) PDCP version change for MCG DRBs with handover SHARP Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1711781](file:///C:\Data\3GPP\Extracts\R2-1711781%20Lossless%20PDCP%20version%20change.doc) Lossless PDCP Version Change between LTE and NR Samsung discussion Rel-15 NR\_newRAT-Core [R2-1709028](file:///C:\Data\3GPP\Extracts\R2-1709028%20Lossless%20PDCP%20version%20change.doc)

- moved from 10.2.2.1 to 10.2.2.2

Withdrawn

[R2-1711519](file:///C:\Data\3GPP\Extracts\R2-1711519%20Considerations%20on%20PDCP%20version%20change.doc) Consideration on PDCP version change Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core Withdrawn

#### 10.2.2.3 Other

Any remaining stage 2 user plane aspects - detailed topics should be discussed in stage 3 user plane.

Note that the L2 impact of bandwidth parts as agreed by RAN1 will be discussed under separate AI 10.2.3.

This agenda item is relevant to EN-DC completion and SA.

[R2-1711010](file:///C:\Data\3GPP\Extracts\R2-1711010%20Stage%202%20TP%20for%20TS%2038.300v1.0.0%20covering%20recent%20LCP%20agreements.doc) Stage 2 TP for TS 38.300v1.0.0 covering recent LCP agreements Samsung R&D Institute UK discussion

=> Stage 2 can be reviewed and updated when the stage 3 details have been progressed.

[R2-1711266](file:///C:\Data\3GPP\Extracts\R2-1711266%20Switching%20on%20split%20bearer%20at%20blocking%20of%20NR%20radio.docx) Switching on split bearer at blocking of NR radio Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

P2

- Ericsson ask if this if for SRB and DRB and also whether this is for normal conditions or also for SCG failure. Nokia think there is no need to restrict the cases.

- OPPO think the procedure may not always be needed.

- Ericsson think it could make sense that the UE initiates this after SCG failure.

- LG think UE initiated change is a separate issue. For this proposal, it makes sense that the SN can request that the bearer is moved back to master node.

- Huawei think that RAN3 can discuss this. We can just indicate to RAN3 that we would like to support that the SN and MN can request this path switch.

- Lenovo think the switch is controlled by the master by setting the threshold.

- MediaTek think there are 2 issues. One is the network signalling and one is the RRC signalling to the UE.

=> Draft LS to RAN3 to request that they work on a way for the SN and MN to request a path switch. (Offline discussion #16, Nokia). Draft LS in R2-1711940.

=> Parameter to be signalled to RRC to control the path to be discussed in UP.

R2-1711940 [DRAFT] LS on Switching on split bearer at blocking of NR radio Nokia LS out Rel-15 NR\_newRAT-Core To:RAN3

=> Revised in R2-1711970

[R2-1711970](file:///C:\Data\3GPP\Extracts\draft_R2-1711970%20Draft%20LS%20on%20Switching%20on%20split%20bearer%20at%20blocking%20of%20NR%20radio.docx) [DRAFT] LS on Switching on split bearer at blocking of NR radio Nokia LS out Rel-15 NR\_newRAT-Core To:RAN3

=> Approved in R2-1712042

[R2-1711151](file:///C:\Data\3GPP\Extracts\R2-1711151%20The%20support%20of%20Voice%20over%20SA%20NR-v1.3.docx) The support of Voice over standalone NR CMCC, Huawei discussion Rel-15 NR\_newRAT-Core

[R2-1711163](file:///C:\Data\3GPP\Extracts\R2-1711163%20-%20Support%20of%20ECN%20in%20NR.docx) Support of ECN in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711164](file:///C:\Data\3GPP\Extracts\R2-1711164%20-%20Activation%20and%20Deactivation%20time%20of%20Secondary%20Cells.docx) Activation and Deactivation time of Secondary Cells Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711165](file:///C:\Data\3GPP\Extracts\R2-1711165%20-%20Draft%20LS%20on%20Activation%20and%20Deactivation%20time%20of%20Secondary%20Cells.docx) [DRAFT] LS on Activation and Deactivation time of Secondary Cells Ericsson LS out Rel-15 NR\_newRAT-Core

[R2-1711405](file:///C:\Data\3GPP\Extracts\R2-1711405%20Stage-2%20aspects%20of%20data%20duplication.docx) Stage-2 aspects of data duplication MediaTek Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708097](file:///C:\Data\3GPP\Extracts\R2-1708097%20Stage-2%20aspects%20of%20data%20duplication.docx)

Withdrawn

[R2-1711240](file:///C:\Data\3GPP\Extracts\R2-1711240%20-%20Number%20of%20supported%20DRBs%20in%20NR%20EN-DC%20and%20E-UTRA.docx) Number of DRBs in NR EN-DC and E-UTRA Ericsson discussion Rel-15 NR\_newRAT-Core

### 10.2.3 Impact of bandwidth parts

To understand the consequences for RAN2 of the agreements in RAN1 on bandwidth parts (BWP), including both user plane and control plane implications.

This agenda item is relevant to EN-DC completion.

[R2-1711640](file:///C:\Data\3GPP\Extracts\R2-1711640%20Initial%20discussion%20on%20the%20impacts%20of%20BWP%20on%20RAN2.doc) Initial discussion on the impacts of BWP on RAN2 ZTE Corporation discussion Rel-15 NR\_newRAT-Core

- Vivo think we need to understand the minimum bandwidth supported by all UEs in order to specify the RAN procedure.

- Nokia agree with ZTE.

- LG agree that IDLE/INACTIVE UEs will only see the cell and not BWPs. Even for connected think we only need to consider the cell in RAN2.

- MediaTek think the initial active BWP can be considered as the default BWP. Don’t think it can be modelled as SCell.

- LG think we can reuse the existing SCell model. MediaTek ask if this means that SCell act/deact will be used for BWP management

- Ericsson think that the idle/inactive is needed as soon as we do SA. Ericsson think that so far a connected mode UE is only informed of the BWP BW and not the carrier BW.

P3

- LG would prefer to consider each BWP as a cell.

- Nokia wonder why we would need more than 2 BWPs per cell. Samsung clarify that RAN1 is currently considering 4 or 8. Nokia think if we have more than 2 active BWPs then we have 2 ways to do CA and there is a chance to lose the UE. Nokia questions the need to move the UE BWP by L1 signalling. Lenovo explain that the RAN1 decision enables the UE to be dynamically moved between numerologies.

P4

- Huawei wonder what cell defined SSB really means. Thinks we agree to do L1 reconfigure without L1 impact. MediaTek have the same understanding as Huawei.

- Intel ask that that is the network wants to change SSB of the same cell then handover would need to be used.

- AT+T wonder if for SCell the change of SSB in frequency could be handled by reconfiguration.

- Ericsson consider the serving cell is a frequency and PCI and change in either one is by synchronous reconfiguration. Nokia agree with Ericsson. If either frequency or PCI changes then it is a different cell. AT+T think this is a different case to what we have considered before as all these different BWPs are tightly synchronised.

- LG wonder about the case of changes in the SFN of the cell defining SSB.

P7

- Samsung wonder whether the different measurement objects would have the same parameters for the other parameters of the measurement object, and whether this is efficient.

- Vivo think one MO can have more than one SSB.

- Qualcomm support the proposal. If the network really needs more than one SSB per serving cell to be Measured then it can choose to configure more than one MO.

- AT+T think there is not much use case to have more than one SSB per MO. We can go with the simple option.

P8

- Nokia think this means that we may need gaps to even measure on the serving cell. Ericsson think we have this even for LTE MTC. Intel think that if not all configured BWPs contain the SSB then gaps will need to be configured.

- Qualcomm support the proposal and think we should avoid dynamic configuration of gaps, at least in the first release.

- LG think that serving cell quality is derived from cell defining SSB.

Agreements for BWP operation in CONNECTED mode:

1: BWP impacts on the CONNECTED mode will be progressed by Dec 17. Impacts to IDLE mode/INACTIVE mode UEs will be discussed with SA after Dec 17.

2a: RRC signalling supports to configure 1 or more BWPs (both for DL BWP and UL BWP) for a serving cell (PCell, PSCell).

2b RRC signalling supports to configure 0, 1 or more BWPs (both for DL BWP and UL BWP) for a serving cell SCell (at least 1 DL BWP) (impact of SUL still to be discussed)

3 For a UE, the PCell, PSCell and each SCell has a single associated SSB in frequency (RAN1 terminology is the is the 'cell defining SSB')

4 Cell defining SS block can be changed by synchronous reconfiguration for PCell/PSCell and SCell release/add for the SCell.

5 Each SS block frequency which needs to be measured by the UE should be configured as individual measurement object (i.e. one measurement object corresponds to a single SS block frequency).

6 The cell defining SS block is considered as the time reference of the serving cell, and for RRM serving cell measurements based on SSB (irrespective of which BWP is activated).

=> Can be discussed after Dec 17 or in a future release whether further optimisation is needed for change of SS block location in frequency (but with no change to PCI and no change in SFN) to be changed by RRC reconfiguration of physical layer parameters with no L2 involvement.

[R2-1710578](file:///C:\Data\3GPP\Extracts\R2-1710578%20BWP%20impact%20on%20RRM%20measurement.doc) BWP impact on RRM measurement Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

P2

- Nokia think that for CSI-RS case the UE could change the CSI-RS resources when the BWP is changed. It is difficult to have a BWP without CSI-RS and if they are there why not use them.

- Intel think the BWP does not impact CSI-RS measurements. Intel think that more than one set of CSI-RS resources can be configured to the UE.

- Samsung think that RAN1 is still discussing this aspect.

- LG think the change of active BWP should be invisible to RRC and change of CS-RSI with change of active BWP is not feasible.

- Huawei think the key thing is to understand if there can be CSI-RS outside of the BW of the active BWP. Maybe UE could measure only the part in the active BWP.

- Ericsson think RAN1 are still deciding the relation between BWP and CSI-RS.

=> We will wait for more information from RAN1 regarding CSI-RS and BWPs.

[R2-1711404](file:///C:\Data\3GPP\Extracts\R2-1711404.docx) RLM/RLF for bandwidth part Samsung R&D Institute UK discussion

- Vivo prefer that UE monitors the current active BWP

- Qualcomm think that this should be discussed in RAN1.

- LG think that option 1 has a problem as sometimes there can be good cell quality but the active BWP is not good.

- Ericsson also think that RLM should be monitored where the PDCCH is expected to be received. It should reflect PDCCH quality. Ericsson think that RAN1 defined a parameter for the RS on which RLM is monitored.

=> We leave to RAN1 to concluded (From RAN2 point of view it does not matter how the IS/OOS indications are derived.)

=> RRC timers and counters related to RLM are not reset when the active BWP is changed.

[R2-1710217](file:///C:\Data\3GPP\Extracts\R2-1710217%20User%20plane%20impacts%20for%20Bandwidth%20Parts.doc) User plane impacts for Bandwidth Parts Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710091](file:///C:\Data\3GPP\Extracts\R2-1710091_Random%20Access%20in%20RRC%20Connected_Bandwidth%20Part%20Aspects.doc) Random Access in RRC Connected: Bandwidth Part Aspects Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core

[R2-1711289](file:///C:\Data\3GPP\Extracts\R2-1711289%20Impact%20of%20Bandwidth%20Parts%20on%20SPS%20scheduling.doc) Impact of Bandwidth Parts on SPS Scheduling Samsung R&D Institute India discussion

[R2-1710274](file:///C:\Data\3GPP\Extracts\R2-1710274.docx) Modeling Bandwidth Parts in MAC CATT discussion Rel-15 NR\_newRAT-Core

[R2-1711387](file:///C:\Data\3GPP\Extracts\R2-1711387%20BWP%20for%20Idle%20and%20inactive.doc) Impacts of BWP for UE in IDLE and INACTIVE LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1710092](file:///C:\Data\3GPP\Extracts\R2-1710092_SI%20Reception%20in%20RRC%20Connected_Bandwidth%20Part%20Aspects.doc) SI Reception in RRC Connected: Bandwidth Part Aspects Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core

[R2-1710125](file:///C:\Data\3GPP\Extracts\R2-1710125%20-%20Impact%20of%20bandwidth%20part%20on%20CA.doc) Impact of bandwidth part on CA OPPO discussion

[R2-1710126](file:///C:\Data\3GPP\Extracts\R2-1710126%20-%20Timer%20based%20BWP%20switching.doc) Timer based BWP switching OPPO discussion

[R2-1710216](file:///C:\Data\3GPP\Extracts\R2-1710216%20Definition%20of%20Cells%20for%20Idle%20and%20connected%20UEs.doc) Definition of cells for idle and connected UEs Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710218](file:///C:\Data\3GPP\Extracts\R2-1710218%20Stage-2%20TP%20for%20BWP.doc) Stage-2 TP for BWP Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710275](file:///C:\Data\3GPP\Extracts\R2-1710275_BWP%20model_v1.docx) BWP model CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710457](file:///C:\Data\3GPP\Extracts\R2-1710457.doc) Control plane impacts for Bandwidth Parts Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710592](file:///C:\Data\3GPP\Extracts\R2-1710592.doc) Overall impact in RAN2 for BWP Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710808](file:///C:\Data\3GPP\Extracts\R2-1710808%20Impact%20of%20BWP%20on%20RRM%20measurement.doc) Impact of BWP on RRM measurement LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1710864](file:///C:\Data\3GPP\Extracts\R2-1710864%20Basic%20Framework%20for%20Bandwidth%20Part%20Operation.docx) Basic Framework for Bandwidth Part Operation MediaTek Inc. discussion NR\_newRAT-Core

[R2-1710866](file:///C:\Data\3GPP\Extracts\R2-1710866%20Text%20Proposal%20for%20BWP%20Operation%20in%2038.300.docx) Text Proposal for BWP Operation in 38.300 MediaTek Inc. discussion

[R2-1710965](file:///C:\Data\3GPP\Extracts\R2-1710965_Discussion%20on%20bandwidth%20part%20operation.docx) Discussion on bandwidth part operation vivo discussion [R2-1708507](file:///C:\Data\3GPP\Extracts\R2-1708507_Discussion%20on%20bandwidth%20part%20operation.docx)

[R2-1711065](file:///C:\Data\3GPP\Extracts\R2-1711065%20Cell%20and%20BWP%20relation%20in%20configuration%20in%20RAN2.docx) Cell and BWP relation in RAN2 Nokia discussion Rel-15 NR\_newRAT-Core

[R2-1711187](file:///C:\Data\3GPP\Extracts\R2-1711187%20Framework%20to%20support%20bandwidth%20parts%20in%20NR_v0.docx) Framework to support bandwidth part in NR Samsung discussion Rel-15

[R2-1711188](file:///C:\Data\3GPP\Extracts\R2-1711188%20Signaling%20to%20support%20bandwidth%20part_r1.docx) Signaling to support bandwidth part Samsung discussion Rel-15

[R2-1711189](file:///C:\Data\3GPP\Extracts\R2-1711189%20Activation_deactivation%20of%20bandwidth%20part%20in%20NR_r2.docx) Activation/deactivation of bandwidth part Samsung discussion Rel-15

[R2-1711190](file:///C:\Data\3GPP\Extracts\R2-1711190%20RRM%20measurement%20to%20support%20bandwidth%20parts%20in%20NR_r1.docx) RRM measurement to support bandwidth parts in NR Samsung discussion Rel-15

[R2-1711191](file:///C:\Data\3GPP\Extracts\R2-1711191%20Draft%20LS%20to%20RAN1%20about%20BWP%20activationdeactivation.doc) Draft LS to RAN1 about BWP activation/deactivation Samsung LS out Rel-15

[R2-1711364](file:///C:\Data\3GPP\Extracts\R2-1711364-Considerations%20on%20CC%20and%20BWP%20in%20NR.doc) Considerations on CC and BWP in NR Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711388](file:///C:\Data\3GPP\Extracts\R2-1711388%20BWP%20RRC%20Configuration.doc) RRC Procedures for BWP Configuration LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711595](file:///C:\Data\3GPP\Extracts\R2-1711595%20-%20The%20Impact%20of%20Bandwidth%20Part%20on%20RAN2.docx) The Impact of Bandwidth Part on RAN2: Overview and Issues Samsung Electronics discussion

[R2-1711607](file:///C:\Data\3GPP\Extracts\R2-1711607%20-%20Scenarios%20of%20Measurement%20Gap%20Considering%20Bandwidth%20Part.docx) Scenarios of Measurement Gap Considering Bandwidth Part Samsung Electronics discussion

[R2-1711822](file:///C:\Data\3GPP\Extracts\R2-1711822%20-%20On%20Bandwidth%20Parts%20and%20Multiple%20SSBs.docx) On Bandwidth Parts and Multiple SSBs Ericsson GmbH, Eurolab discussion Rel-15 NR\_newRAT-Core

Withdrawn

R2-1710867 Text Proposal for BWP Operation in 38.300 MediaTek Inc. discussion Withdrawn

### 10.2.4 MN/SN measurement coordination

As agreed at RAN2#99, the need for any measurement coordination between MN and SN will be discussed again after we have receive more information from RAN4.

Further detail discussion of the measurement object parameters that can be configured differently without affecting whether the 2 measurement objects will count as 1 or 2 measurement layers, please use stage 3 agenda item 10.4.1.4.3.

This agenda item is relevant to EN-DC completion.

Maximum 1 tdoc per company

[R2-1711753](file:///C:\Data\3GPP\Extracts\R2-1711753_MN-SN%20Meas%20Capability%20Coordination.doc) Measurement Capability Coordination for EN-DC NTT DOCOMO INC. discussion Rel-15

P2

- Huawei think that coordination is necessary based on the agreement that the network is responsible to ensure the configurations are consistent. Also the total number of measurements supported by a UE will have some limitation on the network.

- CATT have similar view to Huawei.

- Samsung think that some exchange is needed for the number of measurements that can be configured by each mode. Other parts can be handled by O&M.

- Intel thought that it could be left to RAN3 to decide whether to do anything over X2.

- Qualcomm think it is ok if there is no standardised coordination, but have a problem solving the issue in the UE.

- OPPO have similar view as Qualcomm, network should solve by X2, OAM but not leave the issue to the UE.

- Vivo think that configuring too many measurements can lead to reconfigure failure.

- DOCOMO think if we leave to RAN3, we think it will not work in real life in an inter-vendor environment.

- Nokia think we had a previous agreement that at least the total number of measurements needs to be coordinated and the FFS was on other parameters.

- Ericsson think it should be in inter-node RRC signalling.

- DOCOMO think another option for RAN4 is to define a min number of measurements equal to the sum of LTE and NR measurements.

=> Offline discussion to see how to conclude on P2 onwards (Offline discussion #17, DOCOMO)

Agreements

1: Working assumption is confirmed (UE receives independent measurement configuration from MN and SN. UE does not do any manipulation of parameters in order to make the measurements configurations consistent (i.e. network is responsible to ensure they are consistent if it wants to ensure these are considered as a single measurement layer)

[R2-1702045](file:///C:\Data\3GPP\Extracts\R2-1702045_Offline%20discussion%20on%20Meas%20Capabilities.doc) (Should be R2-1712045) Report of offline discussion #17 on Measurement Capabilities Coordinations DOCOMO

Agreements

1 Tthere will be a signalling to coordinate the number of frequency layer to be used in MN and SN.

2 The MN indicates the number of frequency layers that can be used in the SN

3: Re-negotiation (SN signalling to MN for the purpose to ask for more number of frequency layer) is not supported (at least in Rel-15).

=> Parameter can be included by the inter-node message email discussion

[R2-1711092](file:///C:\Data\3GPP\Extracts\R2-1711092%20Measurement%20coordination%20for%20LTE-NR%20DC.doc) Measurement coordination for LTE-NR DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710236](file:///C:\Data\3GPP\Extracts\R2-1710236_Measurement%20Gap%20Configuration%20in%20MR-DC.doc) Measurement Gap Configuration in MR-DC OPPO discussion [R2-1707759](file:///C:\Data\3GPP\Extracts\R2-1707759_Measurement%20Gap%20Configuration%20in%20MR-DC.doc)

[R2-1710355](file:///C:\Data\3GPP\Extracts\R2-1710355%20measurement%20coordination.docx) Coordination of Parameters for Measurements Report Trigger Fujitsu discussion Rel-15 NR\_newRAT-Core

[R2-1710374](file:///C:\Data\3GPP\Extracts\R2-1710374.doc) Considerations for the MN and the SN to configure measurement objects consistently on the same carrier Spreadtrum Communications discussion Rel-15 [R2-1707971](file:///C:\Data\3GPP\Extracts\R2-1707971.doc)

[R2-1710811](file:///C:\Data\3GPP\Extracts\R2-1710811%20NR%20measurement%20object%20configuration%20in%20SN.doc) NR measurement object configuration in SN LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708900](file:///C:\Data\3GPP\Extracts\R2-1708900%20NR%20measurement%20object%20configuration%20in%20SN.doc)

[R2-1710929](file:///C:\Data\3GPP\Extracts\R2-1710929_Discussion%20on%20measurement%20gap.docx) Discussion on measurement gap vivo discussion Rel-15 NR\_newRAT-Core [R2-1708421](file:///C:\Data\3GPP\Extracts\R2-1708421_Discussion%20on%20measurement%20gap.docx)

### 10.2.5 MN/SN procedures for EN-DC

Output from email discussion [99#49][NR] MN/SN procedures (ZTE)

Details of the content of inter node RRC messages should be progressed in stage 3 AI 10.4.1.9.

This agenda item is relevant to EN-DC completion.

Maximum 1 tdoc per company

[R2-1711527](file:///C:\Data\3GPP\Extracts\R2-1711527%2099%2349%20MN-SN%20procedures.doc) Summary of email discussion [99#49] on MN/SN procedures ZTE Corporation discussion Rel-15

Agreements

1: SRB3 may only be used in scenarios with "no MN involvement” (it cannot be used to send a SN RRC Reconfiguration message in the “SN initiated SN modification with MN involvement” procedure).

2: Add a reference to "measurement results for SN addition/change, UE capability coordination related parameters, DRBs/SRBs configuration" in the Stage 2 description of the MN->SN container (Further details to be discussed in Stage 3)

3: Describe the message flow for Inter-Master Node handover with MN initiated Secondary Node change in TS 37.340. (Can be discussed offline how to capture this).

=> TP capturing above agreements in [R2-1711942](file:///C:\Data\3GPP\Extracts\R2-1711942.doc) (Offline discussion #18, ZTE)

[R2-1711942](file:///C:\Data\3GPP\Extracts\R2-1711942.doc) TP to capture agreements from [R2-1711527](file:///C:\Data\3GPP\Extracts\R2-1711527%2099%2349%20MN-SN%20procedures.doc) ZTE pCR Rel-15 37.340 NR\_newRAT-Core

=> Agreed

[R2-1711960](file:///C:\Data\3GPP\Extracts\R2-1711960.doc) Draft LS on inter-MN handover with SN change ZTE

=> Change " description of this case " to " description of this case and other similar cases"

=> Approved in [R2-1712025](file:///C:\Data\3GPP\RAN2\Docs\R2-1712025.zip)

[R2-1710329](file:///C:\Data\3GPP\Extracts\R2-1710329%20Consideration%20on%20the%20Remaining%20issues%20of%20EN-DC%20in%20TS%2037.340.doc) Consideration on the Remaining issues of EN-DC in TS 37.340 ZTE Corporation discussion Rel-15 NR\_newRAT-Core

- Samsung think that nested procedures could be avoided if the SN was allowed to refresh security in its own. Huawei think it is difficult to let the SN be responsible for this key derivation. Nokia also wonder if SA3 would have to be involved.

- ZTE was proposing to avoid such nested procedures and Samsung are proposing a way to avoid the proposal.

Agreements

1: In the MN handover the target MN decides whether to keep/ change/ release the SCG.

2: In EN-DC, the RACH-less access to t-SN is not supported in SN Change procedure at least in R15.

3: In EN-DC, only the MN can trigger the UE to apply the new configuration in a SN Change procedure.

4: The source MN should include the SCG configuration in the HandoverPreparationInformation.

=> Discuss P1 and P2 offline to try to conclude (Offline discussion #19, ZTE)

[R2-1712018](file:///C:\Data\3GPP\Extracts\R2-1712018%20Offline%20disc%20%2319.doc) Summary of Offline discussion #19 ZTE

Agreements

1: During the MN initiated SN Modification procedure, SgNB shall not initiate a SCG change procedure in Step 2, at least in R15 and the corresponding FFS can be removed.

2: For the case of a SN initiated SN Modification procedure colliding with a MN initiated SN Modification procedure, the solution in MR-DC could reuse the one in LTE DC, i.e. specifying in Stage 3 that the SN initiated SN Modification procedure is regarded as failed while the MN initiated SN Modification procedure continues . The corresponding FFS can be removed.

[R2-1711772](file:///C:\Data\3GPP\Extracts\R2-1711772%20RB%20related%20parameter.doc) RB related parameters transfer between MN and SN NTT DOCOMO INC. discussion Rel-15 NR\_newRAT-Core

P2

- Samsung think that DRB ID, DRB type and EPS bearer ID.

=> Content of inter-node messages will be discussed at stage 3 level, and later stage 2 can be updated accordingly is required.

[R2-1711096](file:///C:\Data\3GPP\Extracts\R2-1711096%20Support%20SCG%20capability%20handling%20via%20SCG%20SRB.doc) Support SCG capability handling via SCG SRB Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709940](file:///C:\Data\3GPP\Extracts\R2-1709940_36306_CR1507r1_(Rel-14)-InterferenceRandomisation..doc)

P2

- Samsung think this is the simple approach but as we have the request to reduce the capabilities, it is not clear that the master will always provide what is required by the SN (all bands, etc).

- Qualcomm think that even before the SN is added the MN needs to know all the correct UE capability.

- DOCOMO think X2 can exchange the band information and so the master node should have knowledge of the operating bands of the SN and hence can know what to request.

- Huawei think that the MN must know the bands that the SN can support and hence knows what to request from the UE.

- Samsung think that the MN might not consider all the SN bands and some might only be added by the SN. If the SN requires more information it would be simpler to go direct to the UE.

- ZTE support the view that it should be possible for the SN to request for more information but open whether to go via the master or use SRB3. CATT think that SN should be able to trigger the request.

- Samsung think that a trigger from SN to MN is complex as it must request exactly what is missing. Nokia wonder how the SN could request capability that are specific to NR, would this be requested transparently in some way. Also think it would be good for anything requested direct by SN to be stored in the MME. Huawei think the MN request would not have to be transparent to the MN.

- Intel see it useful for SN to request UE capability - it could also reduce the capability size transferred on LTE and then SN can request more.

Agreements

1: In LTE-NR DC, the UE capability (including NR capability) of the UE shall be transmitted from master node to the secondary node.

FFS:

Do we specify that SN can request additional NR capabilities from the UE?

If yes, then is the request sent over SRB3 or is it always via MN?

Should it be possible that the additional requested capability is stored in the MME?

=> Offline discussion to try to resolve the FFS points (Offline discussion #20, Nokia)

- Update from offline: Nothing extra is needed for EN-DC

=> For EN-DC in Dec 17 we will not define any extra mechanism for the SN to request more capabilities (either on SRB3 to via the MN)

[R2-1711381](file:///C:\Data\3GPP\Extracts\R2-1711381.docx) SCG change related remaining issues in MRDC Samsung R&D Institute UK discussion

- Intel agree that messages buffered in SRB3 should be discarded and not sent to new SN. But this proposal seems to be a different case of messages send via MN.

- Samsung gives example of measurement reports sent via MN RRC. Intel think that in UE L2 the messages are MN messages

- CATT agree with the Intel comment for DL but thinks the issue is for DL.

- Huawei think it is difficult for MN to know if the measurement report comes from the old SN measurement configuration or the new SN measurement configuration. But will be a short period and MN could discard for this short period.

- Samsung confirm it is only the UL case that is considered. MN can simply use the RRC Connection Reconfiguration Complete to know the measurements change from old and new SN.

=> Noted

[R2-1710508](file:///C:\Data\3GPP\Extracts\R2-1710508%20-%20Discussion%20on%20the%20SCG%20change%20procedure.docx) Discussion on the SCG change procedure Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710856](file:///C:\Data\3GPP\Extracts\R2-1710856%20Clarification%20for%20intra%20SN%20PSCell%20change%20scenarios.docx) Clarification for MN involvement during intra-SN PSCell change Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1711478](file:///C:\Data\3GPP\Extracts\R2-1711478 further discussion on MN-SN procedures.doc) Further discussion on MN-SN procedures OPPO discussion

### 10.2.6 EN-DC - security aspects)

Any remaining stage 2 aspects relating to security for EN-DC.

This agenda item is relevant to EN-DC completion.

[R2-1711095](file:///C:\Data\3GPP\Extracts\R2-1711095%20S-KeNB%20related%20issues%20for%20LTE-NR%20interworking.doc) S-KeNB related issues for LTE-NR interworking Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

P5

- Samsung think there will always be an update to security in case the SN initiates SN change.

- Huawei think that only a change of where the PDCP anchor is changes requires a key change. So it will not always be needed. Think there are different views whether SN change means that the PDCP anchor changes.

- Samsung think we still have the issue that SN needs to request from the master.

- CATT thinks this also depends on the PSCell change discussion.

- Qualcomm thinks that the master controls the counter so the proposal is reasonable.

=> P1-4 will be discussed in the scope of email discussion #30

Agreements

1: No need to specify behaviour for PDCP count wrap around in NR (network expected to take action before this happens)

Offline discussion to try to conclude the FFS point (SN requests to MN whenever a new key is required (e.g. to avoid count wrap around)) (Offline discussion #21, Samsung)

- Update from offline: Covered during online discussion of other docuements.

[R2-1710621](file:///C:\Data\3GPP\Extracts\R2-1710621-SRB3-IP-failure.docx) SRB3 IP check failure handling Intel Corporation discussion Rel-15 NR\_newRAT-Core

P1

- Vivo think we previously agreed that SRB IP check failure is a case of SCG failure.

- Qualcomm tend to agree with Vivo for SRB3 case.

- Samsung also agree with Vivo and Qualcomm.

- Intel think the SA3 LS said that it is up to the network to decide on the action on SRB3 IP check failure. ZTE agree there is a difference in what we agreed previously and what SA3 have told us. Vivo want to follow previous RAN2 agreement and not follow SA3.

- Qualcomm think discarding any RRC message has a consequence and hence SCG failure is better.

- LG think that SRB3 IP check failure can result in SCG failure.

- Intel think if we go this way we still comply with SA3 bit go beyond their requirements.

Agreements

1 IP check failure on SRB3 will trigger SCG failure procedure (same behaviour as for SCG failure triggered by other causes).

2 New cause value in SCG failure message to inform MN of the IP check failure in SRB3.

[R2-1711352](file:///C:\Data\3GPP\Extracts\R2-1711352%20-%20Consequences%20of%20handover%20without%20key%20change%20on%20SRB%20PDCP.docx) Consequences of handover without key change on SRB PDCP Ericsson discussion Rel-15 NR\_newRAT-Core

Agreements

1 PDCP recovery does not apply to SRBs

[R2-1710326](file:///C:\Data\3GPP\Extracts\R2-1710326%20Remaining%20issues%20of%20Security%20aspects.doc) Remaining issues of Security aspects ZTE Corporation discussion Rel-15 NR\_newRAT-Core

Agreements

1 - Follow LTE principles for the SN requested counter check procedure.

[R2-1710328](file:///C:\Data\3GPP\Extracts\R2-1710328_Draft%20LS%20to%20SA3%20on%20SRB%20DRB%20integrity%20check%20failure%20handling.doc) Draft LS to SA3 on SCG SRB integrity check failure ZTE Corporation discussion Rel-15 NR\_newRAT-Core Withdrawn

[R2-1711094](file:///C:\Data\3GPP\Extracts\R2-1711094%20UP%20integrity%20check%20failure%20handling%20in%20LTE-NR%20DC.doc) UP integrity protection check failure handling in LTE-NR DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711520](file:///C:\Data\3GPP\Extracts\R2-1711520%20Usage%20of%20data%20integrity%20protection%20for%20DRB%20in%20NR.doc) Usage of data integrity protection for DRB Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

- NEC understand that the security problem is more for the case of bigger data. Qualcomm understand that the use cases could be industrial control signalling which would typically be small data.

- MediaTek have the same understanding as Qualcomm but wonder how to capture this.

- Huawei think that the DRB IP is a core network decision and hence may not be possible for RAN to decide. LG agree with Huawei and also wonder what is the RAN2 spec impact.

- Intel also support the proposal but also understand it is difficult to capture. The impact is clear in the AS and so we should raise this issue.

- Qualcomm think that clearly this has RAN impact. Agree it is on request of CN but doesn't mean it can be activated for all services.

=> Draft LS to SA3 and SA2 to inform them of the concern that has been identified and that it could be addressed by limiting DRB IP to lower rate services. Inform them that the RAN plenary guidance was to complete the hardware impacting parts of L2 by Dec 17. Draft LS in R2-1712013 (Offline discussion #47, Qualcomm)

[R2-1712013](file:///C:\Data\3GPP\Extracts\R2-1712013%20LS%20on%20usage%20of%20user%20plane%20integrity%20protection%20for%20DRB.doc) [DRAFT] [LS to SA2/3 to inform them of the concern that has been identified and that it could be addressed by limiting DRB IP to lower rate services] Qualcomm LS out Rel-15 NR\_newRAT-Core To:SA3, SA2

=> Approved in R2-1712051

[R2-1711622](file:///C:\Data\3GPP\Extracts\R2-1711622%20draft%20LS%20on%20AS%20security%20algorithms%20for%20EN-DC%20capable%20eNB.docx) draft LS on AS security algorithms for EN-DC capable eNB Qualcomm Europe Inc.(Italy) other Rel-15

[R2-1711794](file:///C:\Data\3GPP\Extracts\R2-1711794.doc) Draft LS to SA3 on SCG SRB integrity check failure ZTE Corporation discussion Rel-15 NR\_newRAT-Core

Withdrawn

R2-1711548 draft LS on AS security algorithms for EN-DC capable eNB Qualcomm Incorporated discussion Rel-15 Withdrawn

### 10.2.7 EN-DC - other aspects

Any remaining stage 2 aspects. Contributions should include a TP to show how the stage 2 specification would be impacted (if no stage 2 spec impact then the contribution should be submitted to an appropriate stage 3 AI)

This agenda item is relevant to EN-DC completion.

Single UL transmission

[R2-1710608](file:///C:\Data\3GPP\Extracts\R2-1710608_NR_single%20UL%20TX_v2.doc) Support of single TX UL Intel Corporation discussion Rel-15 NR\_newRAT-Core

P1

- Lenovo ask if the first proposal is same as legacy LTE. Intel explain this does exist in LTE but it now has to be signalling for this case as well. Ericsson have the same understand as Intel regarding this parameter.

- LG wonder how UE knows there is no scheduling on NR if there is no signalling. Ericsson think in NR there can be no TDM pattern and the UE just follows the UL grants from the network so it is achieved by network implementation.

- AT+T ask if there is a need for the UE to know specifically how the grants are going to be provided.

- Vodafone think this is already agreed within RAN1.

- ZTE think it is not fully concluded in RAN1.

- Nokia think that even in LTE it could be restricted by scheduling with nothing signalling.

- Intel think RAN1 agreed both approaches, one with signalling in LTE and one with no signalling on either NR or LTE.

P2

- Huawei think that RAN2 needs to discuss the TDM pattern between MN and SN

- AT+T think RAN1 did communicate to RAN1 regarding the need for TDM pattern between MN and SN.

- DOCOMO think this will be addressed in RAN3 and there are no impacts into RAN2.

P4

- Vodafone think that within a BC then RAN4 needs to identity the channel combinations that are problematic. We can’t do anything in RAN2 until RAN4 have done their work.

- Intel understand that RAN plenary agreement was that RAN2 should work on this capability signalling to be completed by Dec.

Summary from offline:

- Intel explain the concern for one bit per BC is the need to signal additional BC is the capability is different from the fallback BC and how to indicate the channel allocations. Suggest that we might be able to agree 1 bit per difficult case (BC or channel allocation)

Agreements:

1 For timing information provided to the UE, RAN2 will follow the RAN1 agreements (RAN2 understanding is that some timing information based on TDD UL/DL configuration may be provided in LTE, and no RRC signaling to be added in NR)

2 RAN2 will define capability signalling per problematic case (as defined in RAN4) to indicate whether the UE support 2 simultaneous UL transmissions for the problematic case. FFS how this is structured in RAN2 (e.g. per UE bitmap or per BC bits, etc)

(If RAN4 conclude that there are no problematic cases then these capabilities will not be introduced)

=> Leave RAN3 to work on the coordination of TDM pattern between SN and MN.

=> Discussion will occur in one WG next meeting (RAN2 and RAN3 chairs will coordinate where this discussion occurs )

* [99bis#xx][NR] Capability of signalling for 1 tx (Nokia)

Discuss options for capability signalling for 1 tx. Can consider the agreements made in RAN4 during this week. Aim to produce stage 3 text for the option(s) for which there is support so conclusion can be made at the next meeting.

Intended outcome: Report and text proposal

Deadline: Thursday 2017-11-09

[R2-1711003](file:///C:\Data\3GPP\Extracts\R2-1711003%20Further%20discussion%20on%20supporting%201Tx%20UE%20in%20EN-DC.docx) Further discussion on supporting 1Tx UE in EN-DC Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

moved from 10.2.5 to 10.2.7

- Nokia request comments to consider this issues and how to resolve them for next meeting.

=> Noted

[R2-1710349](file:///C:\Data\3GPP\Extracts\R2-1710349%20Support%20of%20single%20UL%20transmission.doc) Single UL transmssion in NSA and SA NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

moved from 10.4.1.3.4 to 10.2.7

[R2-1711018](file:///C:\Data\3GPP\Extracts\R2-1711018_LTE_NR%20coexistence_v5.doc) LTE-NR Coexistence Sony discussion Rel-15 NR\_newRAT-Core

[R2-1711148](file:///C:\Data\3GPP\Extracts\R2-1711148_Capability%20signaling%20for%20single%20UL%20transmission.docx) Capability signaling for single UL transmission vivo discussion Rel-15 NR\_newRAT-Core

[R2-1711354](file:///C:\Data\3GPP\RAN2\Docs\R2-1711354.zip) NSA Single Tx UE capabilities T-Mobile USA Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711663](file:///C:\Data\3GPP\Extracts\R2-1711663.docx) Performance Evaluation of LTE NR DC Dual UL / Single UL and UE Capability Apple GmbH agenda

[R2-1711679](file:///C:\Data\3GPP\Extracts\R2-1711679.docx) UE capability indication for single UL transmission of LTE-NR DC Apple Inc., Oppo, ZTE discussion Rel-15 NR\_newRAT-Core

[R2-1711777](file:///C:\Data\3GPP\Extracts\R2-1711777_Single%20TX%20EN-DC_r1.doc) RAN2 impact from single uplink EN-DC Samsung Electronics GmbH discussion

[R2-1711792](file:///C:\Data\3GPP\Extracts\R2-1711792.doc) Considerations on single UL/ dual UL transmission for LTE-NR China Unicom discussion

moved from 10.4.3.2 to 10.2.7

[R2-1710248](file:///C:\Data\3GPP\Extracts\R2-1710248-Discussion%20on%201T%20and%202Tx%20UE%20capability%20for%20EN-DC.doc) Discussion on 1Tx/2Tx UE Capability for EN-DC OPPO discussion

moved from 10.4.3.4 to 10.2.7

[R2-1711531](file:///C:\Data\3GPP\Extracts\R2-1711531%20-%20Single%20TX%20UE%20operation.docx) Single TX UE operation Ericsson discussion Rel-15

moved from 10.2.2.3 to 10.2.7

[R2-1711677](file:///C:\Data\3GPP\Extracts\R2-1711677%20-%20Indication%20of%20UE%20Capability%20to%20Manage%20MSD%20Using%20In-Device%20Techniques.docx) Indication of UE Capability to Manage MSD Using In-Device Techniques AT&T discussion

moved from 10.4.3.2 to 10.2.7

=> Revised in [R2-1711941](file:///C:\Data\3GPP\Extracts\R2-1711941.docx)

[R2-1711941](file:///C:\Data\3GPP\Extracts\R2-1711941.docx) Indication of UE Capability to Manage MSD Using In-Device Techniques AT&T discussion

SUL

[R2-1711808](file:///C:\Data\3GPP\Extracts\R2-1711808%20Connected%20mode%20aspects%20of%20SUL.docx) Connected mode aspects of supplementary uplink frequency Samsung Electronics discussion Rel-15 NR\_newRAT-Core

moved from 10.2.19 to 10.2.7

- Huawei think that SUL doesn't need to use CA framework. It can be multiple carriers belonging to the same cell. The SUL and normal UL belong to one single cell.

- Nokia think it is simple to use CA but also need to consider the BWP aspects.

- CMCC would like to treat this as a supplementary UL to a single cell. CMCC thinks the structure doesn’t work in case of one NR DL and one SUL UL

- Intel understand that the UL can choose between SUL and normal UL but in the CA framework then both SUL and normal UL would be configured.

- ZTE agree with Intel that it is different from the CA case. For SA we want to be able to do initial access from the SUL.

- MediaTek think this is a new additional UL for the same cell. LG think this could be modelled as BWP or as CA.

- Ericsson wonder if the UE ever needs to be configured with more than one UL ARFCN. It is just that the one DL can be associated with either the normal UL or the SUL. For SA there would be some difference as the RACH could be on either UL based on some measurement. Reconfiguration would be sync reconfiguration for PCell or release/add for SCell.

- Qualcomm think the Ericsson approach is interesting. This would be ok for the UL link budget issue. But for capacity improvement then both may need to be configured.

- Huawei think that RAN1 is discussing options where both ULs are configured and other methods are used for switching. Not yet clear what will be supported in RAN1. Intel think at least SRS may still be transmitted on the UL carrier paired with the DL carrier for purposes of MIMO signalling.

Agreements for SUL operation in connected mode:

1 When SUL is configured there are 2 ULs configured for one DL of the same cell. (FFS how much configuration is provided for the 2 ULs)

2 At any point in time, each serving cell has at most one PUSCH for transmission

Options for further discussion on RRC signalling to configure SUL

1 RRC configured 2 ULs (one if a full UL configuration and 2nd is just SRS configuration). RRC reconfiguration to provide a full UL configuration for a different carrier is used to switch UL data between 2 different ULs.

2 RRC configures 2 UL. Signalling (e.g. DCI or MAC CE) is defined to enable UE to switch between the 2 different UL configurations, or 2 use both ULs

=> Offline to progress the FFS and to try to conclude between the 2 options. Can consider any RAN1 progress made during this week. (Offline discussion #22, Huawei)

Comeback session on Wednesday:

Clarification of agreements

1 In any slot, one PUSCH is used for transmission for a single serving cell (i.e. associated to a single DL). This excludes simultaneous transmission on 2 PUSCH within a single slot but does not restrict switching between the two PUSCH based on L1 /MAC/RRC signalling options.

2 RAN2 consider that it is up to RAN1 to decide where PUCCH is transmitted

3 Option 2 is clarified to " RRC configures 2 UL. Signalling (e.g. DCI or MAC CE) is defined to enable UE to switch between the 2 different UL configurations, to use both ULs but not schedule them simultaneously based on agreement 1 above"

4 Final decision to use MAC CE signalling would be a RAN2 decision.

5 Final decision to use L1 signalling would be a RAN1 decision.

6 There is no RAN2 motivation to adopt DCI signalling.

[R2-1712044](file:///C:\Data\3GPP\Extracts\R2-1712044%20Summary%20of%20offline%20discussion%20022%20on%20SUL%20operation.doc) [DRAFT] Summary of offline#22 on SUL operation Huawei

=> Include RRC parameters as per RAN1's spreadsheet to enable the RAN1 decisions (and can be discussed in the scope of the RAN1 parameters email discussion)

=> UE capability aspects can be discussed in the email discussion of UE capability parameters

[R2-1711824](file:///C:\Data\3GPP\Extracts\R2-1711824%20Considerations%20on%20support%20of%20supplementary%20uplink%20frequency.docx) Considerations on support of supplementary uplink frequency CMCC discussion Rel-15 NR\_newRAT-Core R2-1711809

[R2-1710899](file:///C:\Data\3GPP\Extracts\R2-1710899%20Discussion%20on%20SUL%20carrier.docx) Discussion on SUL carrier ZTE Corporation discussion Rel-15 NR\_newRAT-Core

=> Revised in [R2-1711841](file:///C:\Data\3GPP\Extracts\R2-1711841%20Discussion%20on%20SUL%20carrier%20v2.docx)

[R2-1711841](file:///C:\Data\3GPP\Extracts\R2-1711841%20Discussion%20on%20SUL%20carrier%20v2.docx) Discussion on SUL carrier ZTE, Sanechips discussion Rel-15 NR\_newRAT-Core

[R2-1711632](file:///C:\Data\3GPP\Extracts\R2-1711632.doc) PUCCH and PUSCH on SUL Samsung discussion NR\_newRAT-Core

moved from 10.2.19 to 10.2.7

[R2-1711002](file:///C:\Data\3GPP\Extracts\R2-1711002%20SUO,%20SUL%20and%20ULS.docx) Differentiating SUO, SUL and ULS Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

moved from 10.2.5 to 10.2.7

Other

[R2-1710858](file:///C:\Data\3GPP\Extracts\R2-1710858%20Handling%20for%20inter-SN%20change%20during%20inter-MN%20HO%20.docx) Handling for inter-SN change during inter-MN HO Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

=> Issue of inter-SN change during inter-MN HO will be handled in RAN3 stage 3

=> Draft LS to RAN3 to inform them of our stage 2 decisions and inform them that they will have to handle this aspect in stage 3. (To be included as part of offline discussion #18, ZTE). Draft LS in [R2-1711960](file:///C:\Data\3GPP\Extracts\R2-1711960.doc).

[R2-1710857](file:///C:\Data\3GPP\Extracts\R2-1710857%20SN%20modification%20during%20intra-MN%20HO.docx) SN modification during intra-MN HO Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

- ZTE think this was skipped as it was obvious but it can be added.

=> Add the scenario intra-MN HO involving SCG change to the TS 37.340.

[R2-1711666](file:///C:\Data\3GPP\Extracts\R2-1711666%20Support%20of%20full%20configuration%20per%20CG.doc) Support of full configuration per CG HTC Corporation, MediaTek Inc. discussion [R2-1709407](file:///C:\Data\3GPP\Extracts\R2-1709407%20Support%20of%20full%20configuration%20per%20CG.doc)

- Ericsson wonders what happens when LTE does a full configuration,. Is SCG released?

- Intel think it will want to support source and target SN are of different releases then this is needed.

- Ericsson think we could stick to LTE principles for full configuration. Ericsson wonder if release and add is the same as full configuration, if new SN doesn't understand the old configuration. Samsung think in LTE this was not possible in a single message but maybe it will be in NR.

- Ericsson think full configuration of the whole configuration can also be performed. Nokia think that the MN would not know. Ericsson assume that the SN would have to inform the master that it didn't understand the source configuration.

=> Noted

[R2-1710327](file:///C:\Data\3GPP\Extracts\R2-1710327%20Remaining%20issues%20of%20inactive%20mode%20handling.doc) Remaining issues of inactive mode handling ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710330](file:///C:\Data\3GPP\Extracts\R2-1710330%20Consideration%20on%20inter-MN%20handover%20with%20SN%20change.docx) Consideration on inter-MN handover with SN change ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710332](file:///C:\Data\3GPP\Extracts\R2-1710332-_LsToSA2_DCandInactive.doc) Reply LS to SA2 on handling DC and INACTIVE STATE ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710930](file:///C:\Data\3GPP\Extracts\R2-1710930_Report%20of%20SCell-failure%20of%20PDCP%20duplication.docx) Report of SCell-failure of PDCP duplication vivo discussion Rel-15 NR\_newRAT-Core

[R2-1711004](file:///C:\Data\3GPP\Extracts\R2-1711004%20Fast%20inter%20site%20small%20cells%20NR.doc) Considerations on fast access inter-site small cells in NR Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core [R2-1707831](file:///C:\Data\3GPP\Extracts\R2-1707831%20Fast%20inter%20site%20small%20cells%20NR.doc)

[R2-1711091](file:///C:\Data\3GPP\Extracts\R2-1711091%20Clarification%20on%20duplication%20SRB%20in%20EN-DC.doc) Clarification on duplication SRB in EN-DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711093](file:///C:\Data\3GPP\Extracts\R2-1711093%20Secondary%20RAT%20data%20volume%20report.doc) Secondary RAT data volume report Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711529](file:///C:\Data\3GPP\Extracts\R2-1711529%20-%20Split%20SRB%20-%20HO%20command%20duplication.docx) Split SRB: HO command duplication Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711680](file:///C:\Data\3GPP\Extracts\R2-1711680%20ANR%20for%20NR.doc) ANR for NR LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1709128](file:///C:\Data\3GPP\Extracts\R2-1709128%20ANR%20for%20NR.doc)

[R2-1711701](file:///C:\Data\3GPP\Extracts\R2-1711701%20Power%20management%20by%20cross-RAT%20signaling%20in%20NSA%20configuration.doc) Power management by cross-RAT signaling in NSA configuration Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709114](file:///C:\Data\3GPP\Extracts\R2-1709114%20Power%20management%20by%20cross-RAT%20signaling%20in%20NSA%20configuration.doc)

[R2-1711756](file:///C:\Data\3GPP\Extracts\R2-1711756%20Consideration%20on%20duplication%20on%20SRB%20for%20CA%20case(resubmission%20of%20R2-1707888).doc) Consideration on duplication on SRB for CA case CATT discussion Rel-15 NR\_newRAT-Core [R2-1707888](file:///C:\Data\3GPP\Extracts\R2-1711756%20Consideration%20on%20duplication%20on%20SRB%20for%20CA%20case(resubmission%20of%20R2-1707888).doc)

[R2-1710277](file:///C:\Data\3GPP\Extracts\R2-1710277.doc) Release of SCG SCell and PSCell change CATT discussion Rel-15 NR\_newRAT-Core

moved from 10.2.18 to 10.2.7

### 10.2.8 Mobility mechanisms - SCG change for EN-DC

Any remaining stage 2 aspects of SCG change for EN-DC (include anything common to SCG change and HO). Contributions should include a TP to show how the stage 2 specification would be impacted (if no stage 2 spec impact then the contribution should be submitted to an appropriate stage 3 AI)

This agenda item is relevant to EN-DC completion.

[R2-1710293](file:///C:\Data\3GPP\Extracts\R2-1710293.doc) Discussion on SCG Change CATT discussion Rel-15 NR\_newRAT-Core

### 10.2.9 Mobility mechanisms - basic handover

Any remaining stage 2 aspects of basic handover (and not common to SCG change for EN-DC). Contributions should include a TP to show how the stage 2 specification would be impacted (if no stage 2 spec impact then the contribution should be submitted to an appropriate stage 3 AI)

This agenda item is not relevant to EN-DC completion but will be treated if time allows

[R2-1710262](file:///C:\Data\3GPP\Extracts\R2-1710262%20Further%20discussion%20on%20information%20for%20handover.doc) Further discussion on information for handover Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710430](file:///C:\Data\3GPP\Extracts\R2-1710430%20Discussion%20on%20the%20support%20of%20MBB%20and%20RACH-less%20in%20NR.docx) Discussion on the support of MBB and RACH-less in NR ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710869](file:///C:\Data\3GPP\Extracts\R2-1710869%20TP%20on%20Basic%20HO%20Considering%20the%20FFS%20Issues.docx) TP on Basic HO Considering the FFS Issues MediaTek Inc. discussion

[R2-1710932](file:///C:\Data\3GPP\Extracts\R2-1710932_Remaining%20issues%20for%20baseline%20handover%20procedure.docx) Remaining issues for baseline handover procedure vivo discussion Rel-15 NR\_newRAT-Core

[R2-1711260](file:///C:\Data\3GPP\Extracts\R2-1711260%20Data%20forwarding%20in%20handover.doc) Data Forwarding in intra-system Handover Samsung R&D Institute India discussion

[R2-1711681](file:///C:\Data\3GPP\Extracts\R2-1711681%20Basic%20handover%20procedure%20considering%20beam.doc) Basic handover procedure considering beam LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711712](file:///C:\Data\3GPP\Extracts\R2-1711712_basic%20handover%20procedure.doc) Open Issues for Basic Handover Procedure NTT DOCOMO INC. discussion Rel-15 NR\_newRAT-Core

[R2-1711761](file:///C:\Data\3GPP\Extracts\R2-1711761_AS_Config_IE.doc) Information carried from source node to target node during handover preparation phase ITRI discussion NR\_newRAT-Core

Withdrawn

R2-1710379 Text Proposal for Stage 2 on Mobility in RRC\_CONNECTED Spreadtrum Communications discussion Rel-15 Withdrawn

### 10.2.10 Mobility mechanisms - other

Note decisions at RAN2#97bis to progress the basic HO mechanism and only when stable to discuss conditional handover and potential optimisations to target close to 0ms or 0ms interruption.

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710169](file:///C:\Data\3GPP\Extracts\R2-1710169%20Ping%20Pong%20for%20CO%20HO.doc) Ping Pong Issues for Conditional Handover TCL discussion NR\_newRAT-Core

[R2-1710264](file:///C:\Data\3GPP\Extracts\R2-1710264%203%20types%20of%20HO%20in%20NR.doc) 3 Types of HO in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708879](file:///C:\Data\3GPP\Extracts\R2-1708879%203%20Types%20of%20HO%20in%20NR.doc)

[R2-1710265](file:///C:\Data\3GPP\Extracts\R2-1710265%20Further%20discussion%20on%20Conditional%20HO.doc) Further discussion on Conditional HO Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708886](file:///C:\Data\3GPP\Extracts\R2-1708886%20Further%20discussion%20on%20Conditional%20HO.doc)

[R2-1710266](file:///C:\Data\3GPP\Extracts\R2-1710266%20DC%20based%20NR%20scheme%20for%200ms%20interruption%20handover.doc) DC based NR scheme for 0ms interruption handover Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708877](file:///C:\Data\3GPP\Extracts\R2-1708877%20DC%20based%20%20NR%20scheme%20for%200ms%20interruption%20handover.doc)

[R2-1710267](file:///C:\Data\3GPP\Extracts\R2-1710267%20Security%20key%20change%20without%20L2%20reset.doc) Security key change without L2 reset Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708878](file:///C:\Data\3GPP\Extracts\R2-1708878%20Security%20key%20change%20without%20L2%20reset.doc)

[R2-1710268](file:///C:\Data\3GPP\Extracts\R2-1710268%20DC%20for%20intra-frequency%20mobility%20in%20NR.doc) DC for intra-frequency mobility in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708880](file:///C:\Data\3GPP\Extracts\R2-1708880%20DC%20for%20intra-frequency%20mobility%20in%20NR.doc)

[R2-1710269](file:///C:\Data\3GPP\Extracts\R2-1710269%20Requirement%20of%20RACH%20procedure%20for%20mobility.doc) Requirement of RACH procedure for mobility Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708881](file:///C:\Data\3GPP\Extracts\R2-1708881%20Requirement%20of%20RACH%20procedure%20for%20mobility.doc)

[R2-1710270](file:///C:\Data\3GPP\Extracts\R2-1710270%20Mobility%20enhancement%20for%20PCell%20change.doc) Mobility enhancements for PCell change Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708882](file:///C:\Data\3GPP\Extracts\R2-1708882%20Mobility%20enhancement%20for%20PCell%20change.doc)

[R2-1710271](file:///C:\Data\3GPP\Extracts\R2-1710271%20Potential%20Advantages%20of%20multi-connectivity%20with%20multiple%20MAC.doc) Potential Advantages of multi-connectivity with multiple MAC entities within an NR cell Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708884](file:///C:\Data\3GPP\Extracts\R2-1708884%20Potential%20Advantages%20of%20multi-connectivity%20with%20multiple%20MAC%20entities%20within%20an%20NR%20cell.doc)

[R2-1710272](file:///C:\Data\3GPP\Extracts\R2-1710272%20Inter%20MN%20handover%20without%20SN%20change.docx) Inter MN handover without SN change Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708885](file:///C:\Data\3GPP\Extracts\R2-1708885%20Inter%20MN%20handover%20without%20SN%20change.docx)

[R2-1710273](file:///C:\Data\3GPP\Extracts\R2-1710273%20Allocation%20of%20appropriate%20RACH%20resources%20for%20handover.docx) Allocation of appropriate RACH resources for handover Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708883](file:///C:\Data\3GPP\Extracts\R2-1708883%20Allocation%20of%20appropriate%20RACH%20resources%20for%20handover.docx)

[R2-1710434](file:///C:\Data\3GPP\Extracts\R2-1710434%20Targeting%20a%20Lossless%20handover%20with%200ms%20interruption.doc) Targeting a Lossless handover with 0ms interruption ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710435](file:///C:\Data\3GPP\Extracts\R2-1710435%20Discussion%20on%20single%20connected%20handover.doc) Discussion on single connected handover ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710543](file:///C:\Data\3GPP\Extracts\R2-1710543.doc) Automatic Neighbour Relation in NR Huawei, HiSilicon discussion Rel-15 [R2-1708208](file:///C:\Data\3GPP\Extracts\R2-1708208.doc)

[R2-1710590](file:///C:\Data\3GPP\Extracts\R2-1710590.doc) HO optimization for Rel15 Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710669](file:///C:\Data\3GPP\Extracts\R2-1710669%20(R15%20NR%20WI%20AI%2010210%20Conditional%20Reconfiguration).doc) Conditional Reconfiguration for NR InterDigital discussion Rel-15 NR\_newRAT-Core [R2-1708736](file:///C:\Data\3GPP\Extracts\R2-1708736%20(R15%20NR%20WI%20AI%201028%20Conditional%20Reconfiguration).doc)

[R2-1710700](file:///C:\Data\3GPP\Extracts\R2-1710700_nr_mob%20enh_sa_v16.doc) Mobility enhancements for NR SA Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1710701](file:///C:\Data\3GPP\Extracts\R2-1710701_nr_mob_enh_nsa_v11.doc) Mobility enhancements for NR NSA Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1710713](file:///C:\Data\3GPP\Extracts\R2-1710713_nr_mob_enh_ran4_v08.doc) Discussion on feasibility of DC-based mobility enhancement Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1710849](file:///C:\Data\3GPP\Extracts\R2-1710849%20-%20Enhancing%20Handover%20Failure.docx) Enhancing Handover Failure Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710850](file:///C:\Data\3GPP\Extracts\R2-1710850%20-%20Conditional%20Handover.docx) Conditional Handover Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710851](file:///C:\Data\3GPP\Extracts\R2-1710851%20-%20On%20Reliability,%20overhead%20and%20controllability%20aspects%20of%20Conditional%20Handover.docx) On Reliability, overhead and controllability aspects of Conditional Handover Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710871](file:///C:\Data\3GPP\Extracts\R2-1710871%20Mobility%20Enhancement%20for%20‘0ms%20Interruption’%20HO.docx) Mobility Enhancement for ‘0ms Interruption’ HO MediaTek Inc. discussion NR\_newRAT-Core [R2-1708002](file:///C:\Data\3GPP\Extracts\R2-1708002%20Mobility%20Enhancement%20for%20‘0ms%20Interruption’%20HO.docx)

[R2-1710872](file:///C:\Data\3GPP\Extracts\R2-1710872%20One%20or%20Multiple%20NR-Cells%20per%20MAC%20Entity.docx) One or Multiple NR-Cells per MAC Entity MediaTek Inc. discussion NR\_newRAT-Core [R2-1708003](file:///C:\Data\3GPP\Extracts\R2-1708003%20One%20or%20Multiple%20NR-Cells%20per%20MAC%20Entity.docx)

R2-1710873 One or Multiple NR-Cells per MAC Entity MediaTek Inc. discussion NR\_newRAT-Core [R2-1708003](file:///C:\Data\3GPP\Extracts\R2-1708003%20One%20or%20Multiple%20NR-Cells%20per%20MAC%20Entity.docx) Withdrawn

R2-1710874 One or Multiple NR-Cells per MAC Entity MediaTek Inc. discussion NR\_newRAT-Core [R2-1708003](file:///C:\Data\3GPP\Extracts\R2-1708003%20One%20or%20Multiple%20NR-Cells%20per%20MAC%20Entity.docx) Withdrawn

R2-1710875 One or Multiple NR-Cells per MAC Entity MediaTek Inc. discussion NR\_newRAT-Core [R2-1708003](file:///C:\Data\3GPP\Extracts\R2-1708003%20One%20or%20Multiple%20NR-Cells%20per%20MAC%20Entity.docx) Withdrawn

R2-1710876 One or Multiple NR-Cells per MAC Entity MediaTek Inc. discussion NR\_newRAT-Core [R2-1708003](file:///C:\Data\3GPP\Extracts\R2-1708003%20One%20or%20Multiple%20NR-Cells%20per%20MAC%20Entity.docx) Withdrawn

R2-1710877 One or Multiple NR-Cells per MAC Entity MediaTek Inc. discussion NR\_newRAT-Core [R2-1708003](file:///C:\Data\3GPP\Extracts\R2-1708003%20One%20or%20Multiple%20NR-Cells%20per%20MAC%20Entity.docx) Withdrawn

R2-1710878 One or Multiple NR-Cells per MAC Entity MediaTek Inc. discussion NR\_newRAT-Core [R2-1708003](file:///C:\Data\3GPP\Extracts\R2-1708003%20One%20or%20Multiple%20NR-Cells%20per%20MAC%20Entity.docx) Withdrawn

R2-1710879 One or Multiple NR-Cells per MAC Entity MediaTek Inc. discussion NR\_newRAT-Core [R2-1708003](file:///C:\Data\3GPP\Extracts\R2-1708003%20One%20or%20Multiple%20NR-Cells%20per%20MAC%20Entity.docx) Withdrawn

R2-1710880 One or Multiple NR-Cells per MAC Entity MediaTek Inc. discussion NR\_newRAT-Core [R2-1708003](file:///C:\Data\3GPP\Extracts\R2-1708003%20One%20or%20Multiple%20NR-Cells%20per%20MAC%20Entity.docx) Withdrawn

[R2-1710892](file:///C:\Data\3GPP\Extracts\R2-1710892.doc) Discussion on conditional handover in NR KT Corp. discussion

[R2-1710977](file:///C:\Data\3GPP\Extracts\R2-1710977%20-%20Discussion%20on%20Conditional%20Handover%20in%20NR%20(Resubmission%20to%2099b).docx) Discussion on Conditional Handover in NR ASTRI, TCL Communication Ltd. discussion

[R2-1711141](file:///C:\Data\3GPP\Extracts\R2-1711141%20-%200%20ms%20interruption%20support%20during%20handover%20procedure%20in%20NR.docx) 0 ms interruption support in NR Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708028](file:///C:\Data\3GPP\Extracts\R2-1708028%20-%200%20ms%20interruption%20support%20during%20handover%20procedure%20in%20NR.docx)

[R2-1711142](file:///C:\Data\3GPP\Extracts\R2-1711142%20-%20RACH-less%20HO%20in%20NR%20when%20UE%20is%20in%20CA%20or%20DC.docx) RACHless HO in NR when UE is in CA or DC Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708029](file:///C:\Data\3GPP\Extracts\R2-1708029%20-%20RACH-less%20HO%20in%20NR%20when%20UE%20is%20in%20CA%20or%20DC.docx)

[R2-1711396](file:///C:\Data\3GPP\Extracts\R2-1711396%20Handling%20of%20SRBs%20in%20re-establishment.doc) Handling of SRBs in connection re-establishment LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708460](file:///C:\Data\3GPP\Extracts\R2-1708460%20Handling%20of%20SRBs%20in%20re-establishment.doc)

[R2-1711406](file:///C:\Data\3GPP\Extracts\R2-1711406.docx) The feasibility of intra-frequency dual connectivity in NR-NR DC Samsung R&D Institute UK discussion

[R2-1711412](file:///C:\Data\3GPP\Extracts\R2-1711412.docx) Problem of DC enhancement for 0 ms interruption time Samsung R&D Institute UK discussion

[R2-1711413](file:///C:\Data\3GPP\Extracts\R2-1711413.docx) Introduction of Conditional handover Samsung R&D Institute UK discussion

[R2-1711416](file:///C:\Data\3GPP\Extracts\R2-1711416.docx) Operational aspects of conditional handover mechanism Samsung R&D Institute UK discussion [R2-1708839](file:///C:\Data\3GPP\Extracts\R2-1708839%20Operational%20aspects%20of%20conditional%20handover%20mechanism.docx)

[R2-1711419](file:///C:\Data\3GPP\Extracts\R2-1711419.doc) DRB Handling while RRC Connection Re-establishment in NR LG Electronics Finland discussion Rel-15 NR\_newRAT-Core

[R2-1711599](file:///C:\Data\3GPP\Extracts\R2-1711599%20-%20The%20Necessity%20of%20T312%20in%20NR.docx) The Necessity of T312 in NR Samsung Electronics discussion [R2-1709602](file:///C:\Data\3GPP\Extracts\R2-1709602%20-%20The%20Necessity%20of%20T312%20in%20NR.docx)

[R2-1711600](file:///C:\Data\3GPP\Extracts\R2-1711600%20-%20Conditional%20HO%20Event%20Design%20Aspects.docx) Conditional Handover: Event Design Aspects Samsung Electronics discussion [R2-1709603](file:///C:\Data\3GPP\Extracts\R2-1709603%20-%20Conditional%20HO%20Event%20Design%20Aspects.docx)

[R2-1711602](file:///C:\Data\3GPP\Extracts\R2-1711602%20-%20Beam%20Refinement%20Considering%20RRM%20Measurement%20based%20on%20Idle%20Mode%20RS.docx) Beam Refinement Considering RRM Measurement based on Idle Mode RS Samsung Electronics discussion [R2-1709604](file:///C:\Data\3GPP\Extracts\R2-1709604%20-%20Beam%20Refinement%20Considering%20RRM%20Measurement%20based%20on%20Idle%20Mode%20RS.docx)

[R2-1711678](file:///C:\Data\3GPP\Extracts\R2-1711678%20-%20Intra-Frequency%20DC%20to%20Enable%20Mobility%20with%20Close%20to%20Zero%20ms%20Interruption.docx) Intra-Frequency DC to Enable Mobility with Close to Zero ms Interruption AT&T discussion [R2-1708204](file:///C:\Data\3GPP\Extracts\R2-1708204%20-%20Intra-frequency%20DC%20to%20enable%20mobility%20with%20close%20to%20zero%20ms%20interruption.docx)

[R2-1711682](file:///C:\Data\3GPP\Extracts\R2-1711682%20Conditional%20handover%20procedure.doc) Conditional handover procedure LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1707134](file:///C:\Data\3GPP\Extracts\R2-1707134%20Conditional%20handover%20procedure.doc)

[R2-1711720](file:///C:\Data\3GPP\Extracts\R2-1711720%20%20NR%20RRC%20based%20Inter%20DU%20mobility.doc) NR RRC based Inter DU mobility Samsung Electronics discussion

### 10.2.11 Mobility - RLM,RLF

Any remaining stage 2 aspects of radio link monitoring procedure and criteria for declaring radio link failure, including impact of beam failure/recovery based on responses from RAN1 to questions sent from last meeting.

This agenda item is relevant to EN-DC completion

Maximum 1 tdoc per company

[R2-1710443](file:///C:\Data\3GPP\Extracts\R2-1710443_RlfandBeamRecoveryAspects-v3.docx) Way forward on RLM aspects for SCG ZTE Corporation, Sane Chips discussion Rel-15

P2

- Ericsson wonder if it is possible to complete this would responses from RAN1 on beam recovery, etc

- Lenovo think that this can be based on periodic indication until we have more input from RAN1.

- LG support the proposal and aperiodic indication can be added later.

- Intel also support the proposal. Vivo also. MediaTek also think this behaviour can be captured.

- DOCOMO understand that RAN4 is discussing the threshold of IS/OOS indications. Intel think we can discuss whether the different thresholds can be configured by RRC.

- ZTE has agreed there can be 2 thresholds but whether this is configurable has not been completed.

Agreements

1 RLF detection will be specified for NR in the RRC spec (as in LTE)

2 For Dec 17, RLF will be based on the periodic IS/OOS indications from L1 (i.e. this is same frame work as LTE)

[R2-1711414](file:///C:\Data\3GPP\Extracts\R2-1711414.doc) NR RLM and RLF procedure Samsung R&D Institute UK discussion

[R2-1710237](file:///C:\Data\3GPP\Extracts\R2-1710237_Discussion%20on%20NR%20Beam%20Failure%20and%20Radio%20Link%20Failure.doc) Discussion on NR Beam Failure and Radio Link Failure OPPO discussion

[R2-1710560](file:///C:\Data\3GPP\Extracts\R2-1710560%20RLF%20for%20NR.docx) RLF for NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710625](file:///C:\Data\3GPP\Extracts\R2-1710625.doc) RLM and RLF Intel Corporation discussion Rel-15 NR\_newRAT-Core To:RAN1, RAN4

[R2-1710838](file:///C:\Data\3GPP\Extracts\R2-1710838%20-%20Remaining%20open%20issues%20of%20RLM%20and%20RLF%20in%20NR.docx) Remaining open issues of RLM and RLF in NR Ericsson discussion NR\_newRAT-Core

[R2-1710881](file:///C:\Data\3GPP\Extracts\R2-1710881%20RLM%20RLF%20Considering%20Beam%20Failure%20Recovery.docx) RLM/RLF Considering Beam Failure Recovery MediaTek Inc., Qualcomm Incorporated discussion NR\_newRAT-Core [R2-1707998](file:///C:\Data\3GPP\Extracts\R2-1707998%20RLMRLF%20Considering%20Beam%20Failure%20Recovery.docx)

[R2-1710919](file:///C:\Data\3GPP\Extracts\R2-1710919_RLM%20RLF%20in%20NR.docx) RLM/RLF in NR vivo discussion Rel-15 NR\_newRAT-Core [R2-1708417](file:///C:\Data\3GPP\Extracts\R2-1708417_RLM%20RLF%20in%20NR.docx)

[R2-1711417](file:///C:\Data\3GPP\Extracts\R2-1711417.doc) RLF considering Beam Recovery Failure LG Electronics Finland discussion Rel-15 NR\_newRAT-Core

[R2-1711615](file:///C:\Data\3GPP\Extracts\R2-1711615_RLF%20and%20beam%20recovery.doc) RLF declaration after beam recovery failure NEC discussion Rel-15 NR\_newRAT-Core

[R2-1711676](file:///C:\Data\3GPP\Extracts\R2-1711676%20-%20Configuration%20of%20IS-OOS%20BLER%20Thresholds%20for%20RLM.docx) Configuration of IS/OOS BLER Thresholds for RLM AT&T discussion

[R2-1711770](file:///C:\Data\3GPP\Extracts\R2-1711770%20BR%20and%20RLF.doc) Beam recovery and RLF CATT discussion Rel-15 NR\_newRAT-Core [R2-1707892](file:///C:\Data\3GPP\Extracts\R2-1707892.doc)

### 10.2.12 Mobility without RRC involvement

AI is a placeholder for when RAN1 has made progress on beam management. Any RAN2 contributions should focus on the RAN2 implications as a consequence of RAN1 agreements - do not submit duplicates of RAN1 documents here.

This agenda item is relevant to EN-DC completion

[R2-1710561](file:///C:\Data\3GPP\Extracts\R2-1710561%20RAN2%20aspects%20of%20UL%20beam%20management.doc) RAN2 aspects of UL beam management Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710562](file:///C:\Data\3GPP\Extracts\R2-1710562%20RAN2%20aspects%20of%20DL%20beam%20management.doc) RAN2 aspects of DL beam management Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710563](file:///C:\Data\3GPP\Extracts\R2-1710563%20Consideration%20on%20DRX%20with%20beam%20management.doc) Consideration on DRX with beam management Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710564](file:///C:\Data\3GPP\Extracts\R2-1710564%20Handling%20of%20resources%20for%20beam%20failure%20recovery.doc) Handling of resources for beam failure recovery Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710565](file:///C:\Data\3GPP\Extracts\R2-1710565%20CSI-RS%20configuration%20for%20beam%20management.doc) CSI-RS configuration for beam management Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710626](file:///C:\Data\3GPP\Extracts\R2-1710626.doc) RAN2 implications for beam managements Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710870](file:///C:\Data\3GPP\Extracts\R2-1710870%20Beam%20Management%20and%20Beam%20Recovery%20in%20MAC.docx) Beam Management and Beam Recovery in MAC MediaTek Inc. discussion NR\_newRAT-Core [R2-1707999](file:///C:\Data\3GPP\Extracts\R2-1707999_Beam%20Management%20and%20Beam%20Recovery%20in%20MAC.docx)

[R2-1710920](file:///C:\Data\3GPP\Extracts\R2-1710920_RACH%20configuration%20for%20beam%20recovery.doc) RACH configuration for beam recovery vivo discussion Rel-15 NR\_newRAT-Core

[R2-1711081](file:///C:\Data\3GPP\Extracts\R2-1711081.doc) Discussion on beam recovery request in NR ASUSTEK COMPUTER (SHANGHAI) discussion Rel-15 NR\_newRAT-Core [R2-1709320](file:///C:\Data\3GPP\Extracts\R2-1709320%20Discussion%20on%20beam%20recovery%20requeset%20in%20NR.doc)

[R2-1711337](file:///C:\Data\3GPP\Extracts\R2-1711337%20-%20BLF%20in%20NR.docx) Beam link monitoring in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711341](file:///C:\Data\3GPP\Extracts\R2-1711341-%20Beam%20management%20in%20NR.docx) RRC configuration beam management in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711348](file:///C:\Data\3GPP\Extracts\R2-1711348-Beam%20management%20in%20C-DRX.doc) Beam management in C-DRX Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709223](file:///C:\Data\3GPP\Extracts\R2-1709223-Beam%20management%20in%20C-DRX.doc)

[R2-1711350](file:///C:\Data\3GPP\Extracts\R2-1711350-Measurement%20reporting%20and%20beam%20refinement%20during%20RACH.doc) Measurement reporting and beam refinement during RACH Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709088](file:///C:\Data\3GPP\Extracts\R2-1709088-%20Measurement%20reporting%20and%20beam%20refinement%20during%20RACH.doc)

[R2-1711360](file:///C:\Data\3GPP\Extracts\R2-1711360-Beam%20reporting%20and%20refinement%20during%20handover.doc) Beam reporting and refinement during handover Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709091](file:///C:\Data\3GPP\Extracts\R2-1709091-%20Beam%20aware%20RACH%20procedure%20and%20beam%20refinement%20during%20handover.doc)

[R2-1711361](file:///C:\Data\3GPP\Extracts\R2-1711361-Beam%20recovery%20request.doc) Beam recovery request Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709085](file:///C:\Data\3GPP\Extracts\R2-1709085-%20Beam%20recovery%20request.doc)

[R2-1711363](file:///C:\Data\3GPP\Extracts\R2-1711363-Beam%20refinement%20after%20beam%20recovery%20or%20scheduling%20request.doc) Beam refinement after beam recovery or scheduling request Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709090](file:///C:\Data\3GPP\Extracts\R2-1709090-Beam%20refinement%20after%20beam%20recovery%20or%20scheduling%20request.doc)

[R2-1711370](file:///C:\Data\3GPP\Extracts\R2-1711370%20Dedicated%20resource%20configuration%20for%20beam%20failure%20recovery.doc) Dedicated resource configuration for beam failure recovery Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core

[R2-1711382](file:///C:\Data\3GPP\Extracts\R2-1711382%20Prioritized%20random%20access%20for%20beam%20failure%20recovery.doc) Prioritized random access for beam failure recovery Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core [R2-1709073](file:///C:\Data\3GPP\Extracts\R2-1709073%20Random%20access%20for%20beam%20failure%20recovery.doc)

[R2-1711450](file:///C:\Data\3GPP\Extracts\R2-1711450%20Beam%20recovery%20in%20NR.docx) Beam Recovery in NR Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

[R2-1711451](file:///C:\Data\3GPP\Extracts\R2-1711451%20Beam%20management.docx) Beam management Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core [R2-1708678](file:///C:\Data\3GPP\Extracts\R2-1708678%20Beam%20management.docx)

[R2-1711675](file:///C:\Data\3GPP\Extracts\R2-1711675%20-%20Inter-Cell%20Mobility%20with%20Limited%20RRC%20Involvement.doc) Inter-Cell Mobility with Limited RRC Involvement AT&T discussion

[R2-1711713](file:///C:\Data\3GPP\Extracts\R2-1711713%20%20Aperiodic%20indications%20based%20on%20Beam%20Recovery.doc) Aperiodic indications based on Beam Recovery Samsung Electronics discussion

[R2-1711719](file:///C:\Data\3GPP\Extracts\R2-1711719%20%20NR%20details%20of%20beam%20recovery%20procedure.doc) NR details of beam recovery procedure Samsung Electronics discussion

[R2-1711721](file:///C:\Data\3GPP\Extracts\R2-1711721%20%20NR%20signals%20for%20downlink%20beam%20management.doc) NR signals for downlink beam management Samsung Electronics discussion

### 10.2.13 Mobility - Inter-RAT

Connected mode mobility between NR and E-UTRA

Inter-RAT NR measurements to be added to E-UTRA for purpose of EN-DC should be discussed under stage 3 AI 10.4.2.

Inter-RAT E-UTRA measurements to be added to NR for the purpose of inter-RAT handover from NR to -E-UTRA should be discussed under stage 3 AI 10.4.1.3.7

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710189](file:///C:\Data\3GPP\Extracts\R2-1710189%20-%20Inter-system%20and%20inter-RAT%20mobility.docx) Inter-system and inter-RAT mobility Ericsson discussion Rel-15 LTE\_5GCN\_connect-Core [R2-1707839](file:///C:\Data\3GPP\Extracts\R2-1707839%20-%20Inter-system%20and%20inter-RAT%20mobility%20for%20LTE%20connected%20to%205GC.docx)

[R2-1710566](file:///C:\Data\3GPP\Extracts\R2-1710566%20%20Inter-RAT%20handover%20between%20LTE%20and%20NR.doc) Inter-RAT handover between LTE and NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710567](file:///C:\Data\3GPP\Extracts\R2-1710567%20Message%20content%20in%20inter-RAT%20handover.doc) Message content in inter-RAT handover Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710804](file:///C:\Data\3GPP\Extracts\R2-1710804_Inter_RAT_Mobility.doc) Mobility between E-UTRAN and NR Qualcomm Incorporated discussion [R2-1709637](file:///C:\Data\3GPP\Extracts\R2-1709637_Inter_RAT_Mobility.doc)

[R2-1710837](file:///C:\Data\3GPP\Extracts\R2-1710837%20-%20UE%20context%20handling%20at%20IRAT%20handover.docx) UE context handling during inter RAT handover Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711069](file:///C:\Data\3GPP\Extracts\R2-1711069%20Events%20and%20measurements%20for%20handover%20from%20E-UTRA%20to%20NR.docx) Events and measurements for handover from E-UTRA to NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711302](file:///C:\Data\3GPP\Extracts\R2-1711302%20Supporting%20Lossless%20Inter-RAT%20Handover.doc) Supporting Lossless Inter-RAT Handover Samsung R&D Institute India discussion

[R2-1711647](file:///C:\Data\3GPP\Extracts\R2-1711647%20NR%20inter-RAT%20mobility%20to%20CSG%20cell.doc) NR inter-RAT mobility to CSG cell LG Electronics Inc. discussion Rel-15 [R2-1709280](file:///C:\Data\3GPP\Extracts\R2-1709280%20NR%20inter-RAT%20mobility%20to%20CSG%20cell.doc)

### 10.2.14 Security (non EN-DC)

Stage 2 aspects of security for cases other than EN-DC

This agenda item is not relevant to EN-DC completion but will be treated if time allows.

[R2-1710198](file:///C:\Data\3GPP\Extracts\R2-1710198%20-%20Key%20refresh%20at%20handover%20in%20NR.docx) Key refresh at handover in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710254](file:///C:\Data\3GPP\Extracts\R2-1710254%20IP%20Failure.docx) Integrity Protection Verification Failure Handling in NR Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1710346](file:///C:\Data\3GPP\Extracts\R2-1710346%20Re-establishment%20upon%20integrity%20check%20failure.doc) Re-establishment upon integrity check failure Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709611](file:///C:\Data\3GPP\Extracts\R2-1709611%20%20Re-establishment%20upon%20integrity%20check%20failure%20v0%201.doc)

[R2-1710347](file:///C:\Data\3GPP\Extracts\R2-1710347%20Draft%20LS%20to%20SA3%20on%20%20reestablishement%20upon%20integrity%20check%20failure.doc) Draft LS to SA3 on reestablishement upon integrity check failure Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709612](file:///C:\Data\3GPP\Extracts\R2-1709612%20Draft%20LS%20to%20SA3%20on%20%20reestablishement%20upon%20integrity%20check%20failure%20v0%201.doc)

[R2-1710348](file:///C:\Data\3GPP\Extracts\R2-1710348%20Integrity%20protection%20and%20Counter%20Check%20Procedure%20for%20NR.doc) Integrity protection and Counter Check Procedure for NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709614](file:///C:\Data\3GPP\Extracts\R2-1709614%20Integrity%20protection%20and%20Counter%20Check%20Procedure%20for%20NR%20v01.doc)

[R2-1710542](file:///C:\Data\3GPP\Extracts\R2-1710542.doc) Procedures for enabling security per bearer Huawei, HiSilicon discussion Rel-15

[R2-1710834](file:///C:\Data\3GPP\Extracts\R2-1710834%20-%20Way%20forward%20with%20Security%20in%20RRC%20Inactive.docx) Way forward with Security in RRC Inactive Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710921](file:///C:\Data\3GPP\Extracts\R2-1710921_UE%20Behavior%20on%20DRB%20IP%20check%20failure.doc) UE Behavior on DRB IP check failure vivo discussion Rel-15 NR\_newRAT-Core

[R2-1710922](file:///C:\Data\3GPP\Extracts\R2-1710922_Draft%20LS%20on%20UE%20Behavior%20on%20DRB%20IP%20check%20failure.doc) Draft LS on UE Behavior on DRB IP check failure vivo LS out Rel-15 NR\_newRAT-Core

[R2-1710923](file:///C:\Data\3GPP\Extracts\R2-1710923_DRB%20IP%20check%20failure%20indication.doc) DRB IP check failure indication vivo discussion Rel-15 NR\_newRAT-Core

[R2-1710924](file:///C:\Data\3GPP\Extracts\R2-1710924_Draft%20LS%20on%20DRB%20IP%20check%20failure%20indication.doc) Draft LS on DRB IP check failure indication vivo LS out Rel-15 NR\_newRAT-Core

### 10.2.15 Slicing

Including signalling of slice info to RAN, impact to access control, confirmation (or otherwise) of working assumption from RAN2#99 on use of dedicated prioritises to control idle mode mobility for slicing, etc

This agenda item is not relevant to EN-DC completion but will be treated if time allows.

Idle mode mobility control

[R2-1710925](file:///C:\Data\3GPP\Extracts\R2-1710925_UE%20registered%20slices%20information%20at%20gNB.doc) UE registered slices information at gNB vivo discussion Rel-15 NR\_newRAT-Core

[R2-1710196](file:///C:\Data\3GPP\Extracts\R2-1710196%20-%20Slice%20availability.docx) Slice availability Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710221](file:///C:\Data\3GPP\Extracts\R2-1710221-Slice%20availability.doc) Slice Availability for Cell Reselection Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710133](file:///C:\Data\3GPP\Extracts\%5bNR-CP%5dR2-1710133%20TP%20for%20Cell%20Reselection%20Dedicated%20Priority%20for%20Network%20Slicing.doc) TP to running CR on Dedicated Priority for Inter-Frequency Cell Reselection for Slicing OPPO, Coolpad discussion [R2-1710173](file:///C:\Data\3GPP\Extracts\%5bNR-CP%5dR2-1710173%20Text%20proposals%20for%20Cell%20Reselection%20Dedicated%20Priority%20for%20Network%20Slicing.doc)

[R2-1710163](file:///C:\Data\3GPP\Extracts\R2-1710163%20Demerits%20of%20using%20Slice%20information%20for%20Cell%20selection.doc) Demerits of using Slice information for Cell selection Lenovo Mobile Com. Technology discussion NR\_newRAT-Core [R2-1709423](file:///C:\Data\3GPP\Extracts\R2-1709423%20Demerits%20of%20using%20Slice%20information%20for%20Cell%20selection.doc)

[R2-1710172](file:///C:\Data\3GPP\Extracts\%5bNR-CP%5dR2-1710172%20Discussion%20on%20Working%20Assumption%20on%20Dedicated%20Priority%20for%20Network%20Slicing.doc) Discussion on Working Assumption on Dedicated Priority for Network Slicing OPPO, Coolpad discussion

[R2-1710173](file:///C:\Data\3GPP\Extracts\%5bNR-CP%5dR2-1710173%20Text%20proposals%20for%20Cell%20Reselection%20Dedicated%20Priority%20for%20Network%20Slicing.doc) TP to running CR on Dedicated Priority for Inter-Frequency Cell Reselection for Slicing OPPO discussion

[R2-1710174](file:///C:\Data\3GPP\Extracts\%5bNR-CP%5dR2-1710174%20Discussion%20on%20Several%20issues%20for%20Network%20Slicing.doc) Discussion on Several Issues for Network Slicing OPPO discussion [R2-1708038](file:///C:\Data\3GPP\Extracts\R2-1708038%20%20Discussion%20on%20Several%20Issues%20for%20Network%20Slicing_v09.doc)

[R2-1710785](file:///C:\Data\3GPP\Extracts\R2-1710785_Slicing_Reselection.doc) Slicing support and cell reselection Qualcomm Incorporated discussion

[R2-1711080](file:///C:\Data\3GPP\Extracts\R2-1711080_Cell%20selection%20reselection%20with%20network%20slicing.docx) Cell selection/reselection with network slicing vivo discussion Rel-15 NR\_newRAT-Core

[R2-1711285](file:///C:\Data\3GPP\Extracts\R2-1711285%20Control%20of%20the%20frequency%20on%20which%20the%20UE%20camps.docx) Control of the frequency on which the UE camps Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

[R2-1711762](file:///C:\Data\3GPP\Extracts\R2-1711762_Discussion%20on%20cell%20reselection%20for%20network%20slicing_V0.doc) Discussion on cell reselection for network slicing ITRI discussion NR\_newRAT-Core

Other

[R2-1710195](file:///C:\Data\3GPP\Extracts\R2-1710195%20-%20Signalling%20aspects%20of%20network%20slicing.docx) Signalling aspects of network slicing Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710197](file:///C:\Data\3GPP\Extracts\R2-1710197%20-%20Access%20Control%20and%20Slicing.docx) Access control and slicing Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710219](file:///C:\Data\3GPP\Extracts\R2-1710219%20Further%20Discussion%20on%20Slice%20Selection%20Information%20over%20RRC.doc) Further Discussion on Slice Selection Information over RRC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710220](file:///C:\Data\3GPP\Extracts\R2-1710220%20Slice-based%20Unified%20Access%20Control.doc) Slice-based Unified Access Control Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710222](file:///C:\Data\3GPP\Extracts\R2-1710222%20What%20is%20RAN%20part%20of%20a%20network%20slice.doc) What is RAN part of a network slice ? Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710422](file:///C:\Data\3GPP\Extracts\R2-1710422%20Leftover%20issues%20for%20NW%20slicing.doc) Leftover issues for NW slicing ZTE Corporation, Sane Chips discussion Rel-15

[R2-1711020](file:///C:\Data\3GPP\Extracts\R2-1711020%20NSSAI%20in%20MSG5.doc) NSSAI in MSG5 Sony discussion Rel-15 NR\_newRAT-Core [R2-1709509](file:///C:\Data\3GPP\Extracts\R2-1709509%20NSSAI%20in%20MSG5_v3.doc)

[R2-1711155](file:///C:\Data\3GPP\Extracts\R2-1711155_AMF%20selection%20based%20on%20assistance%20information.docx) AMF selection based on assistance information LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1709303](file:///C:\Data\3GPP\Extracts\R2-1709303.docx)

[R2-1711192](file:///C:\Data\3GPP\Extracts\R2-1711192.docx) Connected mobility aspects to support network slicing Samsung discussion Rel-15

[R2-1711284](file:///C:\Data\3GPP\Extracts\R2-1711284%20Slice%20assistance%20information%20over%20RRC.docx) Slice assisatnce information over RRC Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

[R2-1711779](file:///C:\Data\3GPP\Extracts\R2-1711779_Slice%20Awareness%20in%20Initial%20Access_r2.doc) Initial Access considering Network Slices Samsung Electronics GmbH discussion [R2-1709167](file:///C:\Data\3GPP\Extracts\R2-1709167_Slice%20Awareness%20in%20Initial%20Access_r1.doc)

[R2-1711791](file:///C:\Data\3GPP\Extracts\R2-1711791_Slice%20Information%20in%20RRC_r1.doc) Slice Information in RRC Samsung Electronics GmbH discussion [R2-1709168](file:///C:\Data\3GPP\Extracts\R2-1709168_Slice%20Information%20in%20RRC_r1.doc)

### 10.2.16 QoS

Any remaining stage 2 aspects, including QoS operation with DC.

Detailed topics should be discussed in stage 3 user plane

Note agreement at RAN2#97bis that QoS flow remapping at handover will be discussed when flow remapping not at handover has been progressed within user plane session.

This agenda item is not relevant to EN-DC completion but will be treated if time allows.

[R2-1710223](file:///C:\Data\3GPP\Extracts\R2-1710223%20DRB%20level%20offloading%20in%20NR%20DC.doc) DRB Level Offloading in NR DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710224](file:///C:\Data\3GPP\Extracts\R2-1710224%20Notification%20Control.doc) Notification Control Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710255](file:///C:\Data\3GPP\Extracts\R2-1710255%20QoS%20Update.docx) QoS Update Rapporteur (Nokia) discussion Rel-15 NR\_newRAT

[R2-1710440](file:///C:\Data\3GPP\Extracts\R2-1710440%20QoS%20remaining%20aspects%20for%20NR-NR%20DC.doc) QoS remaining aspects for NR-NR DC ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710441](file:///C:\Data\3GPP\Extracts\R2-1710441_reflectiveQoSHandover.docx) QoS flow to DRB mapping during handover for bearers with reflective QoS ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710926](file:///C:\Data\3GPP\Extracts\R2-1710926_Lossless%20HO%20for%20Qos%20flow%20and%20DRB%20offloading.doc) Lossless HO for Qos flow and DRB offloading vivo discussion Rel-15 NR\_newRAT-Core

[R2-1710983](file:///C:\Data\3GPP\Extracts\R2-1710983_nr_qos_default_v03.doc) On default DRB, default QoS flow and profile Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1711234](file:///C:\Data\3GPP\Extracts\R2-1711234%20-%20Default%20DRB%20system%20impact%20and%20signalling%20aspects.docx) Default DRB system impact and signalling aspects Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711235](file:///C:\Data\3GPP\Extracts\R2-1711235%20-%20QoS%20Flow%20Remapping%20in%20Handover%20and%20Within%20the%20Same%20Cell.docx) QoS Flow Remapping in Handover and Within the Same Cell Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711238](file:///C:\Data\3GPP\Extracts\R2-1711238%20-%20QoS%20flow%20relocation%20in%20NR-DC%20between%20MN%20and%20SN.docx) QoS Flow Relocation in NR-DC between MN and SN Ericsson discussion Rel-15 NR\_newRAT-Core

Withdrawn

R2-1711239 QoS impact on number of DRBs supported Ericsson discussion Rel-15 NR\_newRAT-Core

### 10.2.17 Positioning

This agenda item is not relevant to EN-DC completion but will be treated if time allows.

[R2-1711047](file:///C:\Data\3GPP\Extracts\R2-1711047_(TP%20for%20Clause%204%20of%2038305).doc) Text Proposal for Clause 4 of TS 38.305 Qualcomm Incorporated discussion

[R2-1711048](file:///C:\Data\3GPP\Extracts\R2-1711048_(TP%20for%20Clause%205%20of%2038305).doc) Text Proposal for Clause 5 of TS 38.305 Qualcomm Incorporated discussion

[R2-1711049](file:///C:\Data\3GPP\Extracts\R2-1711049_(TP%20for%20Clause%206%20of%2038305).doc) Text Proposal for Clause 6 of TS 38.305 Qualcomm Incorporated discussion

[R2-1711051](file:///C:\Data\3GPP\Extracts\R2-1711051_(TP%20for%20Clause%207%20of%2038305).doc) Text Proposal for Clause 7 of TS 38.305 Qualcomm Incorporated discussion

[R2-1711052](file:///C:\Data\3GPP\Extracts\R2-1711052_(TP%20for%20Clause%208%20of%2038305).doc) Text Proposal for Clause 8 of TS 38.305 Qualcomm Incorporated discussion

[R2-1710538](file:///C:\Data\3GPP\Extracts\R2-1710538.doc) Protocol impacts of positioning in NR Huawei, HiSilicon discussion Rel-15 [R2-1708209](file:///C:\Data\3GPP\Extracts\R2-1708209.doc)

[R2-1710884](file:///C:\Data\3GPP\Extracts\R2-1710884_NR%20position_1.doc) Discussion on NR positioning ZTE Corporation discussion

[R2-1711045](file:///C:\Data\3GPP\Extracts\R2-1711045_(TP%20for%20Clause%201-3%20of%2038305).doc) Text Proposal for Clause 1 to 3 of TS 38.305 Qualcomm Incorporated discussion Rel-15 NR\_newRAT

[R2-1711357](file:///C:\Data\3GPP\Extracts\R2-1711357.docx) Support of measurement gaps for location related inter-RAT measurements Ericsson discussion Rel-15

[R2-1711358](file:///C:\Data\3GPP\Extracts\R2-1711358.docx) Text proposal for 38.305 skeleton Ericsson discussion Rel-15

[R2-1711691](file:///C:\Data\3GPP\Extracts\R2-1711691%20Support%20NR%20positioning%20under%20dual%20connectivity.docx) Support NR positioning under dual connectivity LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

### 10.2.18 Stage 2 corrections

This agenda item is for corrections to the draft stage 2 TSs. 'Corrections' means improvements to the way that existing agreements are captured in the TS, or addition of existing agreements that have been omitted (new agreements should not be proposed). In addition, such corrections should first to communicated to the specification rapporteur for possible inclusion in a rapporteur's update, and only submitted here if you conclude a separate contribution should be useful.

This agenda item is relevant to EN-DC completion.

[R2-1710074](file:///C:\Data\3GPP\Extracts\R2-1710074_nr_rrc_tp_v04.doc) Text proposal for clarifications on the NR RRC states Samsung, Rapporteur (Nokia) discussion Rel-15 NR\_newRAT-Core

=> Agreed

[R2-1710076](file:///C:\Data\3GPP\Extracts\R2-1710076_nr_slice_v02.doc) Text proposal for clarifications on NR slicing Samsung discussion Rel-15 NR\_newRAT-Core

=> Change 'UE should be able to' to 'UE provides'

=> Can consider offline whether to clarify in stage 2 when this information has to be provided.

=> Offline discussion to conclude the TP (Offline discussion #24)

[R2-1712034](file:///C:\Data\3GPP\Extracts\R2-1712034_nr_slice_v09.doc) Text proposal for clarifications on NR slicing Samsung discussion Rel-15 NR\_newRAT-Core

=> Agreed

[R2-1711426](file:///C:\Data\3GPP\Extracts\R2-1711426%20Text%20proposal%20on%20removing%20mini-slot.doc) Text proposal to 38.300 on removing mini-slot HUAWEI TECHNOLOGIES Co. Ltd. discussion Rel-15

=> This aspect can be corrected in stage 2 when RAN1 have finally concluded.

[R2-1711778](file:///C:\Data\3GPP\Extracts\R2-1711778_nr_tp_id_v02.doc) Text proposal for clarifications on the NR identities Samsung discussion Rel-15 NR\_newRAT-Core

- Samsung think that I could refer to inactive and this identity may not always be used in inactive. Nokia explain that I-RNTI is just a label in the spec.

=> Rapporteur will correct the resume ID in the TS

[R2-1710253](file:///C:\Data\3GPP\Extracts\R2-1710253%20URLLC%20Update.docx) URLLC Update Rapporteur (Nokia), Huawei discussion Rel-15 NR\_newRAT

- moved from 10.2.1 to 10.2.18

=> Agreed

[R2-1710380](file:///C:\Data\3GPP\Extracts\R2-1710380%20Text%20Proposal%20for%20Stage%202%20on%20EN-DC.doc) Text Proposal for Stage 2 on EN-DC Spreadtrum Communications discussion Rel-15

moved from 10.2.7 to 10.2.18

- ZTE explain that the changes related to the measurement reports are already agreed to be added.

=> Noted

[R2-1711659](file:///C:\Data\3GPP\Extracts\R2-1711659%20TP%20on%20SN%20modification%20without%20MN%20involvement.doc) TP on SN modification without MN involvement HTC Corporation discussion NR\_newRAT-Core [R2-1708243](file:///C:\Data\3GPP\Extracts\R2-1708243%20TP%20on%20SN%20modification%20without%20MN%20involvement.doc)

moved from 10.2.7 to 10.2.18

=> Revised in [R2-1711929](file:///C:\Data\3GPP\Extracts\R2-1711929%20TP%20on%20SN%20modification%20without%20MN%20involvement%20(Revision%20of%20R2-1711659).doc)

[R2-1711929](file:///C:\Data\3GPP\Extracts\R2-1711929%20TP%20on%20SN%20modification%20without%20MN%20involvement%20(Revision%20of%20R2-1711659).doc) TP on SN modification without MN involvement HTC Corporation discussion NR\_newRAT-Core

=> Agreed

### 10.2.19 Other (non EN-DC)

Other stage 2 aspects for non EN-DC

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

Dual registration (to address and respond to SA2 LS)

[R2-1710324](file:///C:\Data\3GPP\Extracts\R2-1710324%20Consideration%20on%20the%20dual%20registration%20operation.doc) Consideration on the dual registration operation ZTE Corporation discussion Rel-15 NR\_newRAT-Core

- Vivo wonder if we first need to confirm if these 2 types of UE are feasible

- Samsung think that even without any RAN coordination there can still be some coordination via OAM to enable transmissions to be coordinated.

- Lenovo saw similar issues and think everything is feasible but wonder how important these cases are. Think that SA2 would like the UE to be able to be active in both RATs at the same time but they also consider UEs that cannot do this and can only be idle in one.

- Ericsson think that it would be better to keep the UE connected via a single CN and utilise EN-DC for example. If anything we should focus on idle/active use case.

- Intel agree with ZTE that this seems feasible from a RAN spec perspective.

- Vivo gave update from coffee break discussion: Companies have diverse view. Most UE vendors think it is feasible for Dual RX, single Tx but think Dual Rx Dual Tx will have issues. But there may be some performance impact.

- Lenovo think another view from the discussion was that single tx case might still work if NAS does everything on its own.

- Intel the discussion was what was feasible in Rel-15 without any optimisation.

=> Reply to SA2 that RAN2 could not conclude whether it is feasible with the current specifications. Also indicate that we do not plan to make any optimisation for this in Rel-15.

=> Draft LS in R2-1712016 (Offline discussion #48, Intel).

- After further offline it was concluded not to send an LS.

R2-1712016 [DRAFT] [LS to SA2 on [R2-1710324](file:///C:\Data\3GPP\Extracts\R2-1710324%20Consideration%20on%20the%20dual%20registration%20operation.doc)] Intel LS out Rel-15 NR\_newRAT-Core To:SA2

[R2-1710927](file:///C:\Data\3GPP\Extracts\R2-1710927_Impacts%20of%20dual%20camping%20UE.docx) Impacts of dual camping UE vivo discussion Rel-15 NR\_newRAT-Core

[R2-1710928](file:///C:\Data\3GPP\Extracts\R2-1710928_Draft%20reply%20LS%20on%20dual%20camping.doc) Draft reply LS on dual camping vivo LS out Rel-15 NR\_newRAT-Core

[R2-1711563](file:///C:\Data\3GPP\Extracts\R2-1711563.doc) Considerations of RAN impact of LTE-NR dual registration Qualcomm Incorporated discussion Rel-15 NR\_newRAT

[R2-1710637](file:///C:\Data\3GPP\Extracts\R2-1710637-dual-radio-LS_rsp-v3.docx) [Draft] Reply LS on simultaneous transmission and/or reception over EPC/E-UTRAN and 5GC/NR Intel Corporation discussion Rel-15 NR\_newRAT-Core

moved from 12 to 10.2.19

[R2-1710156](file:///C:\Data\3GPP\Extracts\R2-1710156%20Supporting%20Dual%20Registration%20in%20Access%20Stratum.doc) Supporting Dual Registration in Access Stratum Lenovo, Motorola Mobility LS out Rel-15 NR\_newRAT-Core

moved from 10.1 to 10.2.19

[R2-1710158](file:///C:\Data\3GPP\Extracts\R2-1710158%20Reply%20LS%205G%20IWK%20DR.docx) Reply to LS on simultaneous transmission and/or reception over EPC/E-UTRAN and 5GC/NR Lenovo, Motorola Mobility LS out Rel-15 NR\_newRAT-Core

moved from 10.1 to 10.2.19

=> Revised to [R2-1711828](file:///C:\Data\3GPP\Extracts\R2-1711828%20Draft%20Reply%20LS%205G%20IWK%20DR.docx)

[R2-1711828](file:///C:\Data\3GPP\Extracts\R2-1711828%20Draft%20Reply%20LS%205G%20IWK%20DR.docx) [DRAFT] Reply to LS on simultaneous transmission and/or reception over EPC/E-UTRAN and 5GC/NR Lenovo, Motorola Mobility LS out Rel-15 NR\_newRAT-Core

[R2-1711776](file:///C:\Data\3GPP\Extracts\R2-1711776_Reply%20LS%20on%20dual%20registration_r1.doc) [Draft] Reply LS on simultaneous transmission and/or reception over EPC/E-UTRAN and 5GC/NR Samsung Electronics GmbH LS out

moved from 10.1 to 10.2.19

Other

[R2-1710345](file:///C:\Data\3GPP\Extracts\R2-1710345%20Support%20of%20Rel-14%20voice%20enhancements%20in%20SA%20NR.doc) Details on support of Rel-14 voice enhancements in SA NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709610](file:///C:\Data\3GPP\Extracts\R2-1709610%20Support%20LTE%20Rel-14%20eVoLTE%20for%20SA%20NR%20v1.doc)

[R2-1710474](file:///C:\Data\3GPP\Extracts\R2-1710474.docx) Support for IMS Emergency calls in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710810](file:///C:\Data\3GPP\Extracts\R2-1710810%20Mobility%20history%20reporting%20in%20NR.doc) Mobility history reporting in NR LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708905](file:///C:\Data\3GPP\Extracts\R2-1708905%20Speed%20dependent%20scaling%20of%20measurement%20related%20parameters%20in%20NR.doc)

[R2-1711070](file:///C:\Data\3GPP\Extracts\R2-1711070%20Discussion%20on%20the%20support%20of%20SCG%20SRB%20for%20Intra-NR%20Dc.doc) Discussion on the support of SCG SRB for intra-NR DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711088](file:///C:\Data\3GPP\Extracts\R2-1711088%20Bearer%20handling%20in%20NR-E-UTRA%20Dual%20Connectivity.doc) Bearer handling in NR-E-UTRA Dual Connectivity Samsung R&D Institute India discussion Rel-15 [R2-1708439](file:///C:\Data\3GPP\Extracts\R2-1708439%20Bearer%20handling%20in%20NR-E-UTRA%20Dual%20Connectivity.doc)

[R2-1711140](file:///C:\Data\3GPP\Extracts\R2-1711140%20-%20Discussion%20on%20SCG%20SRB%20for%20NR-NR%20DC.docx) Discussion on SCG SRB for NR-NR DC Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711156](file:///C:\Data\3GPP\Extracts\R2-1711156_Support%20for%20IMS%20Emergency%20services%20in%20NR.docx) Support for IMS Emergency services in NR LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1709305](file:///C:\Data\3GPP\Extracts\R2-1709305.docx)

[R2-1711193](file:///C:\Data\3GPP\Extracts\R2-1711193%20Numerology%20configuration%20in%20NR.docx) Numerology configuration in NR Samsung discussion Rel-15

[R2-1711244](file:///C:\Data\3GPP\Extracts\R2-1711244%20-%20PDCP%20duplication%20for%20AM%20operation%20(Stage%202).docx) PDCP duplication for AM operation Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711383](file:///C:\Data\3GPP\Extracts\R2-1711383%20AS%20context%20in%20RRC_IDLE.doc) AS context in RRC\_IDLE LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708454](file:///C:\Data\3GPP\Extracts\R2-1708454%20AS%20context%20in%20RRC_IDLE.doc)

[R2-1711415](file:///C:\Data\3GPP\Extracts\R2-1711415.doc) RLF Procedure for NR-NR Dual connectivity Samsung R&D Institute UK discussion

[R2-1711549](file:///C:\Data\3GPP\Extracts\R2-1711549%20-%20CP%20latency%20in%20NR.docx) CP latency in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711550](file:///C:\Data\3GPP\Extracts\R2-1711550%20-%20UP%20latency%20in%20NR.docx) UP latency in NR Ericsson discussion Rel-15 To:RAN3, SA2, SA3, CT1

[R2-1711565](file:///C:\Data\3GPP\Extracts\R2-1711565.doc) UE Voice Capability Qualcomm Incorporated discussion Rel-15 NR\_newRAT

[R2-1711665](file:///C:\Data\3GPP\Extracts\R2-1711665%20Suspension%20to%20INACTIVE%20in%20NR%20DC.docx) Suspension to INACTIVE in NR Dual connectivity Samsung Electronics discussion Rel-15 NR\_newRAT-Core

[R2-1711718](file:///C:\Data\3GPP\Extracts\R2-1711718%20%20CSI-RS%20IDs%20for%20NR%20beam%20and%20RRM%20measurement.doc) CSI-RS IDs for NR beam and RRM measurement Samsung Electronics discussion

[R2-1711734](file:///C:\Data\3GPP\Extracts\R2-1711734_nr_id_v23.doc) Further considerations on radio network identities for NR Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1711793](file:///C:\Data\3GPP\Extracts\R2-1711793_CP%20latency%20enhancement.doc) RAN2 consideration on control plane latency enhancement Samsung Electronics GmbH discussion [R2-1709170](file:///C:\Data\3GPP\Extracts\R2-1709170_CP%20latency%20enhancement.doc)

[R2-1711802](file:///C:\Data\3GPP\Extracts\R2-1711802%20Further%20discussion%20on%20CA%20baseline%20in%20NR%20_remaining.doc) Further discussion on Carrier Aggregation baseline in NR Samsung Electronics discussion Rel-15 NR\_newRAT-Core [R2-1709575](file:///C:\Data\3GPP\Extracts\R2-1709575%20Further%20discussion%20on%20CA%20baseline%20in%20NR.doc)

[R2-1711803](file:///C:\Data\3GPP\Extracts\R2-1711803%20RAN2%20aspect%20on%20fast%20carrier%20switch.docx) RAN2 aspect on fast carrier switch Samsung Electronics discussion Rel-15 NR\_newRAT-Core [R2-1709576](file:///C:\Data\3GPP\Extracts\R2-1709576%20RAN2%20aspect%20on%20fast%20carrier%20switch.docx)

[R2-1711804](file:///C:\Data\3GPP\Extracts\R2-1711804%20Needs%20of%20Fast%20carrier%20swtich%20in%20NR.docx) Needs of Fast Carrier Switch in NR Samsung Electronics discussion Rel-15 NR\_newRAT-Core [R2-1709577](file:///C:\Data\3GPP\Extracts\R2-1709577%20Needs%20of%20Fast%20carrier%20swtich%20in%20NR.docx)

[R2-1711805](file:///C:\Data\3GPP\Extracts\R2-1711805%20Reference%20waveform%20for%20uplink%20transmission.doc) Reference waveform for uplink transmission Samsung Electronics discussion Rel-15 NR\_newRAT-Core [R2-1709579](file:///C:\Data\3GPP\Extracts\R2-1709579%20Reference%20waveform%20for%20uplink%20transmission.doc)

## 10.3 Stage 3 user plane

Documents in this agenda item will be handled in the NR user plane break out session

### 10.3.1 MAC

#### 10.3.1.1 TS

Latest TS 38.321, rapporteur inputs, etc

Including output from email discussion [99#10][NR UP] – Running draft TS 38.321 – Samsung

Please provide input to the rapporteur for corrections. Single rapporteur TP is encouraged.

#### 10.3.1.2 MAC architecture

*Contributions on MAC modelling of PDCCH monitoring/TTI length.*

*Note: specific issues related to CA (e.g. RAR, SR, DRX, etc.) and duplication should be submitted under the dedicated AI. Modelling of numerology/TTI length should be submitted under LCP*

*Max 1 contribution per company – supporting TPs should be included in the contribution*

[R2-1710127](file:///C:\Data\3GPP\Extracts\R2-1710127%20-%20MAC%20modelling%20of%20PDCCH%20monitoring%20occasion%20and%20TTI.doc) MAC modelling of PDCCH monitoring occasion and TTI OPPO discussion

[R2-1710291](file:///C:\Data\3GPP\Extracts\R2-1710291.docx) Replacing NR-UNIT across MAC specification CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710655](file:///C:\Data\3GPP\Extracts\R2-1710655%20(R15%20NR%20WI%20AI10312%20MAC%20Timing%20Aspects).doc) Timing Aspects in MAC InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710816](file:///C:\Data\3GPP\Extracts\R2-1710816%20MAC%20timing%20modeling.docx) MAC timing modelling Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1710973](file:///C:\Data\3GPP\Extracts\R2-1710973_Time%20unit%20of%20MAC%20Timers.docx) Time unit of MAC timers vivo discussion

[R2-1711169](file:///C:\Data\3GPP\Extracts\R2-1711169%20-%20Modelling%20of%20PDCCH%20Monitoring%20considering%20duplex%20modes.docx) Modelling of PDCCH Monitoring considering duplex modes Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711195](file:///C:\Data\3GPP\Extracts\R2-1711195%20Revisiting%20TTI%20as%20NR-UNIT_r2.docx) Revisiting TTI as NR-UNIT Samsung discussion Rel-15

[R2-1711427](file:///C:\Data\3GPP\Extracts\R2-1711427%20MAC%20modelling%20of%20PDCCH%20monitoring%20and%20TTI%20length.doc) MAC modelling of PDCCH monitoring and TTI length Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711763](file:///C:\Data\3GPP\Extracts\R2-1711763.docx) Timing terminologies in MAC ITRI discussion NR\_newRAT-Core

#### 10.3.1.3 MAC PDU format

Contributions should focus only on critical issues/corrections related to agreed MAC PDU format

*Contributions on RAR PDU format should be submitted under this AI* (*Max 1 contribution per company – supporting TPs should be included in the contribution)*

*Single TP by rapporteur on all MAC CE formats is expected for this AI. Other contributions on MAC CE format should only focus on critical issues that require discussion.*

[R2-1710080](file:///C:\Data\3GPP\Extracts\R2-1710080_Random%20Access%20-%20RAR%20MAC%20Subheader%20Design.doc) Random Access in NR: RAR MAC Subheader Design Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core

[R2-1710112](file:///C:\Data\3GPP\Extracts\R2-1710112%20Details%20on%20RAR%20MAC%20PDU2.doc) Details on RAR MAC PDU Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

R2-1710113 Discussions on MAC PDU construction Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core Withdrawn

[R2-1710292](file:///C:\Data\3GPP\Extracts\R2-1710292.docx) MAC RAR PDU CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710395](file:///C:\Data\3GPP\Extracts\R2-1710395%20Enhancement%20for%20the%20Transparent%20MAC%20PDU.doc) Enhancement for the Transparent MAC PDU CMCC discussion Rel-15 NR\_newRAT-Core

[R2-1710907](file:///C:\Data\3GPP\Extracts\R2-1710907.doc) MAC CE formats for NR Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1710962](file:///C:\Data\3GPP\Extracts\R2-1710962_Remaining%20issue%20for%20RAR.doc) Remaining issue for RAR vivo discussion

[R2-1711166](file:///C:\Data\3GPP\Extracts\R2-1711166%20-%20MAC%20PDU%20discard%20due%20to%20unknown%20MAC%20CEs.docx) MAC PDU discard due to unknown MAC CEs Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711174](file:///C:\Data\3GPP\Extracts\R2-1711174%20-%20RAR%20Design%20and%20Contents.docx) RAR Design and Contents Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711267](file:///C:\Data\3GPP\Extracts\R2-1711267%20Subheader%20formats%20for%20MAC%20RAR%20PDU.docx) Subheader formats for MAC RAR PDU Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1711581](file:///C:\Data\3GPP\Extracts\R2-1711581%20Padding%20for%20NR.doc) Padding for NR Samsung discussion Rel-15 NR\_newRAT-Core [R2-1709584](file:///C:\Data\3GPP\Extracts\R2-1709584%20Padding%20for%20NR.doc)

[R2-1711784](file:///C:\Data\3GPP\Extracts\R2-1711784%20Handling%20of%20unknown%20and%20erroneous%20data.doc) Handling of Unknown, Unforeseen and Erreneous Protocol Data Samsung discussion Rel-15 NR\_newRAT-Core To:SA3

#### 10.3.1.4 Random access

##### 10.3.1.4.1 Differentiation of RA parameters

*A converged solution and TP is highly encouraged provided.*

*As per RAN guidance, a short discussion will take place on the topic and depending on outcome it may be de-prioritized for RAN2#100 and postponed for June completion time frame.*

*Max 1 contribution per company – multi company contributions are encouraged. Supporting TPs should be included in the contribution*

[R2-1710315](file:///C:\Data\3GPP\Extracts\R2-1710315%20Consideration%20on%20the%20RACH%20Parameters.docx) Consideration on the RACH parameters ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710415](file:///C:\Data\3GPP\Extracts\R2-1710415.docx) On Prioritization of Random Access PANASONIC R&D Center Germany discussion To:RAN3

[R2-1710489](file:///C:\Data\3GPP\Extracts\R2-1710489%20Differentiation%20of%20RA%20parameters.doc) Differentiation of RA parameters Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core

[R2-1710657](file:///C:\Data\3GPP\Extracts\R2-1710657%20(R15%20NR%20WI%20AI103143%20RACH%20Handover).doc) RACH Configuration in Handover InterDigital discussion Rel-15 NR\_newRAT-Core [R2-1708730](file:///C:\Data\3GPP\Extracts\R2-1708730%20(R15%20NR%20WI%20AI103143%20RACH%20Handover).doc)

[R2-1710961](file:///C:\Data\3GPP\Extracts\R2-1710961%20Group%20the%20different%20RACH%20events.doc) Group the different RACH events vivo discussion

[R2-1711040](file:///C:\Data\3GPP\Extracts\R2-1711040%20Categorized%20Events%20for%20Differentiation%20of%20backoff%20and%20power%20ramping%20parameter.doc) Categorized Events for Differentiation of backoff and power ramping parameter Beijing Xiaomi Mobile Software discussion Rel-15 To:SA2 Cc:RAN1, RAN4

[R2-1711152](file:///C:\Data\3GPP\Extracts\R2-1711152%20Discussions%20of%20configuration%20of%20parameter%20differentiation%20for%20RACH.doc) Discussions on configuration of parameter differentiation for RACH CMCC discussion Rel-15 NR\_newRAT-Core

[R2-1711428](file:///C:\Data\3GPP\Extracts\R2-1711428%20Further%20discussion%20on%20differentiation%20for%20SR-triggered%20Random%20Access.doc) Further discussion on differentiation for SR-triggered Random Access Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711634](file:///C:\Data\3GPP\Extracts\R2-1711634.doc) Differentiation of Backoff parameter and/or power ramping Samsung discussion NR\_newRAT-Core

[R2-1711695](file:///C:\Data\3GPP\Extracts\R2-1711695%20Details%20of%20prioritized%20random%20access_v3_with%20TP.doc) Details of prioritized random access AsusTek, CATT, Convida, Ericsson, Huawei, Intel, Interdigital, ITRI, OPPO, Qualcomm, Vivo discussion Rel-15 NR\_newRAT-Core

##### 10.3.1.4.2 Random access in presence of multi-beam operation

*Issues related to multi-beam operation. Focus should be on RAN2 specific aspects*

*Max 1 contribution per company – supporting TPs should be included in the contribution*

[R2-1710078](file:///C:\Data\3GPP\Extracts\R2-1710078_Beamformed%20RA%20-%20Additional%20Power%20Ramping%20Aspects.doc) Beamformed RA: Additional Power Ramping Aspects Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core

[R2-1710079](file:///C:\Data\3GPP\Extracts\R2-1710079_Draft%20LS%20on%20RA%20preamble%20power%20ramping%20counter%20update.doc) Draft LS on RA preamble power ramping counter update Samsung R&D Institute India LS out Rel-15 NR\_newRAT-Core

[R2-1710614](file:///C:\Data\3GPP\Extracts\R2-1710614%20Random%20Access%20Multi%20Beam%20Aspects.docx) Random Access multi-beam aspects Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710656](file:///C:\Data\3GPP\Extracts\R2-1710656%20(R15%20NR%20WI%20AI103142%20RACH%20resource%20configurations%20Beamforming).doc) PRACH Resource Configurations for Beamforming InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710771](file:///C:\Data\3GPP\Extracts\R2-1710771%20Random%20access%20with%20beam%20operation.doc) Random access with beam operation Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710865](file:///C:\Data\3GPP\Extracts\R2-1710865.doc) Discussion on random access with multi-beam operations HTC Corporation discussion NR\_newRAT-Core [R2-1709422](file:///C:\Data\3GPP\Extracts\R2-1709422.doc)

[R2-1711025](file:///C:\Data\3GPP\Extracts\R2-1711025%20-%20RACH.doc) Remaining Issues on RACH Procedure Sony discussion Rel-15 NR\_newRAT-Core

[R2-1711050](file:///C:\Data\3GPP\Extracts\R2-1711050%20Multiple%20preamble%20transmission%20for%20contention%20free%20RACH.doc) Multiple preamble transmission for contention free RACH Beijing Xiaomi Mobile Software discussion Rel-15

[R2-1711086](file:///C:\Data\3GPP\Extracts\R2-1711086.doc) Discussion on multiple Msg1 transmissions for contention free RACH ASUSTEK COMPUTER (SHANGHAI) discussion Rel-15 NR\_newRAT-Core

[R2-1711176](file:///C:\Data\3GPP\Extracts\R2-1711176%20-%20Preamble%20modelling%20and%20configuration%20with%20multiple%20SSBs.docx) Preamble modeling and configuration with multiple SSBs Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711608](file:///C:\Data\3GPP\Extracts\R2-1711608%20RA%20procedure%20for%20multi-beam%20operation.docx) Random Access procedure for multi-beam operation LG Electronics Inc. discussion

##### 10.3.1.4.3 Random access procedures

*Contributions on further details of random access procedures, preamble selection, power ramping for msg1 transmission (with no beam forming) RA-RNTI calculation and 4 contention resolution.*

*Stage 3 details of On-demand SI request. Details for msg3 based-SI request depend on CP discussions and may not be progressed given the prioritization of SI design in CP.*

[R2-1710081](file:///C:\Data\3GPP\Extracts\R2-1710081_Random%20Access%20in%20NR%20-%20Contention%20Resolution.doc) Random Access in NR: Contention Resolution Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core

[R2-1710102](file:///C:\Data\3GPP\Extracts\R2-1710102_Msg1%20based%20SI%20Request_DL%20TX%20Beam%20Identification.doc) Msg1 based SI Request: DL TX Beam Identification Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core [R2-1707681](file:///C:\Data\3GPP\Extracts\R2-1707681_Beamformed%20Random%20Access%20-%20RA%20Resources%20for%20SI%20Request.doc)

[R2-1710103](file:///C:\Data\3GPP\Extracts\R2-1710103_Msg1%20based%20SI%20Request_PRACH%20Preamble%20Selection.doc) Msg1 based SI Request: PRACH Preamble Selection Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core

[R2-1710294](file:///C:\Data\3GPP\Extracts\R2-1710294.docx) The impact of On Demand SI on RA procedure CATT discussion Rel-15 NR\_newRAT-Core [R2-1707928](file:///C:\Data\3GPP\Extracts\R2-1707928.docx)

[R2-1710357](file:///C:\Data\3GPP\Extracts\R2-1710357%20RA-RNTI%20calculation.doc) RA-RNTI calculation Fujitsu discussion Rel-15 NR\_newRAT-Core

[R2-1710613](file:///C:\Data\3GPP\Extracts\R2-1710613%20Random%20Access%20Procedural%20Aspects.docx) Random access procedural aspects Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710717](file:///C:\Data\3GPP\Extracts\R2-1710717%20Discussion%20on%20non-contention%20based%20random%20access.doc) Discussion on non-contention based random access Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709259](file:///C:\Data\3GPP\Extracts\R2-1709259%20Discussion%20on%20non-contention%20based%20random%20access.doc)

[R2-1710772](file:///C:\Data\3GPP\Extracts\R2-1710772%20Contention%20resolution%20for%20random%20access.doc) Contention resolution for random access Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710773](file:///C:\Data\3GPP\Extracts\R2-1710773%20Selection%20of%20random%20access%20preamble%20in%20NR.doc) Selection of random access preamble in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710775](file:///C:\Data\3GPP\Extracts\R2-1710775%20Calculation%20of%20RA-RNTI.doc) Calculation of RA-RNTI Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710776](file:///C:\Data\3GPP\Extracts\R2-1710776%20Discussion%20on%20the%20procedure%20of%20MSG1-based%20SI%20request.doc) Discussion on the procedure of MSG1-based SI request Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

R2-1710784 Power ramping for Msg1 transmission with no beam forming Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core Withdrawn

[R2-1710909](file:///C:\Data\3GPP\Extracts\R2-1710909.doc) Triggering/initiating Random Access Procedure in NR Samsung discussion Rel-15 NR\_newRAT-Core [R2-1709005](file:///C:\Data\3GPP\Extracts\R2-1709005.doc)

R2-1710910 Triggering/initiating Random Access Procedure in NR Samsung discussion Rel-15 NR\_newRAT-Core [R2-1709005](file:///C:\Data\3GPP\Extracts\R2-1709005.doc) Withdrawn

[R2-1710964](file:///C:\Data\3GPP\Extracts\R2-1710964%20Stop%20SI%20request%20due%20to%20RRC%20connecition%20setup%20RACH.docx) Stop SI request due to RRC connecition setup RACH vivo discussion [R2-1708494](file:///C:\Data\3GPP\Extracts\R2-1708494%20Stop%20SI%20request%20due%20to%20RRC%20connecition%20setup%20RACH.docx)

[R2-1711028](file:///C:\Data\3GPP\Extracts\R2-1711028.doc) MAC PDU format for Random Access Response Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core

[R2-1711173](file:///C:\Data\3GPP\Extracts\R2-1711173%20-%20Remaining%20issues%20of%20Message%203%20Size%20Indication.docx) Remaining Issues of Message 3 Size Indication Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711175](file:///C:\Data\3GPP\Extracts\R2-1711175%20-%20RA-RNTI%20for%20NR.docx) RA-RNTI for NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711306](file:///C:\Data\3GPP\Extracts\R2-1711306%20MSG4%20content%20for%20on-demand%20SI%20request%20for%20SI%20broadcast.docx) MSG4 content for on-demand SI request for SI broadcast MediaTek Inc. discussion [R2-1708046](file:///C:\Data\3GPP\Extracts\R2-1708046%20MSG4%20content%20for%20on-demand%20SI%20request%20for%20SI%20broadcast.docx)

[R2-1711443](file:///C:\Data\3GPP\Extracts\R2-1711443%20-%20Text%20proposal%20for%20Random%20access.docx) Text proposal for Random access Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711609](file:///C:\Data\3GPP\Extracts\R2-1711609%20considerations%20for%20RA-RNTI%20calculation.docx) Considerations for RA-RNTI calculation LG Electronics Inc. discussion NR\_newRAT-Core

[R2-1711642](file:///C:\Data\3GPP\Extracts\R2-1711642.doc) Grouping SI request responses in random access procedure III discussion Rel-15

[R2-1711707](file:///C:\Data\3GPP\Extracts\R2-1711707%20Enhancement%20for%20mitigating%20contention%20in%20random%20access.doc) Enhancement for mitigating contention in random access Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709120](file:///C:\Data\3GPP\Extracts\R2-1709120%20Enhancement%20for%20mitigating%20contention%20in%20random%20access.doc)

[R2-1711731](file:///C:\Data\3GPP\Extracts\R2-1711731%20RA%20for%20Msg1%20based%20SI%20request.docx) RA for Msg1 based SI request LG Electronics UK discussion NR\_newRAT-Core

##### 10.3.1.4.4 Other aspects related to RA

[R2-1710105](file:///C:\Data\3GPP\Extracts\R2-1710105_Multiple%20Message%201%20Transmissions.doc) Multiple Message 1 Transmissions Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core

[R2-1710107](file:///C:\Data\3GPP\Extracts\R2-1710107_RA%20Procedure%20for%20RRC%20Inactive%20State.doc) Random Access Procedure for RRC INACTIVE State Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core [R2-1707685](file:///C:\Data\3GPP\Extracts\R2-1707685_RA%20Procedure%20for%20RRC%20Inactive%20State.doc)

[R2-1710774](file:///C:\Data\3GPP\Extracts\R2-1710774%20RAR%20monitoring%20occasion%20in%20RAR%20window.doc) RAR monitoring occasion in RAR window Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

#### 10.3.1.5 SR

*SR configuration, mapping and transmission for CA case*

*Handling of timers and SR\_counters*

*SR cancelation and failure handling*

[R2-1710108](file:///C:\Data\3GPP\Extracts\R2-1710108%20Remaining%20issues%20on%20SR%20configuration.doc) Remaining issues on multiple SR configurations Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710109](file:///C:\Data\3GPP\Extracts\R2-1710109%20SR%20procedure%20in%20NR.doc) SR procedure in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710110](file:///C:\Data\3GPP\Extracts\R2-1710110%20SR%20Failure%20Handling.doc) SR failure handling in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710111](file:///C:\Data\3GPP\Extracts\R2-1710111%20SR%20configuration%20and%20transmission%20for%20CA%20case%20in%20NR.doc) SR configuration and transmission for CA case in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710128](file:///C:\Data\3GPP\Extracts\R2-1710128%20-%20Details%20of%20SR%20procedure.doc) Details of SR procedure OPPO discussion [R2-1707736](file:///C:\Data\3GPP\Extracts\R2-1707736%20-%20Details%20of%20SR%20procedure.doc)

[R2-1710129](file:///C:\Data\3GPP\Extracts\R2-1710129%20-%20SR%20configuration%20in%20CA%20case.doc) SR configuration in CA case OPPO discussion

[R2-1710130](file:///C:\Data\3GPP\Extracts\R2-1710130%20-%20SR%20configuration%20for%20BWP.doc) Impact of bandwidth part on SR configuration OPPO discussion

[R2-1710295](file:///C:\Data\3GPP\Extracts\R2-1710295.docx) Further details on the SR procedure CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710296](file:///C:\Data\3GPP\Extracts\R2-1710296.docx) SR configuration, mapping and transmission for CA case CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710319](file:///C:\Data\3GPP\Extracts\R2-1710319%20Consideration%20on%20the%20SR%20in%20NR.docx) Consideration on the SR in NR ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710336](file:///C:\Data\3GPP\Extracts\R2-1710336%20Text%20Proposal%20for%20TS%2038.321%20covering%20SR%20operation%20in%20NR.doc) Text Proposal for TS 38.321 covering SR operation in NR Samsung R&D Institute UK discussion

[R2-1710337](file:///C:\Data\3GPP\Extracts\R2-1710337%20Handling%20absence%20of%20SR%20resource%20in%20NR.doc) Handling absence of SR resource in NR Samsung R&D Institute UK discussion

[R2-1710339](file:///C:\Data\3GPP\Extracts\R2-1710339%20Behaviour%20in%20case%20of%20multiple%20SR%20triggers%20and%20collision%20resolution.doc) Behaviour in case of multiple SR triggers and collision resolution Samsung R&D Institute UK discussion

[R2-1710341](file:///C:\Data\3GPP\Extracts\R2-1710341%20On%20LCH-to-SR-configuration%20mapping%20within%20the%20multi-BWP%20framework.doc) On LCH-to-SR-configuration mapping within the multi-BWP framework Samsung R&D Institute UK discussion

[R2-1710358](file:///C:\Data\3GPP\Extracts\R2-1710358%20SR%20procedure%20with%20multiple%20SR%20configurations.doc) SR procedure with multiple SR configurations Fujitsu discussion Rel-15 NR\_newRAT-Core

[R2-1710605](file:///C:\Data\3GPP\Extracts\R2-1710605%20SR.docx) Handling multiple SR configurations Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710658](file:///C:\Data\3GPP\Extracts\R2-1710658%20(R15%20NR%20WI%20AI10315%20SR%20Configurations).doc) Multiple SR Configurations in NR InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710817](file:///C:\Data\3GPP\Extracts\R2-1710817%20SR%20procedure%20for%20NR.docx) SR procedure for NR Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1710824](file:///C:\Data\3GPP\Extracts\R2-1710824%20Discussion%20on%20SR_Counter.doc) Discussion on SR\_Counter Potevio discussion

[R2-1710868](file:///C:\Data\3GPP\Extracts\R2-1710868.doc) Discussion on details of SR procedures HTC Corporation discussion NR\_newRAT-Core [R2-1709419](file:///C:\Data\3GPP\Extracts\R2-1709419.doc)

[R2-1710971](file:///C:\Data\3GPP\Extracts\R2-1710971_Discussion%20on%20the%20SR%20configurations%20for%20CA%20case.docx) Discussion on the SR configurations for CA case vivo discussion

[R2-1710974](file:///C:\Data\3GPP\Extracts\R2-1710974_Discussion%20on%20the%20SR%20cancellation%20and%20failure%20handling.docx) Discussion on the SR cancellation and failure handling vivo discussion

[R2-1711087](file:///C:\Data\3GPP\Extracts\R2-1711087.doc) Consideration on multiple SR configurations ASUSTEK COMPUTER (SHANGHAI) discussion Rel-15 NR\_newRAT-Core [R2-1709328](file:///C:\Data\3GPP\Extracts\R2-1709328%20Consideration%20on%20multiple%20SR%20configurations%20v1.0.doc)

[R2-1711178](file:///C:\Data\3GPP\Extracts\R2-1711178%20-%20Remaining%20issues%20for%20Scheduling%20Request.docx) Remaining issues for Scheduling Request Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711179](file:///C:\Data\3GPP\Extracts\R2-1711179%20-%20SR%20failure%20handling%20for%20multiple%20pending%20SRs.docx) SR failure handling for multiple pending SRs Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711296](file:///C:\Data\3GPP\Extracts\R2-1711296%20Scheduling%20Request%20Enhancement%20for%20Latency%20Reduction.doc) Scheduling Request Enhancement for Latency Reduction Spreadtrum Communications discussion

[R2-1711303](file:///C:\Data\3GPP\Extracts\R2-1711303%20SR%20design%20supporting%20multiple%20configurations.doc) SR design supporting multiple configurations MediaTek Inc. discussion

[R2-1711696](file:///C:\Data\3GPP\Extracts\R2-1711696%20SR%20procedures%20with%20multiple%20SR%20configurations.doc) SR procedures with multiple SR configurations Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711729](file:///C:\Data\3GPP\Extracts\R2-1711729%20Multiple%20SR.docx) Multiple SR in NR LG Electronics UK discussion NR\_newRAT-Core [R2-1709151](file:///C:\Data\3GPP\Extracts\R2-1709151%20Support%20of%20selective%20SR.docx)

[R2-1711764](file:///C:\Data\3GPP\Extracts\R2-1711764.docx) Discussion on SR configuration mapping ITRI discussion NR\_newRAT-Core

[R2-1711765](file:///C:\Data\3GPP\Extracts\R2-1711765_Discussion%20on%20SR%20procedure.doc) Discussion on SR procedure ITRI discussion NR\_newRAT-Core

#### 10.3.1.6 BSR

BS size, table calculations, and format (max 1 contribution per company for this topic)

BSR cancelation

[R2-1710202](file:///C:\Data\3GPP\Extracts\R2-1710202%20BSR%20format%20and%20BS%20table%20design.doc) Design of BSR format and BS table Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710203](file:///C:\Data\3GPP\Extracts\R2-1710203%20BSR%20procedure.doc) BSR procedure Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710204](file:///C:\Data\3GPP\Extracts\R2-1710204%20BSR%20impact%20on%20SR%20trigger.doc) BSR impacts on SR trigger Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710205](file:///C:\Data\3GPP\Extracts\R2-1710205%20BSR%20enhancement%20for%20SDAP.doc) BSR enhancement for SDAP Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1707725](file:///C:\Data\3GPP\Extracts\R2-1707725%20BSR%20enhancement%20for%20SDAP.doc)

[R2-1710241](file:///C:\Data\3GPP\Extracts\R2-1710241.doc) BSR enhancements with multiple numerologies SHARP Corporation discussion

R2-1710256 BSR Formats Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT To:RAN2 Cc:RAN3 Withdrawn

[R2-1710297](file:///C:\Data\3GPP\Extracts\R2-1710297.docx) Discussion on BSR cancellation CATT discussion Rel-15 NR\_newRAT-Core [R2-1707919](file:///C:\Data\3GPP\Extracts\R2-1707919.docx)

[R2-1710298](file:///C:\Data\3GPP\Extracts\R2-1710298.docx) BSR MAC CE CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710320](file:///C:\Data\3GPP\Extracts\R2-1710320%20Consideration%20on%20BSR%20for%20URLLC%20in%20NR.docx) Consideration on BSR for URLLC in NR ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710334](file:///C:\Data\3GPP\Extracts\R2-1710334%20Text%20Proposal%20for%20TS%2038.321%20covering%20BSR%20triggering%20operation%20in%20NR.doc) Text Proposal for TS 38.321 covering BSR triggering operation in NR Samsung R&D Institute UK discussion

[R2-1710352](file:///C:\Data\3GPP\Extracts\R2-1710352-%20Discussion%20on%20the%20BSR%20format.doc) Discussion on BSR format OPPO discussion

[R2-1710356](file:///C:\Data\3GPP\Extracts\R2-1710356%20MAC%20TP%20for%20BSR.doc) MAC TP for BSR Fujitsu discussion Rel-15 NR\_newRAT-Core

[R2-1710606](file:///C:\Data\3GPP\Extracts\R2-1710606%20BSR.docx) BSR enhancement Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710695](file:///C:\Data\3GPP\Extracts\R2-1710695%20BSR%20design%20to%20support%20pre-processing.docx) BSR design to support pre-processing MediaTek Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708270](file:///C:\Data\3GPP\Extracts\R2-1708270%20BSR%20design%20to%20support%20pre-processing.docx)

[R2-1710783](file:///C:\Data\3GPP\Extracts\R2-1710783%20Consideration%20for%20BSR%20in%20EN-DC.doc) Considerations on BSR in EN-DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710900](file:///C:\Data\3GPP\Extracts\R2-1710900.doc) Discussion on NR BSR formats KT Corp. discussion

[R2-1710918](file:///C:\Data\3GPP\Extracts\R2-1710918.doc) Short BSR format Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1710963](file:///C:\Data\3GPP\Extracts\R2-1710963%20BSR%20format%20in%20NR.docx) BSR format in NR vivo discussion [R2-1708491](file:///C:\Data\3GPP\Extracts\R2-1708491%20BSR%20format%20in%20NR.docx)

[R2-1711119](file:///C:\Data\3GPP\Extracts\R2-1711119.doc) Details of BSR formats ETRI discussion

[R2-1711180](file:///C:\Data\3GPP\Extracts\R2-1711180%20-%20Further%20aspects%20on%20BSR%20transmission%20and%20cancellation.docx) Further aspects on BSR transmission and cancellation Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711181](file:///C:\Data\3GPP\Extracts\R2-1711181%20-%20Aspects%20of%20BSR%20format%20and%20tables.docx) Aspects of BSR format and tables Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711185](file:///C:\Data\3GPP\Extracts\R2-1711185%20-%20BSR%20Text%20proposal.docx) BSR Text proposal Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711304](file:///C:\Data\3GPP\Extracts\R2-1711304%20NR%20BSR%20format%20design.doc) NR BSR format design MediaTek Inc. discussion

[R2-1711580](file:///C:\Data\3GPP\Extracts\R2-1711580%20Long%20BSR%20format.doc) Long BSR format Samsung discussion Rel-15 NR\_newRAT-Core [R2-1709585](file:///C:\Data\3GPP\Extracts\R2-1709585%20Discussion%20on%20BSR%20format.doc)

[R2-1711697](file:///C:\Data\3GPP\Extracts\R2-1711697%20A%20unified%20format%20for%20BSRs.doc) A unified format for BSRs Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711708](file:///C:\Data\3GPP\Extracts\R2-1711708%20On%20BSR%20cancellation%20conditions.doc) On BSR cancellation conditions Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709123](file:///C:\Data\3GPP\Extracts\R2-1709123%20BSR%20cancellation%20conditions.doc)

[R2-1711723](file:///C:\Data\3GPP\Extracts\R2-1711723%20Flexible%20BSR.docx) Flexible BSR LG Electronics UK discussion NR\_newRAT-Core [R2-1709149](file:///C:\Data\3GPP\Extracts\R2-1709149%20BSR%20format%20with%20increased%20LCG.docx)

#### 10.3.1.7 LCP

How to define and configure “time” in LCP restriction procedure Stage 3 details of capturing LCP restrictions and parameters. Single, converged stage 3 TP is encouraged

[R2-1710131](file:///C:\Data\3GPP\Extracts\R2-1710131%20-%20LCP%20restrictions%20and%20modelling%20.docx) LCP restrictions and modelling OPPO discussion

[R2-1710299](file:///C:\Data\3GPP\Extracts\R2-1710299.docx) Further consideration on the transmission profile parameters CATT discussion Rel-15 NR\_newRAT-Core [R2-1707916](file:///C:\Data\3GPP\Extracts\R2-1707916.docx)

[R2-1710300](file:///C:\Data\3GPP\Extracts\R2-1710300.docx) Minimum Size of MAC PDU including Data CATT discussion Rel-15 NR\_newRAT-Core [R2-1707917](file:///C:\Data\3GPP\Extracts\R2-1707917.docx)

[R2-1710316](file:///C:\Data\3GPP\Extracts\R2-1710316%20Consideration%20on%20the%20transmission%20profile.doc) Consideration on the transmission profile ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710317](file:///C:\Data\3GPP\Extracts\R2-1710317%20Consideration%20on%20the%20LCP%20restriction.docx) Consideration on the LCP restriction ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710369](file:///C:\Data\3GPP\Extracts\R2-1710369%20Further%20consideration%20on%20parameters%20for%20LCP%20restriction.doc) Further consideration on parameters for LCP restriction Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710370](file:///C:\Data\3GPP\Extracts\R2-1710370%20LCP%20with%20grant-free%20transmission.doc) LCP with grant-free transmission Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710371](file:///C:\Data\3GPP\Extracts\R2-1710371%20Detailed%20modelling%20on%20LCP%20in%20NR.doc) Detailed modelling on LCP in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710372](file:///C:\Data\3GPP\Extracts\R2-1710372%20LCP%20priority%20and%20procedure%20in%20NR.doc) LCP priority and procedure in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708910](file:///C:\Data\3GPP\Extracts\R2-1708910%20LCP%20priority%20and%20procedure%20in%20NR.doc)

[R2-1710633](file:///C:\Data\3GPP\Extracts\R2-1710633.doc) Minimum UL grant and segmentation skipping in NR Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710634](file:///C:\Data\3GPP\Extracts\R2-1710634.doc) LCP restrictions and modelling Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710659](file:///C:\Data\3GPP\Extracts\R2-1710659%20(R15%20NR%20WI%20AI%2010317%20LCP%20LCH%20Multiple%20Mappings).docx) LCP for LCHs with Multiple RRC Configured Mappings InterDigital discussion Rel-15 NR\_newRAT-Core [R2-1708729](file:///C:\Data\3GPP\Extracts\R2-1708729%20(R15%20NR%20WI%20AI%2010317%20LCP%20LCH%20Multiple%20Mappings).docx)

[R2-1710660](file:///C:\Data\3GPP\Extracts\R2-1710660%20(R15%20NR%20WI%20AI10317%20LCH%20selection%20in%20LCP).doc) Logical Channel Selection in LCP InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710768](file:///C:\Data\3GPP\Extracts\R2-1710768.doc) URLLC traffic considering multiple UL grants and LCP restriction parameters III discussion Rel-15

[R2-1710818](file:///C:\Data\3GPP\Extracts\R2-1710818%20Further%20details%20on%20LCP.docx) Further details on LCP Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1710819](file:///C:\Data\3GPP\Extracts\R2-1710819%20UL%20skipping%20with%20LCH%20restriction.docx) UL skipping with LCH restriction Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1710854](file:///C:\Data\3GPP\Extracts\R2-1710854.doc) URLLC traffic considering multiple UL grants and LCP restriction parameters III discussion Rel-15 [R2-1710768](file:///C:\Data\3GPP\Extracts\R2-1710768.doc)

[R2-1711009](file:///C:\Data\3GPP\Extracts\R2-1711009%20Modelling%20options%20for%20LCP.doc) Modelling options for LCP Samsung R&D Institute UK discussion

[R2-1711012](file:///C:\Data\3GPP\Extracts\R2-1711012%20LCP%20handling%20multiple%20numerologies%20in%20NR%20using%20the%203-step%20procedure%20of%20LTE%20without%20modifications.doc) LCP: handling multiple numerologies in NR using the 3-step procedure of LTE without modifications Samsung R&D Institute UK discussion

[R2-1711029](file:///C:\Data\3GPP\Extracts\R2-1711029.doc) LCP procedure for NR Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core

[R2-1711033](file:///C:\Data\3GPP\Extracts\R2-1711033.doc) Mapping of MAC CE during LCP Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core

[R2-1711170](file:///C:\Data\3GPP\Extracts\R2-1711170%20-%20Remaining%20issues%20on%20LCP.docx) Remaining issues on LCP Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711171](file:///C:\Data\3GPP\Extracts\R2-1711171%20-%20Avoiding%20unnecessary%20padding%20for%20small%20grants.docx) Avoiding unnecessary padding for small grants Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711305](file:///C:\Data\3GPP\Extracts\R2-1711305%20NR%20LCP%20Modelling.doc) NR LCP Modelling MediaTek Inc. discussion

[R2-1711423](file:///C:\Data\3GPP\Extracts\R2-1711423%20LCP%20for%20grant-free%20transmissions.docx) LCP for grant-free transmissions MediaTek Inc., Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1708101](file:///C:\Data\3GPP\Extracts\R2-1708101%20LCP%20for%20grant-free%20transmissions.docx)

[R2-1711596](file:///C:\Data\3GPP\Extracts\R2-1711596%20-%20Discussion%20on%20How%20to%20Define%20í¦Timeí¦%20for%20LCP.docx) Discussion on How to Define “Time” for LCP Samsung Electronics discussion

[R2-1711597](file:///C:\Data\3GPP\Extracts\R2-1711597%20-%20Consideration%20of%20Grant-free%20Transmission%20from%20LCP%20perspective.docx) Consideration of Grant-free Transmission from LCP perspective Samsung Electronics discussion

[R2-1711598](file:///C:\Data\3GPP\Extracts\R2-1711598%20-%20Discussion%20on%20Prioritization%20between%20MAC%20CE%20and%20LCH.docx) Discussion on Prioritization between MAC CE and LCH Samsung Electronics discussion

[R2-1711698](file:///C:\Data\3GPP\Extracts\R2-1711698%20Additional%20parameters%20for%20LCP%20restriction.doc) Additional parameters for LCP restriction Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711709](file:///C:\Data\3GPP\Extracts\R2-1711709%20Ordering%20of%20transport%20blocks.doc) Order of transport blocks Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709124](file:///C:\Data\3GPP\Extracts\R2-1709124%20Ordering%20of%20transport%20blocks.doc)

[R2-1711711](file:///C:\Data\3GPP\Extracts\R2-1711711.doc) Dynamic priority for delay sensitive services Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1708721](file:///C:\Data\3GPP\Extracts\R2-1708721%20Dynamic%20priority%20for%20delay%20sensitive%20services.doc)

[R2-1711726](file:///C:\Data\3GPP\Extracts\R2-1711726%20Step%201%20in%20LCP.docx) Step 1 in LCP LG Electronics UK discussion NR\_newRAT-Core [R2-1709147](file:///C:\Data\3GPP\Extracts\R2-1709147%20Step%201%20in%20LCP.docx)

[R2-1711790](file:///C:\Data\3GPP\Extracts\R2-1711790%20Skipping%20Segmentation.doc) Analysis of Skipping Segmentation Samsung discussion Rel-15 NR\_newRAT-Core [R2-1709034](file:///C:\Data\3GPP\Extracts\R2-1709034%20Skipping%20Segmentation.doc)

#### 10.3.1.8 SPS/Grant-free

HARQ and transmissions aspects (e.g. HARQ identification with and without repetition, how to handle new data transmission on SPS occasions and retransmissions) (Max 1 contribution per company for this topic)

Progress on RAN2 specific aspects related to “type 1” (e.g. when UE starts using resources, naming of the schemes, etc) (Max 1 contribution per company for this topic)

Other RAN2 specific aspects related to SPS/Grant free (e.g. Whether multiple SPS configurations on SCells can be active at the same time, etc) (Max 1 contribution per company for all other related RAN2 aspects)RAN2 should strive for commonality between type 1 and type 2.

[R2-1710132](file:///C:\Data\3GPP\Extracts\R2-1710132%20-%20Support%20SPS%20on%20SCell.doc) Support SPS on Scell OPPO discussion [R2-1707742](file:///C:\Data\3GPP\Extracts\R2-1707742%20-%20Support%20SPS%20on%20SCell.doc)

[R2-1710134](file:///C:\Data\3GPP\Extracts\R2-1710134%20-%20SPS%20operations%20on%20BWP%20switching.doc) SPS operations on BWP switching OPPO discussion

[R2-1710301](file:///C:\Data\3GPP\Extracts\R2-1710301.docx) Grant-free transmission CATT discussion Rel-15 NR\_newRAT-Core [R2-1707930](file:///C:\Data\3GPP\Extracts\R2-1707930.docx)

[R2-1710302](file:///C:\Data\3GPP\Extracts\R2-1710302.docx) Further consideration on multiple SPS CATT discussion Rel-15 NR\_newRAT-Core [R2-1707931](file:///C:\Data\3GPP\Extracts\R2-1707931.docx)

[R2-1710322](file:///C:\Data\3GPP\Extracts\R2-1710322%20consideration%20on%20SPS%20and%20Grant-free.docx) Consideration on SPS and grant-free ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710335](file:///C:\Data\3GPP\Extracts\R2-1710335%20Considerations%20of%20the%20number%20of%20SPS%20configurations%20per%20cell%20group%20and%20TP%20for%20TS%2038.321v1.0.0.doc) Considerations of the number of SPS configurations per cell group and TP for TS 38.321v1.0.0 Samsung R&D Institute UK discussion

[R2-1710662](file:///C:\Data\3GPP\Extracts\R2-1710662%20(R15%20NR%20WI%20AI10318%20SPSgrantfree).doc) SPS and Grant-free operation InterDigital discussion Rel-15 NR\_newRAT-Core [R2-1708732](file:///C:\Data\3GPP\Extracts\R2-1708732%20(R15%20NR%20WI%20AI10318%20SPSgrantfree).doc)

[R2-1710820](file:///C:\Data\3GPP\Extracts\R2-1710820%20Unified%20Type%201%20and%20Type%202%20Grant-free%20operation.docx) Unified Type 1 and Type 2 Grant-free operation Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1710959](file:///C:\Data\3GPP\Extracts\R2-1710959%20HARQ%20process%20and%20timer%20for%20SPS.doc) HARQ process and Timer for SPS vivo discussion [R2-1708487](file:///C:\Data\3GPP\Extracts\R2-1708487%20HARQ%20process%20for%20UL%20grant-free.docx)

[R2-1710960](file:///C:\Data\3GPP\Extracts\R2-1710960.docx) Collision between grant-based and grant-free resources on the same UL carrier vivo discussion [R2-1708488](file:///C:\Data\3GPP\Extracts\R2-1708488.docx)

[R2-1710975](file:///C:\Data\3GPP\Extracts\R2-1710975_Multiple%20SPS%20configurations%20on%20SCells.docx) Multiple SPS configurations on Scells vivo discussion

[R2-1711251](file:///C:\Data\3GPP\Extracts\R2-1711251%20-%20Modelling%20of%20SPS-Grant%20Free%20Scheme%20in%20NR.docx) Modelling of SPS/Grant Free Scheme in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711252](file:///C:\Data\3GPP\Extracts\R2-1711252%20-%20SPS%20for%20SCell.docx) SPS for Scell Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711253](file:///C:\Data\3GPP\Extracts\R2-1711253%20Remaining%20issues%20of%20SPS%20UL.docx) Remaining issues on SPS UL Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711263](file:///C:\Data\3GPP\Extracts\R2-1711263%20DL%20SPS%20Operation%20in%20NR.doc) DL SPS Operation in NR Samsung R&D Institute India discussion

[R2-1711264](file:///C:\Data\3GPP\Extracts\R2-1711264%20Draft%20LS%20to%20RAN1%20on%20DL%20SPS%20Operation.doc) Draft LS to RAN1 on DL SPS Operation Samsung R&D Institute India LS out

[R2-1711272](file:///C:\Data\3GPP\Extracts\R2-1711272%20Supporting%20Framework%20for%20Grant-free%20Type-1%20and%20Type-2.doc) Supporting Framework for Grant-free Type-1 and Type-2 Samsung R&D Institute India discussion

[R2-1711288](file:///C:\Data\3GPP\Extracts\R2-1711288%20Draft%20LS%20to%20RAN1%20on%20SPS%20and%20Grant-free%20Transmission.doc) Draft LS to RAN1 on Supporting Framework for Grant-free Type-1 and Type-2 Samsung R&D Institute India LS out

[R2-1711422](file:///C:\Data\3GPP\Extracts\R2-1711422%20UL%20HARQ%20identification%20for%20SPS.docx) UL HARQ identification for SPS MediaTek Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711429](file:///C:\Data\3GPP\Extracts\R2-1711429%20Further%20discussion%20on%20the%20modelling%20of%20grant-free.doc) Further discussion on the modelling of grant-free Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711430](file:///C:\Data\3GPP\Extracts\R2-1711430%20Configuration%20on%20type%201%20grant-free%20for%20active%20UE.doc) Configuration on type 1 grant-free for active UE Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711431](file:///C:\Data\3GPP\Extracts\R2-1711431%20HARQ%20and%20transmission%20for%20type%201%20grant-free%20for%20active%20UE.doc) HARQ and transmission for type 1 grant-free for active UE Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711571](file:///C:\Data\3GPP\Extracts\R2-1711571%20Using%20multiple%20SPS%20on%20SCells.docx) Using multiple SPS on SCells LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711579](file:///C:\Data\3GPP\Extracts\R2-1711579%20Consideration%20on%20Type%201%20resource%20control%20for%20NR.docx) Consideration on Type 1 resource control for NR LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708856](file:///C:\Data\3GPP\Extracts\R2-1708856%20Consideration%20on%20SPS%20resource%20control%20for%20NR.docx)

[R2-1711699](file:///C:\Data\3GPP\Extracts\R2-1711699%20On%20supporting%20SPS%20on%20SCells.doc) On supporting SPS on SCells Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711710](file:///C:\Data\3GPP\Extracts\R2-1711710%20On%20reliable%20transmission%20of%20URLLC%20data.doc) On reliable transmission of URLLC data Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709125](file:///C:\Data\3GPP\Extracts\R2-1709125%20On%20reliable%20transmission%20of%20URLLC%20data.doc)

#### 10.3.1.9 HARQ

[R2-1711177](file:///C:\Data\3GPP\Extracts\R2-1711177%20-%20HARQ%20Configurations%20in%20NR.docx) HARQ configurations in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711432](file:///C:\Data\3GPP\Extracts\R2-1711432%20Discussion%20on%20HARQ%20configurations%20in%20NR.doc) Discussion on HARQ configuration in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

#### 10.3.1.10 DRX

Finalize HARQ RTT configuration aspects and units used for HARQ RTT and DL/UL retx timers

Other issues related to DRX

[R2-1710206](file:///C:\Data\3GPP\Extracts\R2-1710206%20HARQ%20RTT%20timer.doc) HARQ RTT timer Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1707726](file:///C:\Data\3GPP\Extracts\R2-1707726%20HARQ%20RTT%20timer.doc)

[R2-1710207](file:///C:\Data\3GPP\Extracts\R2-1710207%20Units%20of%20DRX%20timers.doc) Units of DRX timers Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710208](file:///C:\Data\3GPP\Extracts\R2-1710208%20impacts%20of%20BWP%20on%20DRX.doc) Impacts of BWP on DRX Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710209](file:///C:\Data\3GPP\Extracts\R2-1710209%20Details%20in%20DRX%20operation.doc) Details in DRX operation Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710303](file:///C:\Data\3GPP\Extracts\R2-1710303.docx) Discussion on DRX Timers CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710321](file:///C:\Data\3GPP\Extracts\R2-1710321%20consideration%20on%20DRX.docx) Consideration on DRX ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710350](file:///C:\Data\3GPP\Extracts\R2-1710350%20-%20Discussion%20on%20HARQ%20RTT%20timer.doc) Discussion on HARQ RTT Timer OPPO discussion

[R2-1710607](file:///C:\Data\3GPP\Extracts\R2-1710607%20CDRX.docx) C-DRX enhancement in NR Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710661](file:///C:\Data\3GPP\Extracts\R2-1710661%20(R15%20NR%20WI%20AI103110%20DRX%20TP).doc) Remaining details on DRX InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710663](file:///C:\Data\3GPP\Extracts\R2-1710663%20(R15%20NR%20WI%20AI103110%20Timer_BWPCh_TP).doc) Timer-based Change to Default Bandwidth Part InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710755](file:///C:\Data\3GPP\Extracts\R2-1710755_Consideration%20on%20HARQ%20RTT%20Timer.doc) Consideration on HARQ RTT Timer LG Electronics Mobile Research discussion NR\_newRAT-Core

[R2-1710823](file:///C:\Data\3GPP\Extracts\R2-1710823%20Discussion%20on%20DRX%20timers%20related%20issues%20in%20NR.docx) Discussion on DRX timers related issues in NR Potevio discussion

[R2-1710952](file:///C:\Data\3GPP\Extracts\R2-1710952.doc) DRX timer for SPS Samsung discussion Rel-15 NR\_newRAT-Core [R2-1709012](file:///C:\Data\3GPP\Extracts\R2-1709012.doc) To:RAN1

[R2-1710972](file:///C:\Data\3GPP\Extracts\R2-1710972_Discussion%20on%20HARQ%20RTT%20Timer.doc) Discussion on HARQ RTT Timer vivo discussion

[R2-1711083](file:///C:\Data\3GPP\Extracts\R2-1711083.doc) HARQ RTT timer and DRX retransmission timer ASUSTEK COMPUTER (SHANGHAI) discussion Rel-15 NR\_newRAT-Core

[R2-1711084](file:///C:\Data\3GPP\Extracts\R2-1711084.doc) Numerology for PDCCH Monitoring during DRX Active Time ASUSTEK COMPUTER (SHANGHAI) discussion Rel-15 NR\_newRAT-Core [R2-1709326](file:///C:\Data\3GPP\Extracts\R2-1709326%20Numerology%20for%20PDCCH%20Monitoring%20during%20DRX%20Active%20Time_v1.8.doc)

[R2-1711167](file:///C:\Data\3GPP\Extracts\R2-1711167%20-%20C-DRX%20timers.docx) C-DRX timers Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711172](file:///C:\Data\3GPP\Extracts\R2-1711172%20-%20HARQ%20RTT%20timers%20and%20other%20remaining%20issues%20in%20DRX.docx) HARQ RTT timers and other remaining issues in DRX Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711198](file:///C:\Data\3GPP\Extracts\R2-1711198%20Power%20saving%20for%20wideband%20carrier%20in%20NR.docx) Power saving for wideband carrier in NR Samsung discussion Rel-15

[R2-1711199](file:///C:\Data\3GPP\Extracts\R2-1711199%20Timer-based%20BWP%20switching_r1.docx) Timer-based BWP switching Samsung discussion Rel-15

[R2-1711702](file:///C:\Data\3GPP\Extracts\R2-1711702%20Wake%20Up%20Signaling%20for%20C-DRX.docx) Wakeup signaling for C-DRX mode Qualcomm Incorporated, Apple, OPPO discussion Rel-15 NR\_newRAT-Core [R2-1709652](file:///C:\Data\3GPP\Extracts\R2-1709652%20Wake-up%20signaling%20for%20C-DRX%20mode.docx)

[R2-1711703](file:///C:\Data\3GPP\Extracts\R2-1711703%20Wakeup%20signaling%20for%20multi-beam%20systems.doc) Wakeup signaling for multi-beam systems Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709116](file:///C:\Data\3GPP\Extracts\R2-1709116%20Wakeup%20signaling%20for%20multi-beam%20systems.doc)

[R2-1711704](file:///C:\Data\3GPP\Extracts\R2-1711704%20UE%20Power%20Saving%20during%20Active%20State.docx) UE power saving during active state Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709117](file:///C:\Data\3GPP\Extracts\R2-1709117%20UE_Power_Saving_during_Active_State.docx)

[R2-1711714](file:///C:\Data\3GPP\Extracts\R2-1711714%20%20Beamformed%20NR%20C-DRX%20operation.doc) Beamformed NR C-DRX operation Samsung Electronics discussion

#### 10.3.1.11 Impact of PDCP duplication on MAC

*MAC CE for activation/deactivation of PDCU duplication*

*Aspects related to fallback to split bearer and handling of RLC/PDCP entities during activation/deactivation should be submitted in AI 10.3.3.5*

*This AI will not be treated*

[R2-1710304](file:///C:\Data\3GPP\Extracts\R2-1710304.docx) Duplication activation/deactivation MAC CE CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710756](file:///C:\Data\3GPP\Extracts\R2-1710756%20Details%20of%20bitmap%20design.doc) Details of bitmap design Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710757](file:///C:\Data\3GPP\Extracts\R2-1710757%20BSR%20procedure%20for%20data%20duplication.doc) BSR procedure for data duplication Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1707713](file:///C:\Data\3GPP\Extracts\R2-1707713%20BSR%20procedure%20for%20data%20duplication%20.doc)

[R2-1710758](file:///C:\Data\3GPP\Extracts\R2-1710758%20Cell%20deactivation%20impacts%20on%20PDCP%20duplication.doc) Cell deactivation impacts on PDCP duplication Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709102](file:///C:\Data\3GPP\Extracts\R2-1709102%20Cell%20Deactivation%20impact%20on%20PDCP%20duplication.doc)

[R2-1710759](file:///C:\Data\3GPP\Extracts\R2-1710759%20PBR%20configuration%20for%20duplication%20RB.doc) PBR configuration for duplication DRB Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710958](file:///C:\Data\3GPP\Extracts\R2-1710958%20Duplication%20deactivation%20due%20to%20Scell%20or%20BWP%20deactivation.doc) Duplication deactivation due to Scell or BWP deactivation vivo discussion [R2-1708489](file:///C:\Data\3GPP\Extracts\R2-1708489%20Duplication%20deactivation%20due%20to%20Scell%20or%20BWP%20deactivation.doc)

[R2-1710968](file:///C:\Data\3GPP\Extracts\R2-1710968_PDCP%20duplication%20impacts%20on%20LCP.docx) PDCP duplication impacts on LCP vivo discussion [R2-1708502](file:///C:\Data\3GPP\Extracts\R2-1708502_PDCP%20duplication%20impacts%20on%20LCP.docx)

[R2-1711085](file:///C:\Data\3GPP\Extracts\R2-1711085.DOC) PDCP duplication and SCell (de-)activation ASUSTEK COMPUTER (SHANGHAI) discussion Rel-15 NR\_newRAT-Core [R2-1709327](file:///C:\Data\3GPP\Extracts\R2-1709327%20PDCP%20duplication%20and%20SCell%20(de-)activation.DOC) To:RAN4 Cc:RAN1

[R2-1711248](file:///C:\Data\3GPP\Extracts\R2-1711248%20-%20PDCP%20duplication%20control%20related%20to%20SCell%20control.docx) PDCP duplication control related to SCell control Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711411](file:///C:\Data\3GPP\Extracts\R2-1711411%20MAC%20impact%20of%20duplication%20discard.docx) MAC impact of duplication discard MediaTek Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708100](file:///C:\Data\3GPP\Extracts\R2-1708100%20MAC%20impact%20of%20duplication%20discard.docx)

[R2-1711424](file:///C:\Data\3GPP\Extracts\R2-1711424%20MAC%20CE%20design%20for%20duplication.docx) MAC CE design for duplication MediaTek Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708102](file:///C:\Data\3GPP\Extracts\R2-1708102%20MAC%20CE%20design%20for%20duplication.docx)

[R2-1711705](file:///C:\Data\3GPP\Extracts\R2-1711705%20Impact%20of%20PDCP%20Duplication%20on%20BSR%20in%20the%20CA%20case.doc) Impact of PDCP duplication on BSR in the CA case Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709118](file:///C:\Data\3GPP\Extracts\R2-1709118%20Impact%20of%20PDCP%20Duplication%20on%20BSR%20in%20the%20CA%20case.doc)

#### 10.3.1.12 PHR

*PHR triggers, reporting, handling, for single and dual connectivity (i.e. without beamforming)*

*PHR in the presence of beamforming may be down prioritized and treated if RAN1 has made progress and if some input from RAN2 is needed.*

[R2-1710318](file:///C:\Data\3GPP\Extracts\R2-1710318%20Consideration%20on%20PHR%20in%20NR.docx) Consideration on PHR in NR ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710610](file:///C:\Data\3GPP\Extracts\R2-1710610.doc) Impact of BWP on PHR Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710664](file:///C:\Data\3GPP\Extracts\R2-1710664%20(R15%20NR%20WI%20AI%20103112%20PHR).doc) Power Headroom Reporting for NR InterDigital discussion Rel-15 NR\_newRAT-Core [R2-1708733](file:///C:\Data\3GPP\Extracts\R2-1708733%20(R15%20NR%20WI%20AI%20103112%20PHR).doc)

[R2-1710767](file:///C:\Data\3GPP\Extracts\R2-1710767%20Consideration%20on%20PHR%20in%20EN-DC.doc) Consideration on PHR in EN-DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708957](file:///C:\Data\3GPP\Extracts\R2-1708957%20Consideration%20on%20PHR%20in%20EN-DC.doc)

[R2-1710953](file:///C:\Data\3GPP\Extracts\R2-1710953.doc) PHR triggering events for NR Samsung discussion Rel-15 NR\_newRAT-Core [R2-1704481](file:///C:\Data\3GPP\Extracts\R2-1704481.doc)

[R2-1710954](file:///C:\Data\3GPP\Extracts\R2-1710954.doc) PHR format for NR Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1711032](file:///C:\Data\3GPP\Extracts\R2-1711032.doc) PHR for NR CA Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core

[R2-1711182](file:///C:\Data\3GPP\Extracts\R2-1711182%20-%20Power%20headroom%20report%20in%20NR.docx) Power headroom reporting in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711183](file:///C:\Data\3GPP\Extracts\R2-1711183%20-%20PHR%20Text%20proposal.docx) PHR text proposal Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711433](file:///C:\Data\3GPP\Extracts\R2-1711433%20PHR%20reporting%20in%20different%20TTI%20lengths.doc) PHR reporting in different TTI lengths Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711434](file:///C:\Data\3GPP\Extracts\R2-1711434%20Considration%20on%20PHR%20with%20multi-beam%20operation.doc) Consideration on PHR with multi-beam operation Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711435](file:///C:\Data\3GPP\Extracts\R2-1711435%20Power%20management%20with%20multiple%20numerologies.doc) Power management with multiple numerologies Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711436](file:///C:\Data\3GPP\Extracts\R2-1711436%20Consideration%20on%20PHR%20triggering%20and%20cancellation%20in%20NR.doc) Consideration on PHR triggering and cancellation in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711437](file:///C:\Data\3GPP\Extracts\R2-1711437%20Content%20of%20the%20PHR.doc) Content of the PHR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711612](file:///C:\Data\3GPP\Extracts\R2-1711612%20PHR%20for%20multi-beam%20operation.docx) PHR for multi-beam operation PHR for multi-beam operation discussion NR\_newRAT-Core

[R2-1711613](file:///C:\Data\3GPP\Extracts\R2-1711613%20PHR%20for%20wider%20bandwidth%20operation.docx) PHR for wider bandwidth operation LG Electronics Inc. discussion NR\_newRAT-Core

[R2-1711667](file:///C:\Data\3GPP\Extracts\R2-1711667.doc) PHR in PDCP duplication with CA ITL discussion Rel-15

[R2-1711700](file:///C:\Data\3GPP\Extracts\R2-1711700%20PHR%20trigger%20by%20waveform%20change.docx) PHR trigger by waveform change Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711706](file:///C:\Data\3GPP\Extracts\R2-1711706%20PHR%20for%20UL%20Split%20Bearer.doc) PHR for UL Split Bearer Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1709119](file:///C:\Data\3GPP\Extracts\R2-1709119%20PHR%20for%20UL%20Split%20Bearer.doc)

[R2-1711798](file:///C:\Data\3GPP\Extracts\R2-1711798%20Guaranteed%20power%20for%20Power%20Headroom%20in%20EN-DC.doc) Guaranteed power for Power Headroom in EN-DC Samsung Electronics discussion Rel-15 NR\_newRAT-Core [R2-1709571](file:///C:\Data\3GPP\Extracts\R2-1709571%20Guaranteed%20power%20for%20Power%20Headroom%20in%20EN-DC.doc)

[R2-1711799](file:///C:\Data\3GPP\Extracts\R2-1711799%20NR%20PHR%20for%20EN-DC.doc) NR PHR for EN-DC Samsung Electronics discussion Rel-15 NR\_newRAT-Core [R2-1709572](file:///C:\Data\3GPP\Extracts\R2-1709572%20NR%20PHR%20for%20EN-DC.doc)

[R2-1711800](file:///C:\Data\3GPP\Extracts\R2-1711800%20PHR%20triggering%20event%20for%20beam%20change.doc) PHR triggering event for beam change Samsung Electronics discussion Rel-15 NR\_newRAT-Core [R2-1709573](file:///C:\Data\3GPP\Extracts\R2-1709573%20PHR%20triggering%20event%20for%20beam%20change.doc)

[R2-1711801](file:///C:\Data\3GPP\Extracts\R2-1711801%20Extended%20PHR%20considering%20beam%20and%20TRxP%20change.doc) Extended PHR considering beam and TRxP change Samsung Electronics discussion Rel-15 NR\_newRAT-Core [R2-1709574](file:///C:\Data\3GPP\Extracts\R2-1709574%20Extended%20PHR%20considering%20beam%20and%20TRxP%20change.doc)

[R2-1711821](file:///C:\Data\3GPP\Extracts\R2-1711821_NR%20PHR.doc) PHR for NR NTT DOCOMO INC. discussion Rel-15 NR\_newRAT-Core

#### 10.3.1.13 Other

*Other aspects not included in the detailed agenda items.*

[R2-1710135](file:///C:\Data\3GPP\Extracts\R2-1710135%20-%20Activation%20and%20deactivation%20of%20SCells.doc) Activation and deactivation of Scells OPPO discussion

[R2-1710769](file:///C:\Data\3GPP\Extracts\R2-1710769%20Scell%20activation%20and%20deactivation%20in%20EN-DC.doc) Scell activation and deactivation in EN-DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708965](file:///C:\Data\3GPP\Extracts\R2-1708965%20Scell%20activation%20and%20deactivation%20in%20EN-DC.doc)

[R2-1710782](file:///C:\Data\3GPP\Extracts\R2-1710782%20Considerations%20on%20TTI-bundling%20in%20EN-DC.doc) Considerations on TTI-bundling in EN-DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710955](file:///C:\Data\3GPP\Extracts\R2-1710955.doc) Text propsoal for a new clause for the handling of measurement gap Samsung discussion Rel-15 NR\_newRAT-Core [R2-1709018](file:///C:\Data\3GPP\Extracts\R2-1709018.doc)

[R2-1710956](file:///C:\Data\3GPP\Extracts\R2-1710956.doc) UL Time Alignment for NR Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1711082](file:///C:\Data\3GPP\Extracts\R2-1711082.DOC) Discussion on Timing Advance in NR ASUSTEK COMPUTER (SHANGHAI) discussion Rel-15 NR\_newRAT-Core [R2-1709329](file:///C:\Data\3GPP\Extracts\R2-1709329%20Discussion%20on%20Timing%20Advance%20in%20NR.DOC)

[R2-1711168](file:///C:\Data\3GPP\Extracts\R2-1711168%20-%20Timing%20advance%20in%20NR.docx) Timing advance in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711184](file:///C:\Data\3GPP\Extracts\R2-1711184%20-%20Power%20control%20aspects.docx) Power control aspects Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711194](file:///C:\Data\3GPP\Extracts\R2-1711194%20Time%20unit%20for%20scheduling%20and%20HARQ%20in%20NR_r0.docx) Time unit for scheduling and HARQ in NR Samsung discussion Rel-15

[R2-1711196](file:///C:\Data\3GPP\Extracts\R2-1711196%20Draft%20LS%20to%20RAN1%20about%20RAN2%20decisions%20on%20TTI.doc) Draft LS to RAN1 about RAN2 decisions on TTI Samsung LS out Rel-15

[R2-1711197](file:///C:\Data\3GPP\Extracts\R2-1711197%20Time%20unit%20for%20some%20MAC%20operations%20-%20subframe%20and%20slot_r0.docx) Time unit for some MAC operations - subframe and slot Samsung discussion Rel-15

[R2-1711254](file:///C:\Data\3GPP\Extracts\R2-1711254%20Enhanced%20HARQ%20feedback%20mode%20in%20SPS.docx) Enhanced HARQ feedback mode in SPS Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711259](file:///C:\Data\3GPP\Extracts\R2-1711259%20BSR%20for%20Multiple%20Numerology%20Operation.doc) BSR for Multiple Numerology Operation Samsung R&D Institute India discussion

[R2-1711261](file:///C:\Data\3GPP\Extracts\R2-1711261%20Determining%20Value%20of%20X%20for%20LCP.doc) Determining Value of X for LCP Samsung R&D Institute India discussion

[R2-1711297](file:///C:\Data\3GPP\Extracts\R2-1711297%20Retransmission%20Aspects%20for%20Uplink%20SPS.doc) Retransmission Aspects for Uplink SPS Samsung R&D Institute India discussion

[R2-1711438](file:///C:\Data\3GPP\Extracts\R2-1711438%20Maintenance%20of%20Uplink%20Time%20Alignment%20in%20NR.doc) Maintenance of uplink time alignment in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core To:RAN4

[R2-1711439](file:///C:\Data\3GPP\Extracts\R2-1711439%20CA%20activation%20and%20deactivation%20in%20NR.doc) CA activation and deactivation in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711440](file:///C:\Data\3GPP\Extracts\R2-1711440%20Draft%20LS%20on%20CA%20activation%20delay%20of%20SCell.doc) Draft LS on CA activation delay of Scell Huawei, HiSilicon LS out Rel-15 NR\_newRAT-Core

[R2-1711441](file:///C:\Data\3GPP\Extracts\R2-1711441%20MAC%20impact%20of%20bandwidth%20part.doc) MAC impact of bandwidth part activation/deactivation Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711569](file:///C:\Data\3GPP\Extracts\R2-1711569%20SPS%20with%20implicit%20SCell%20deactivation.docx) SPS with implicit SCell deactivation LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711570](file:///C:\Data\3GPP\Extracts\R2-1711570%20Restart%20condition%20of%20sCellDeactivationTimer%20with%20skipping%20operation.docx) Restart condition of sCellDeactivationTimer with skipping operation LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711604](file:///C:\Data\3GPP\Extracts\R2-1711604%20-%20Potential%20Issues%20for%20BSR%20Latency%20Reduction.docx) Potential Issues for BSR Latency Reduction Samsung Electronics discussion [R2-1709607](file:///C:\Data\3GPP\Extracts\R2-1709607%20-%20Potential%20Issues%20for%20BSR%20Latency%20Reduction.docx)

[R2-1711605](file:///C:\Data\3GPP\Extracts\R2-1711605%20-%20Potential%20Issues%20for%20UL%20Transmision%20with%20Shared%20UL%20Grant%20among%20Multiple%20UEs.docx) Potential Issues for UL Transmision with Shared UL Grant among Multiple Ues Samsung Electronics discussion [R2-1709608](file:///C:\Data\3GPP\Extracts\R2-1709608%20-%20Potential%20Issues%20for%20UL%20Transmision%20with%20Shared%20UL%20Grant%20among%20Multiple%20UEs.docx)

[R2-1711637](file:///C:\Data\3GPP\Extracts\R2-1711637.doc) On the TTI and Subframe in NR Samsung discussion NR\_newRAT-Core

[R2-1711639](file:///C:\Data\3GPP\Extracts\R2-1711639.doc) [Draft] LS on the TTI definition Samsung LS out NR\_newRAT-Core

[R2-1711643](file:///C:\Data\3GPP\Extracts\R2-1711643.doc) Activation of SCell containing BWPs Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1711724](file:///C:\Data\3GPP\Extracts\R2-1711724%20Reconsideration%20of%20sCellDeactivationTimer.docx) Reconsideration of sCellDeactivationTimer LG Electronics UK discussion NR\_newRAT-Core

[R2-1711725](file:///C:\Data\3GPP\Extracts\R2-1711725%20Error%20handling%20in%20MAC.docx) Error handling in MAC LG Electronics UK discussion NR\_newRAT-Core [R2-1709146](file:///C:\Data\3GPP\Extracts\R2-1709146%20Error%20handling%20in%20MAC.docx)

[R2-1711727](file:///C:\Data\3GPP\Extracts\R2-1711727%20Initial%20state%20of%20SCell.docx) Initial state of SCell LG Electronics UK discussion NR\_newRAT-Core [R2-1709152](file:///C:\Data\3GPP\Extracts\R2-1709152%20Initial%20state%20of%20SCell.docx)

[R2-1711795](file:///C:\Data\3GPP\Extracts\R2-1711795_UP%20latency%20enhancement.doc) RAN2 consideration on user plane latency enhancement Samsung Electronics GmbH discussion [R2-1709171](file:///C:\Data\3GPP\Extracts\R2-1709171_UP%20latency%20enhancement.doc)

### 10.3.2 RLC

#### 10.3.2.1 TS

Latest TS 38.323, rapporteur inputs, etc

Including output from email discussion [99#11][NR UP] – Running draft TS 38.322 – MediaTek

Please provide input to the rapporteur for corrections. Single/combined rapporteur TP is encouraged.

[R2-1710249](file:///C:\Data\3GPP\Extracts\R2-1710249%20-%20Consistence%20of%20RLC%20Tx%20behavior.docx) Consistence of RLC Tx behavior SHARP Corporation discussion

[R2-1710917](file:///C:\Data\3GPP\Extracts\R2-1710917%20Text%20Proposal%20on%20NR%20RLC%20release%20procedure.doc) Text Proposal on NR RLC release procedure Samsung R&D Institute India discussion Rel-15

[R2-1710976](file:///C:\Data\3GPP\Extracts\R2-1710976%20Text%20Proposal%20on%20LTE%20RLC%20release%20procedure%20for%20EN-DC.doc) Text Proposal on LTE RLC release procedure for EN-DC Samsung R&D Institute India discussion Rel-15

#### 10.3.2.2 RLC header format

Contributions should focus only on critical issues/corrections related to agreed RLC PDU format (e.g. not enhancements)

[R2-1710211](file:///C:\Data\3GPP\Extracts\R2-1710211%20Consideration%20on%20RLC%20STATUS%20PDU%20construction.doc) Issues on RLC status PDU construction Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710697](file:///C:\Data\3GPP\Extracts\R2-1710697%20Finalization%20of%20AMD%20PDU%20and%20STATUS%20PDU%20formats.docx) Finalization of AMD PDU and STATUS PDU formats MediaTek Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711268](file:///C:\Data\3GPP\Extracts\R2-1711268%20Remaining%20details%20of%20RLC%20STATUS%20PDU%20format.docx) Remaining details of RLC STATUS PDU format Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1711619](file:///C:\Data\3GPP\Extracts\R2-1711619_RLC%20PDU%20accommodation%20in%20multi%20MAC%20PDUs.doc) RLC PDU accommodation in multi MAC PDUs NTT DOCOMO INC., Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711789](file:///C:\Data\3GPP\Extracts\R2-1711789%20RLC%20Status%20PDU.doc) Presence of E1 in RLC Status Report Samsung discussion Rel-15 NR\_newRAT-Core

#### 10.3.2.3 RLC UM operation

Including output from email discussion [99#35][NR UP] Reassembly for RLC UM – Qualcomm

Contributions on how to capture the reassembly other than input from [99#35] are discouraged. Comments should be provided in email discussion. If an alternate TP is proposed, a converged, multi-company TP should be provided.

Other contributions should focus only on critical issues/corrections related to agree functionalities

[R2-1710212](file:///C:\Data\3GPP\Extracts\R2-1710212%20Remaining%20issues%20for%20RLC%20UM%20operation.doc) Remaining issues for RLC UM procedure Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711542](file:///C:\Data\3GPP\Extracts\R2-1711542%20Report%20of%20email%20discussion%20%5b99%2335%5d%5bNR%20UP%5d%20Reassembly%20for%20RLC%20UM.docx) Report of email discussion [99#35][NR UP] Reassembly for RLC UM Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711655](file:///C:\Data\3GPP\Extracts\R2-1711655_Transmitting%20UM%20RLC%20entity%20re-establishment.doc) Transmitting UM RLC entity re-establishment Sequans Communications discussion Rel-15 NR\_newRAT-Core

#### 10.3.2.4 Impact of PDCP duplication to RLC

*This AI will not be treated*

[R2-1710760](file:///C:\Data\3GPP\Extracts\R2-1710760%20RLC%20optimization%20for%20packet%20dupliation.doc) RLC optimization for packet duplication Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709498](file:///C:\Data\3GPP\Extracts\R2-1709498%20RLC%20optimization%20for%20packet%20dupliation.doc) To:RAN1

[R2-1710761](file:///C:\Data\3GPP\Extracts\R2-1710761%20Further%20consideration%20on%20RLF%20indication.doc) Further consideration on RLF indication Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710762](file:///C:\Data\3GPP\Extracts\R2-1710762%20RLC%20behaviours%20upon%20duplicate%20deactivation.doc) RLC behaviours upon duplicate deactivation Huawei, ASUSTek, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1707718](file:///C:\Data\3GPP\Extracts\R2-1707718%20RLC%20behaviors%20upon%20duplication%20deactivation.doc)

[R2-1711409](file:///C:\Data\3GPP\Extracts\R2-1711409%20RLC%20impact%20of%20duplication%20discard.docx) RLC impact of duplication discard MediaTek Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708099](file:///C:\Data\3GPP\Extracts\R2-1708099%20RLC%20impact%20of%20duplication%20discard.docx)

[R2-1711786](file:///C:\Data\3GPP\Extracts\R2-1711786%20Interaction%20between%20RLC%20Entities.doc) Interaction between RLC Entities for PDCP Duplication Samsung discussion Rel-15 NR\_newRAT-Core [R2-1709027](file:///C:\Data\3GPP\Extracts\R2-1709027%20Interaction%20between%20RLC%20Entities.doc)

[R2-1711788](file:///C:\Data\3GPP\Extracts\R2-1711788%20RLC%20max%20retransmissions%20in%20CA%20duplication.doc) RLC Max Retransmissions in CA Duplication Samsung discussion Rel-15 NR\_newRAT-Core To:RAN1

#### 10.3.2.5 RLC AM operation

Issues related to RLC Polling and Status reporting (max 1 contribution per company for this topic)

Other issues related to transmission/re-transmissions of AMD PDUs

[R2-1710213](file:///C:\Data\3GPP\Extracts\R2-1710213%20Remaining%20issue%20for%20RLC%20AM%20operation.doc) Remaining issue for RLC AM operation Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710215](file:///C:\Data\3GPP\Extracts\R2-1710215.doc) Remaining issues for polling in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709661](file:///C:\Data\3GPP\Extracts\R2-1709661.doc) Withdrawn

[R2-1710306](file:///C:\Data\3GPP\Extracts\R2-1710306.docx) NR RLC AM operation and status reporting CATT discussion Rel-15 NR\_newRAT-Core [R2-1707935](file:///C:\Data\3GPP\Extracts\R2-1707935.docx)

[R2-1710323](file:///C:\Data\3GPP\Extracts\R2-1710323%20Consideration%20on%20the%20T-reordering%20handling%20for%20the%20AMD%20PDU%20segment.docx) Consideration on the T-reordering handling for AMD PDU segment ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710696](file:///C:\Data\3GPP\Extracts\R2-1710696%20Text%20Proposal%20for%20RLC%20AM%20polling%20mechanism.docx) Text proposal for RLC AM polling mechanism MediaTek Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708268](file:///C:\Data\3GPP\Extracts\R2-1708268%20Text%20Proposal%20for%20RLC%20AM%20polling%20mechanism.docx) To:RAN1

[R2-1710777](file:///C:\Data\3GPP\Extracts\R2-1710777%20Remaining%20issues%20for%20polling%20in%20NR%20and%20EN-DC.doc) Remaining issues for polling in NR and EN-DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710821](file:///C:\Data\3GPP\Extracts\R2-1710821%20Segmentation%20based%20gap%20detection%20for%20AM%20operation.docx) Segmentation based gap detection for AM operation Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1710902](file:///C:\Data\3GPP\Extracts\R2-1710902.doc) RLC AM status reporting issue Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711250](file:///C:\Data\3GPP\Extracts\R2-1711250%20-%20RLC%20STATUS%20report%20format%20and%20polling.docx) RLC STATUS report format and polling Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711269](file:///C:\Data\3GPP\Extracts\R2-1711269%20Clarification%20to%20the%20ARQ%20procedures.docx) Clarification to the ARQ procedures Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1711541](file:///C:\Data\3GPP\Extracts\R2-1711541.doc) Further details of RLC Polling Procedure Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1708949](file:///C:\Data\3GPP\Extracts\R2-1708949.doc)

[R2-1711567](file:///C:\Data\3GPP\Extracts\R2-1711567%20Need%20of%20early%20RLC%20STATUS%20reporting.docx) Need of early RLC STATUS reporting LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711590](file:///C:\Data\3GPP\Extracts\R2-1711590%20t-reordering%20in%20RLC%20AM.doc) t-reordering in RLC AM Samsung discussion Rel-15 NR\_newRAT-Core [R2-1709598](file:///C:\Data\3GPP\Extracts\R2-1709598%20t-reordering%20in%20RLC%20AM.doc)

#### 10.3.2.6 Other

Clarify UE requirement on PDCP discard and SN utilization for pre-processing (max 1 contribution per company for this topic)

Other remaining issues for RLC

[R2-1710136](file:///C:\Data\3GPP\Extracts\R2-1710136%20-%20Pre-processing%20in%20RLC%20layer.doc) Pre-processing in RLC layer OPPO discussion

[R2-1710137](file:///C:\Data\3GPP\Extracts\R2-1710137%20-%20RLF%20on%20the%20SCell%20RLC.doc) RLF on the SCell RLC OPPO discussion [R2-1707746](file:///C:\Data\3GPP\Extracts\R2-1707746%20-%20RLF%20on%20the%20duplication%20leg.doc)

[R2-1710210](file:///C:\Data\3GPP\Extracts\R2-1710210%20Way%20forward%20for%20RLC%20pre-processing.doc) Way forward for RLC Pre-processing Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710214](file:///C:\Data\3GPP\Extracts\R2-1710214%20New%20values%20for%20RLC%20timer.doc) New values for RLC timers Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710307](file:///C:\Data\3GPP\Extracts\R2-1710307.docx) RLC failure and RLF in CA CATT discussion Rel-15 NR\_newRAT-Core [R2-1707923](file:///C:\Data\3GPP\Extracts\R2-1707923.docx)

[R2-1710359](file:///C:\Data\3GPP\Extracts\R2-1710359%20RLC%20TP%20for%20BSR.doc) RLC TP for BSR Fujitsu discussion Rel-15 NR\_newRAT-Core

[R2-1710898](file:///C:\Data\3GPP\Extracts\R2-1710898%20Consideration%20on%20the%20separate%20SN%20length%20configuration%20for%20UL%20and%20DL%20in%20RLC%20and%20PDCP.docx) Consideration on the separate SN length configuration for UL and DL in RLC and PDCP ZTE Corporation discussion Rel-15 NR\_newRAT-Core To:RAN1, RAN4

[R2-1711249](file:///C:\Data\3GPP\Extracts\R2-1711249%20-%20RLC%20PDU%20creation%20and%20SDU-PDU%20discard.docx) RLC PDU creation an SDU/PDU discard Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711568](file:///C:\Data\3GPP\Extracts\R2-1711568%20Clarification%20on%20Re-establishment%20procedure%20in%20NR%20RLC.docx) Clarification on Re-establishment procedure in NR RLC LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711574](file:///C:\Data\3GPP\Extracts\R2-1711574%20RLC%20SDU%20discard%20procedure%20in%20NR.docx) RLC SDU discard procedure in NR LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708850](file:///C:\Data\3GPP\Extracts\R2-1708850%20RLC%20SDU%20discard%20procedure%20in%20NR.docx)

[R2-1711594](file:///C:\Data\3GPP\Extracts\R2-1711594_RLC%20SDU%20discard%20procedure.doc) RLC SDU discard procedure Sequans Communications discussion Rel-15 NR\_newRAT-Core

[R2-1711746](file:///C:\Data\3GPP\Extracts\R2-1711746%20RLC%20pre-processing.docx) RLC pre-processing Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT To:RAN1

### 10.3.3 PDCP

#### 10.3.3.1 TS

Latest TS 38.323, rapporteur inputs, etc

Including output from email discussion [99#12][NR UP] – Running draft TS 38.323 – LG

Please provide input to the rapporteur for corrections. Single/combined rapporteur TP is encouraged.

[R2-1710903](file:///C:\Data\3GPP\Extracts\R2-1710903.doc) NR PDCP COUNT length Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1710905](file:///C:\Data\3GPP\Extracts\R2-1710905%20Text%20Proposal%20on%20PDCP%20Data%20Recovery%20procedure.doc) Text Proposal on PDCP Data Recovery procedure Samsung R&D Institute India discussion To:RAN4 Cc:RAN1

[R2-1711575](file:///C:\Data\3GPP\Extracts\R2-1711575%20PDCP%20specification%20updates.docx) PDCP specification updates LG Electronics Inc. (PDCP rapporteur) discussion Rel-15 NR\_newRAT-Core

[R2-1711576](file:///C:\Data\3GPP\Extracts\R2-1711576%20TP%20on%20PDCP%20data%20volume%20calculation.docx) TP on PDCP data volume calculation LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

#### 10.3.3.2PDCP PDU formats

Contributions should focus only on critical issues/corrections related to agreed RLC PDU format (e.g. not enhancements)

#### 10.3.3.3 PDCP receive operation

Including output from email discussion [99#36][NR UP] Out-of-order delivery in PDCP – LG

Contributions on how to capture the reassembly other than input from [99#36] are discouraged. Comments should be provided in email discussion. If an alternate TP is proposed, a converged, multi-company TP should be provided.

[R2-1710967](file:///C:\Data\3GPP\Extracts\R2-1710967_RoHC%20support%20of%20EN-DC.docx) RoHC support of EN-DC vivo,CATR discussion

[R2-1711008](file:///C:\Data\3GPP\Extracts\R2-1711008_Discussion%20to%20avoid%20duplicate%20reordering%20in%20EN-DC.doc) Discussion to avoid duplicate reordering in EN-DC Samsung R&D Institute India discussion Rel-15 [R2-1709101](file:///C:\Data\3GPP\Extracts\R2-1709101_Discussion%20to%20avoid%20duplicate%20reordering%20in%20EN-DC.doc)

[R2-1711470](file:///C:\Data\3GPP\Extracts\R2-1711470_Out-of-sequence%20delivery%20duplicate%20discard.doc) Out-of-sequence delivery duplicate discard Sequans Communications, Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

[R2-1711577](file:///C:\Data\3GPP\Extracts\R2-1711577%20Support%20for%20out-of-order%20delivery%20in%20PDCP_Final.docx) Support for out-of-order delivery in PDCP LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711593](file:///C:\Data\3GPP\Extracts\R2-1711593%20Outdated%20and%20duplicated%20PDU%20handling.doc) Outdated and duplicated PDU handling Samsung discussion Rel-15 NR\_newRAT-Core [R2-1709599](file:///C:\Data\3GPP\Extracts\R2-1709599%20Outdated%20and%20duplicated%20PDU%20handling.doc)

[R2-1711610](file:///C:\Data\3GPP\Extracts\R2-1711610%20Decompression%20failure%20upon%20PDCP%20re-establishment.doc) Decompression failure upon PDCP re-establishment Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1711673](file:///C:\Data\3GPP\Extracts\R2-1711673_Handling%20of%20COUNT%20wrap%20around.doc) Handling of COUNT wrap around Sequans Communications discussion Rel-15 NR\_newRAT-Core

#### 10.3.3.4 UL data split

*Capture UE requirements or restriction on bad UE behaviour related to pre-processing (max 1 contribution per company – multi-company proposals encouraged)*

[R2-1710143](file:///C:\Data\3GPP\Extracts\R2-1710143%20-%20Discussion%20on%20threshold%20for%20UL%20data%20split.doc) Discussion on threshold for UL data split OPPO discussion Rel-15 NR\_newRAT-Core

[R2-1710308](file:///C:\Data\3GPP\Extracts\R2-1710308.docx) Limiting UE pre-processing for split bearer CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710360](file:///C:\Data\3GPP\Extracts\R2-1710360%20Pre-processing%20restriction.doc) Pre-processing restriction Fujitsu discussion Rel-15 NR\_newRAT-Core

[R2-1710635](file:///C:\Data\3GPP\Extracts\R2-1710635.doc) Restriction on UE pre-processing Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710698](file:///C:\Data\3GPP\Extracts\R2-1710698%20Pre-processing%20and%20uplink%20data%20split.docx) Pre-processing and uplink data split MediaTek Inc., Qualcomm Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1710778](file:///C:\Data\3GPP\Extracts\R2-1710778%20Remaining%20issues%20of%20pre-processing%20for%20UL%20split%20bearer%20for%20NR%20and%20EN-DC.doc) Remaining issues of pre-processing for UL split bearer Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710780](file:///C:\Data\3GPP\Extracts\R2-1710780%20Data%20volume%20reporting%20in%20NR%20PDCP.doc) Data volume reporting in NR PDCP Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711037](file:///C:\Data\3GPP\Extracts\R2-1711037.doc) Threshold for NR UL split bearer Lenovo, Motorola Mobility, Sequans Communications discussion Rel-15 NR\_newRAT-Core

[R2-1711039](file:///C:\Data\3GPP\Extracts\R2-1711039.doc) Pre-processing for UL split bearer operation Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core

[R2-1711246](file:///C:\Data\3GPP\Extracts\R2-1711246%20-%20PDCP%20pre-processing%20and%20data%20delivery%20to%20lower%20layers.docx) PDCP pre-processing and data delivery to lower layers Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711270](file:///C:\Data\3GPP\Extracts\R2-1711270%20Submission%20of%20PDCP%20PDUs%20to%20lower%20layers%20for%20UL%20split%20bearer.docx) Submission of PDCP PDUs to lower layers for UL split bearer Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1711545](file:///C:\Data\3GPP\Extracts\R2-1711545%20Supporting%20UL%20single%20path%20transmission%20in%20PDCP.doc) Supporting UL single path transmission in PDCP Qualcomm Incorporated, MediaTek Inc., Broadcom discussion Rel-15 NR\_newRAT-Core

[R2-1711547](file:///C:\Data\3GPP\Extracts\R2-1711547%20Uplink%20path%20switching.docx) PDCP uplink path switching MediaTek Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711578](file:///C:\Data\3GPP\Extracts\R2-1711578%20Need%20for%20pre-processing%20limit.docx) Need for pre-processing limit LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711620](file:///C:\Data\3GPP\Extracts\R2-1711620_UE%20triggered%20PDCP%20UL%20path%20change%20in%20DC.doc) UE triggered PDCP UL path change in DC NTT DOCOMO INC., NEC, Fujitsu discussion Rel-15 NR\_newRAT-Core

[R2-1711654](file:///C:\Data\3GPP\Extracts\R2-1711654_Pre-processing%20limit%20for%20split%20bearers.doc) Pre-processing limit for split bearers Sequans Communications discussion Rel-15 NR\_newRAT-Core

[R2-1711730](file:///C:\Data\3GPP\Extracts\R2-1711730%20Threshold%20for%20UL%20split.docx) Threshold for UL split LG Electronics UK discussion NR\_newRAT-Core [R2-1709656](file:///C:\Data\3GPP\Extracts\R2-1709656%20Threshold%20for%20UL%20split.docx)

[R2-1711787](file:///C:\Data\3GPP\Extracts\R2-1711787%20NR%20UL%20Split.doc) NR UL Split Configuration Samsung discussion Rel-15 NR\_newRAT-Core

#### 10.3.3.5 PDCP duplication

This AI will not be treated

[R2-1710763](file:///C:\Data\3GPP\Extracts\R2-1710763%20PDCP%20operation%20for%20packet%20duplication.doc) PDCP operation for packet duplication Huawei, ASUSTek, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1707719](file:///C:\Data\3GPP\Extracts\R2-1707719%20PDCP%20operation%20for%20packet%20duplication.doc)

[R2-1710764](file:///C:\Data\3GPP\Extracts\R2-1710764%20PDCP%20data%20volume%20calculation%20for%20packet%20duplication.doc) PDCP data volume calculation for packet duplication Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1707720](file:///C:\Data\3GPP\Extracts\R2-1707720%20PDCP%20data%20volume%20calculation%20for%20packet%20duplication.doc)

[R2-1710765](file:///C:\Data\3GPP\Extracts\R2-1710765%20Clarification%20on%20bearer%20type%20for%20packet%20duplication.docx) Clarification on bearer type for packet duplication Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710766](file:///C:\Data\3GPP\Extracts\R2-1710766%20Enhancements%20for%20DL%20packet%20duplication.doc) Enhancements for DL Packet Duplication Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1707715](file:///C:\Data\3GPP\Extracts\R2-1707715%20Enhancements%20for%20DL%20packet%20duplication.doc)

[R2-1710970](file:///C:\Data\3GPP\Extracts\R2-1710970_Layer-2%20behaviors%20of%20PDCP%20duplication%20deactivation.docx) Layer-2 behaviors of PDCP duplication deactivation vivo discussion [R2-1708508](file:///C:\Data\3GPP\Extracts\R2-1708508_Layer-2%20behaviors%20of%20PDCP%20duplication%20activation%20deactivation.docx)

[R2-1711041](file:///C:\Data\3GPP\Extracts\R2-1711041.doc) PDCP Packet Duplication Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core

[R2-1711242](file:///C:\Data\3GPP\Extracts\R2-1711242%20-%20PDCP%20duplication%20and%20discard.docx) PDCP duplication and discard Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711245](file:///C:\Data\3GPP\Extracts\R2-1711245%20-%20PDCP%20duplication%20transmit%20procedure.docx) PDCP duplication transmit operation Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711247](file:///C:\Data\3GPP\Extracts\R2-1711247%20-%20PDCP%20data%20volume%20reporting%20in%20duplication.docx) PDCP data volume reporting in duplication Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711407](file:///C:\Data\3GPP\Extracts\R2-1711407%20Data%20duplication%20in%20NR.docx) Data duplication in NR MediaTek Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708098](file:///C:\Data\3GPP\Extracts\R2-1708098%20Data%20duplication%20in%20NR.docx)

[R2-1711421](file:///C:\Data\3GPP\Extracts\R2-1711421%20On%20deactivation%20of%20duplication%20in%20carrier%20aggregation.docx) On deactivation of duplication in carrier aggregation MediaTek Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711544](file:///C:\Data\3GPP\Extracts\R2-1711544%20PDCP%20duplication.doc) PDCP duplication Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1708951](file:///C:\Data\3GPP\Extracts\R2-1708951.doc)

[R2-1711669](file:///C:\Data\3GPP\Extracts\R2-1711669.doc) Configuration of PDCP duplication on default DRB ITL discussion Rel-15

[R2-1711782](file:///C:\Data\3GPP\Extracts\R2-1711782%20Activation%20and%20Deactivation%20of%20PDCP%20Duplication.doc) Activation and Deactivation of PDCP Duplication Samsung discussion Rel-15 NR\_newRAT-Core To:RAN1

[R2-1711783](file:///C:\Data\3GPP\Extracts\R2-1711783%20CA%20Duplication.doc) Discussion on CA Duplication Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1711785](file:///C:\Data\3GPP\Extracts\R2-1711785%20Initial%20State%20of%20Uplink%20Packet%20Duplication.doc) Initial State of Uplink Packet Duplication Samsung discussion Rel-15 NR\_newRAT-Core

#### 10.3.3.6 Support for RoHC

[R2-1710142](file:///C:\Data\3GPP\Extracts\R2-1710142%20-%20Left%20issues%20on%20ROHC%20in%20PDCP%20operation.doc) Left issues on ROHC in PDCP operation OPPO discussion Rel-15 NR\_newRAT-Core

[R2-1710636](file:///C:\Data\3GPP\Extracts\R2-1710636.doc) Asymmetric ROHC in NR Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710779](file:///C:\Data\3GPP\Extracts\R2-1710779%20Remaining%20issues%20for%20RoHC%20in%20NR%20PDCP.doc) Remaining issues for RoHC in NR PDCP Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710966](file:///C:\Data\3GPP\Extracts\R2-1710966_Discussion%20on%20the%20PDCP%20data%20volume.docx) Discussion on the PDCP data volume vivo discussion [R2-1708498](file:///C:\Data\3GPP\Extracts\R2-1708498_Discussion%20on%20the%20PDCP%20data%20volume.docx)

[R2-1711554](file:///C:\Data\3GPP\Extracts\R2-1711554_Discsussion%20on%20PDCP%20re-establishment.docx) Discsussion on PDCP re-establishment LG Electronics France discussion Rel-15 NR\_newRAT-Core

[R2-1711732](file:///C:\Data\3GPP\Extracts\R2-1711732%20PDCP%20header%20compression%20in%20reflective%20QoS.doc) Header compression in reflective QoS HTC Corporation discussion [R2-1709375](file:///C:\Data\3GPP\Extracts\R2-1709375%20PDCP%20header%20compression%20in%20reflective%20QoS.doc)

#### 10.3.3.7 Other

[R2-1710144](file:///C:\Data\3GPP\Extracts\R2-1710144%20-%20Left%20issues%20on%20PDCP%20operation%20for%20LTE%20RLC.doc) Left issues on PDCP operation for LTE RLC OPPO discussion Rel-15 NR\_newRAT-Core

[R2-1710309](file:///C:\Data\3GPP\Extracts\R2-1710309.docx) Dynamic leg switching for split bearer CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710310](file:///C:\Data\3GPP\Extracts\R2-1710310.docx) Remaining issues for duplication/split bearer CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710314](file:///C:\Data\3GPP\Extracts\R2-1710314%20Consideration%20on%20UP%20integrity%20configuration.doc) Consideration on UP integrity configuration ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710781](file:///C:\Data\3GPP\Extracts\R2-1710781%20Solutions%20for%20SN%20gap%20issue%20due%20to%20PDCP%20discard.doc) Solutions for SN gap issue due to PDCP discard Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710906](file:///C:\Data\3GPP\Extracts\R2-1710906.doc) SDAP header excluded from PDCP ciphering Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711043](file:///C:\Data\3GPP\Extracts\R2-1711043.doc) PDCP discard timer for NR Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core

[R2-1711044](file:///C:\Data\3GPP\Extracts\R2-1711044%20PDCP%20discard.doc) PDCP discard Beijing Xiaomi Mobile Software discussion Rel-15 [R2-1709177](file:///C:\Data\3GPP\Extracts\R2-1709177%20PDCP%20discard.doc)

[R2-1711123](file:///C:\Data\3GPP\Extracts\R2-1711123%20Discussion%20on%20PDCP%20data%20volume%20calculation.doc) Discussion on PDCP data volume calculation Samsung R&D Institute India discussion [R2-1708444](file:///C:\Data\3GPP\Extracts\R2-1708444%20PDCP%20data%20available%20for%20transmission.doc)

[R2-1711146](file:///C:\Data\3GPP\Extracts\R2-1711146%20PDCP%20operations%20during%20PDCP%20version%20change%20in%20EN-DC.doc) PDCP operations during PDCP version change in EN-DC Samsung R&D Institute India discussion Rel-15

[R2-1711241](file:///C:\Data\3GPP\Extracts\R2-1711241%20-%20PDCP%20SN%20reconfiguration%20at%20handover.docx) PDCP SN reconfiguration at handover Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711243](file:///C:\Data\3GPP\Extracts\R2-1711243%20-%20PDCP%20UP%20timers.docx) UP timers in PDCP Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711271](file:///C:\Data\3GPP\Extracts\R2-1711271%20PDCP%20trigger%20for%20UL%20splitting.docx) PDCP trigger for uplink splitting Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1711539](file:///C:\Data\3GPP\Extracts\R2-1711539%20Resolving%20the%20SN-gap%20issue%20due%20to%20PDCP%20discard.doc) Resolving the SN-gap issue due to PDCP discard Qualcomm Incorporated, Fujitsu, Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708947](file:///C:\Data\3GPP\Extracts\R2-1708947.doc)

[R2-1711540](file:///C:\Data\3GPP\Extracts\R2-1711540%20Further%20details%20on%20moving%20reordering%20window.doc) Further details on moving reordering window Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1708948](file:///C:\Data\3GPP\Extracts\R2-1708948.doc)

[R2-1711557](file:///C:\Data\3GPP\Extracts\R2-1711557_Discussion%20on%20data%20recovery%20procedure%20for%20UM%20DRBs.docx) Discussion on data recovery procedure for UM DRBs LG Electronics France discussion Rel-15 NR\_newRAT-Core To:RAN1

[R2-1711653](file:///C:\Data\3GPP\Extracts\R2-1711653_PDCP%20retransmissions%20upon%20UL%20path%20change%20&%20re-establishment.doc) PDCP retransmissions upon UL path change & re-establishment Sequans Communications discussion Rel-15 NR\_newRAT-Core

[R2-1711735](file:///C:\Data\3GPP\Extracts\R2-1711735%20Separate%20configurations%20for%20UL%20and%20DL%20PDCP%20SN%20lengths.doc) Separate configurations for UL and DL PDCP SN lengths HTC Corporation discussion [R2-1709352](file:///C:\Data\3GPP\Extracts\R2-1709352%20Separate%20configurations%20for%20UL%20and%20DL%20PDCP%20SN%20lengths.doc)

### 10.3.4 SDAP

#### 10.3.4.1 TS

Latest TS 37.324, rapporteur inputs, etc

Including output from email discussion [99#13][NR UP] – Running draft TS 37.324 – Huawei

Please provide input to the rapporteur for corrections. Single/combined rapporteur TP is encouraged.

[R2-1710068](file:///C:\Data\3GPP\Extracts\R2-1710068_nr_qos_tp_v03.doc) Text proposal for the SDAP entity establishment and release Samsung discussion Rel-15 NR\_newRAT

[R2-1710069](file:///C:\Data\3GPP\Extracts\R2-1710069_nr_qos_sdap_v03.doc) Text proposal on the number of SDAP entities for DC operation Samsung discussion Rel-15 To:SA3

[R2-1710225](file:///C:\Data\3GPP\Extracts\R2-1710225%20Number%20of%20SDAP%20Entities%20for%20NR%20DC.doc) Number of SDAP Entities for NR DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711552](file:///C:\Data\3GPP\RAN2\Docs\R2-1711552.zip) TS 37.324 v101 Rapporteur (Huawei) draft TS Rel-15 37.324 1.0.1 NR\_newRAT-Core

[R2-1711728](file:///C:\Data\3GPP\Extracts\R2-1711728%20LCP%20restriction.docx) LCP restriction LG Electronics UK discussion NR\_newRAT-Core To:RAN3

#### 10.3.4.2 Header Format

Details of header format only (e.g. size of QFI and use of one bit QFI). Progress on some aspects may require SA2 response.

[R2-1710070](file:///C:\Data\3GPP\Extracts\R2-1710070_nr_qos_header_v14.doc) Further considerations on the QoS header format Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1710168](file:///C:\Data\3GPP\Extracts\R2-1710168%20SDAP%20Header%20Format.doc) SDAP Header Format TCL discussion Rel-15 NR\_newRAT-Core

[R2-1710226](file:///C:\Data\3GPP\Extracts\R2-1710226-SDAP%20Header%20Format.doc) Further Discussion on SDAP Header Format Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710351](file:///C:\Data\3GPP\Extracts\R2-1710351%20-%20Discussion%20on%20single%20bit%20RQI.doc) Discussion on single bit RQI OPPO discussion [R2-1707780](file:///C:\Data\3GPP\Extracts\R2-1707780-QoS%20flow%20remapping.doc)

[R2-1710393](file:///C:\Data\3GPP\Extracts\R2-1710393%20Shorter%20QFI%20in%20SDAP%20header.docx) Shorter QFI in SDAP header CMCC discussion Rel-15 NR\_newRAT-Core

[R2-1710394](file:///C:\Data\3GPP\Extracts\R2-1710394%20Considerations%20on%20one%20bit%20RQI.doc) Considerations on one bit RQI CMCC, OPPO discussion Rel-15 NR\_newRAT-Core

[R2-1710439](file:///C:\Data\3GPP\Extracts\R2-1710439%20Discussion%20on%20SDAP%20DATA%20PDU%20for%20reflective%20QoS.doc) Discussion on SDAP DATA PDU for reflective QoS ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710702](file:///C:\Data\3GPP\Extracts\R2-1710702%20Separating%20AS%20and%20NAS%20RQI%20fields.docx) Separating AS and NAS RQI fields MediaTek Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711077](file:///C:\Data\3GPP\Extracts\R2-1711077.doc) Presence of UL SDAP header on default DRB ASUSTeK discussion Rel-15 NR\_newRAT-Core [R2-1709055](file:///C:\Data\3GPP\Extracts\R2-1709055%20Presence%20of%20UL%20SDAP%20header%20on%20default%20DRB.doc)

[R2-1711078](file:///C:\Data\3GPP\Extracts\R2-1711078.doc) Discussion on changing presence of SDAP header ASUSTeK discussion Rel-15 NR\_newRAT-Core

[R2-1711236](file:///C:\Data\3GPP\Extracts\R2-1711236%20-%20SDAP%20entity%20establishment.docx) SDAP entity establishment Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711237](file:///C:\Data\3GPP\Extracts\R2-1711237%20-%20SDAP%20Header%20Format.docx) SDAP Header Format Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711546](file:///C:\Data\3GPP\Extracts\R2-1711546.doc) Reflective QoS Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711556](file:///C:\Data\3GPP\Extracts\R2-1711556_Location%20of%20QoS%20Flow%20ID%20in%20UL%20and%20DL%20packet.docx) Location of QoS Flow ID in UL and DL packet LG Electronics France discussion Rel-15 NR\_newRAT-Core [R2-1703023](file:///C:\Data\3GPP\Extracts\R2-1703023_Location%20of%20QoS%20Flow%20ID%20in%20UL%20and%20DL%20packetv1.docx)

[R2-1711755](file:///C:\Data\3GPP\Extracts\R2-1711755%20SDAP%20header%20format.docx) SDAP header format LG Electronics discussion NR\_newRAT-Core

#### 10.3.4.3 Other

QoS flow remapping and handover within the same cell (max 1 contribution per company for this topic)

Other SDAP issues

[R2-1710166](file:///C:\Data\3GPP\Extracts\R2-1710166%20Issues%20with%20RQI%20setting.doc) Issues with RQI setting TCL discussion NR\_newRAT-Core

[R2-1710167](file:///C:\Data\3GPP\Extracts\R2-1710167%20QoS%20Flow%20ID%20for%20AS%20Reflective.doc) QFI Presence for AS Level Reflective QoS TCL discussion NR\_newRAT-Core To:SA3 Cc:SA2

[R2-1710227](file:///C:\Data\3GPP\Extracts\R2-1710227%20SDAP%20(re)configuration.doc) SDAP (re)configuration Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710228](file:///C:\Data\3GPP\Extracts\R2-1710228%20QoS%20Flow%20to%20DRB%20Re-Mapping.doc) QoS Flow to DRB Re-Mapping Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710229](file:///C:\Data\3GPP\Extracts\R2-1710229%20Lossless%20Handover%20of%20QoS%20Flow.doc) Lossless Handover of QoS Flow Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710230](file:///C:\Data\3GPP\Extracts\R2-1710230%20QoS%20Flow%20Level%20Offloading%20in%20NR-DC.doc) QoS Flow Level Offloading in NR-DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710257](file:///C:\Data\3GPP\Extracts\R2-1710257%20New%20QoS%20Flows%20on%20the%20Default%20Bearer.docx) New QoS flow on the Default Bearer Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1710258](file:///C:\Data\3GPP\Extracts\R2-1710258%20Reflective%20QoS%20Control.docx) Reflective QoS Control Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1710259](file:///C:\Data\3GPP\Extracts\R2-1710259%20QoS%20Flow%20Remapping.docx) QoS Flow Remapping Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1710260](file:///C:\Data\3GPP\Extracts\R2-1710260%20Default%20QoS%20profile.docx) Default QoS Profile Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

[R2-1710311](file:///C:\Data\3GPP\Extracts\R2-1710311.docx) How to update the mapping rule of reflective QoS CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710312](file:///C:\Data\3GPP\Extracts\R2-1710312.docx) QoS re-mapping of QoS flow and DRB CATT discussion Rel-15 NR\_newRAT-Core [R2-1707939](file:///C:\Data\3GPP\Extracts\R2-1707939.docx)

[R2-1710353](file:///C:\Data\3GPP\Extracts\R2-1710353%20-%20QoS%20flow%20remapping.doc) QoS flow remapping OPPO discussion

[R2-1710438](file:///C:\Data\3GPP\Extracts\R2-1710438%20Discussion%20on%20QoS%20flow-DRB%20remapping.doc) Discussion on QoS flow-DRB remapping ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710699](file:///C:\Data\3GPP\Extracts\R2-1710699%20In-order%20delivery%20during%20QoS%20flow%20relocation.docx) In-order delivery during QoS flow relocation MediaTek Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708260](file:///C:\Data\3GPP\Extracts\R2-1708260%20SDAP%20header%20design%20for%20reflective%20QoS%20indication%20and%20QoS%20flow%20remapping.docx)

[R2-1710969](file:///C:\Data\3GPP\Extracts\R2-1710969%20Consideration%20on%20BSR%20for%20SDAP.docx) Consideration on BSR for SDAP vivo,Xiaomi,CATR discussion

R2-1711067 QoS Flow Remapping Beijing Xiaomi Mobile Software discussion Rel-15 [R2-1709179](file:///C:\Data\3GPP\Extracts\R2-1709179%20QoS%20Flow%20Remapping.doc)

[R2-1711068](file:///C:\Data\3GPP\Extracts\R2-1711068%20QoS%20Flow%20Remapping.doc) QoS Flow Remapping Beijing Xiaomi Mobile Software discussion Rel-15 [R2-1709179](file:///C:\Data\3GPP\Extracts\R2-1709179%20QoS%20Flow%20Remapping.doc) To:SA2, RAN3, CT1

[R2-1711342](file:///C:\Data\3GPP\Extracts\R2-1711342%20-%20SDAP%20configuration%20aspects.docx) SDAP configuration aspects Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711543](file:///C:\Data\3GPP\Extracts\R2-1711543%20SDAP%20remaining%20issues.doc) SDAP remaining issues Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711558](file:///C:\Data\3GPP\Extracts\R2-1711558_QoS%20flow%20to%20DRB%20remapping.docx) QoS flow to DRB remapping LG Electronics France discussion Rel-15 NR\_newRAT-Core [R2-1703086](file:///C:\Data\3GPP\Extracts\R2-1703086_QoS%20flow%20to%20DRB%20remapping.docx)

[R2-1711668](file:///C:\Data\3GPP\Extracts\R2-1711668.doc) Reflective QoS acknowledgement ITL discussion Rel-15

[R2-1711741](file:///C:\Data\3GPP\Extracts\R2-1711741%20Configurability%20for%20the%20presence%20of%20SDAP%20header.docx) Configurability for the presence of SDAP header LG Electronics discussion NR\_newRAT-Core [R2-1709068](file:///C:\Data\3GPP\Extracts\R2-1709068%20Configurability%20for%20the%20presence%20of%20SDAP%20header.docx)

[R2-1711742](file:///C:\Data\3GPP\Extracts\R2-1711742%20Configuration%20scenarios%20for%20whether%20or%20not%20a%20SDAP%20header%20is%20present.docx) Configuration scenarios on whether or not a SDAP header is present LG Electronics discussion NR\_newRAT-Core [R2-1709071](file:///C:\Data\3GPP\Extracts\R2-1709071%20Configuration%20scenarios%20for%20whether%20or%20not%20a%20SDAP%20header%20is%20present.docx)

[R2-1711748](file:///C:\Data\3GPP\Extracts\R2-1711748%20Considerations%20on%20release%20of%20a%20mapping%20of%20QoS%20flow%20to%20DRB.docx) Considerations on release of a mapping of QoS flow to DRB LG Electronics discussion NR\_newRAT-Core

[R2-1711750](file:///C:\Data\3GPP\Extracts\R2-1711750%20Discussion%20on%20default%20DRB%20establishment%20in%20DC.docx) Discussion on default DRB establishment in DC LG Electronics discussion NR\_newRAT-Core [R2-1709074](file:///C:\Data\3GPP\Extracts\R2-1709074%20Discussion%20on%20default%20DRB%20establishment%20in%20DC.docx)

[R2-1711811](file:///C:\Data\3GPP\Extracts\R2-1711811%20SDAP%20Configuration.docx) SDAP configuration LG Electronics discussion NR\_newRAT-Core [R2-1709089](file:///C:\Data\3GPP\Extracts\R2-1709089%20SDAP%20Configuration.docx)

[R2-1711817](file:///C:\Data\3GPP\Extracts\R2-1711817_RQoS_operation.doc) Reflective QoS operation SHARP Corporation discussion Rel-15 NR\_newRAT-Core

## 10.4 Stage 3 control plane

### 10.4.1 NR RRC

#### 10.4.1.1 TS

Latest TS 38.331, other rapporteur inputs, etc. Please submit any new text proposals to the appropriate agenda item. Note specification methodology has been given a separate AI for RRC.

This agenda item is relevant to EN-DC completion.

[R2-1710557](file:///C:\Data\3GPP\RAN2\Docs\R2-1710557.zip) TS 38.331 Ericsson draft TS Rel-15 38.331 0.1.0 NR\_newRAT-Core [R2-1708468](file:///C:\Data\3GPP\TSGR2\TSGR2_99\Docs\R2-1708468.zip)

=> Endorsed

#### 10.4.1.2 Specification methodology

This agenda item is relevant to EN-DC completion.

[R2-1710117](file:///C:\Data\3GPP\Extracts\R2-1710117.doc) Remaining issues on NR RRC methodology NTT DOCOMO, INC. discussion Rel-15 NR\_newRAT-Core

[R2-1710118](file:///C:\Data\3GPP\Extracts\R2-1710118.doc) Necessity of error handling on inter-node RRC message NTT DOCOMO, INC. discussion Rel-15 NR\_newRAT-Core

[R2-1710539](file:///C:\Data\3GPP\Extracts\R2-1710539.doc) Definitions and logic for need codes in NR ASN.1 Huawei, HiSilicon discussion Rel-15

=> Revised in [R2-1712004](file:///C:\Data\3GPP\Extracts\R2-1712004.doc)

[R2-1712004](file:///C:\Data\3GPP\Extracts\R2-1712004.doc) Definitions and logic for need codes in NR ASN.1 Huawei, HiSilicon, Nokia discussion Rel-15

[R2-1711507](file:///C:\Data\3GPP\Extracts\R2-1711507%205G%20RRC%20specification%20improvements.doc) Specification improvements for NR RRC Samsung Telecommunications discussion Rel-15

Come back for outcome of offline session on specification methodology

[R2-1712037](file:///C:\Data\3GPP\Extracts\R2-1712037%20RRC%20methodoloy.docx) Offline session on RRC Methodology Ericsson

=> Agreed

#### 10.4.1.3 Connection control procedures

No documents should be submitted to 10.4.1.3. Please submit to 10.4.1.3.x.

##### 10.4.1.3.1 Connection reconfiguration message structure

Structure and general content of RRCConnectionReconfiguration message. Including the related additions to the LTE RRCConnectionReconfiguration for EN-DC operation.

Including output from email discussion [99#30][NR] RRC Connection Reconfiguration (Ericsson)

This agenda item is relevant to EN-DC completion.

[R2-1711532](file:///C:\Data\3GPP\Extracts\R2-1711532%20-%20Summary%20of%20%20RRCConnectionReconfiguration%20email%20discussion.docx) Summary of email discussion #30 for RRCConnectionReconfiguration Ericsson discussion Rel-15

=> Revised in [R2-1711961](file:///C:\Data\3GPP\Extracts\R2-1711961%20-%20Summary%20of%20%20RRCConnectionReconfiguration%20email%20discussion.docx)

[R2-1711961](file:///C:\Data\3GPP\Extracts\R2-1711961%20-%20Summary%20of%20%20RRCConnectionReconfiguration%20email%20discussion.docx) Summary of email discussion #30 for RRCConnectionReconfiguration Ericsson discussion Rel-15

P1

- Nokia think the implication that an update of the SN security must always go through the MN. Asks if SN can trigger security key change for one bearer. Ericsson think this will be possible of RAN3 supports the request from SN to MN.

- Ericsson think the key change in SN is not needed as handovers within SN can be done without key change so the only rare case is wrap around.

Agreements

1: Include SCG-Counter in LTE RRCConnectionReconfiguration. Rename this to SK-counter.

2 Indicate explicitly or implicitly at the RadioBearerConfig level if the bearers in this container are using KeNB or S-KgNB (one indication per RadioBearerConfig container and not one per bearer)

3 Adopt following signalling solution for algorithms: a) Algorithms for the bearers using KeNB and LTE PDCP: use securityConfigHO, b) Algorithms for the bearers using KeNB and NR PDCP: use new signalling in RadioBearerConfig (however, the algorithm should be same as in securityConfigHO) and c) Algorithms for the bearers using S-KgNB and NR PDCP: use new signalling in RadioBearerConfig. New signalling applies to all bearers in RadioBearerConfig.

3i Case a and b can configure LTE algorithms, and case c can configure NR algorithms

(This is for Rel-15 and may be re-discussed in future releases)

4 Introduce an explicit bit to indicate that PDCP is to be re-established (security key a change and PDCP re-establishment can be linked together in the field description)

5 Introduce an explicit bit to indicate that RLC is to be re-established (to be used whenever MAC is reset).

FFS: How to trigger the PDCP recovery actions given the agreement 5 to be checked

6 For SCG change scenario and S-KgNB change scenario, signalling and L2 actions according to the TP plus agreements 4 and 5 are used. There is no need identified to specify “SCG change” procedure for the UE in NR RRC specification. (Implications on stage 2 description can be checked offline)

7 Apply same signalling structure for SRBs and DRBs (including SRB3)

[R2-1711533](file:///C:\Data\3GPP\Extracts\R2-1711533%20-%20TP%20for%20RRCReconfiguration%20Email-99-30.docx) LTE and NR text proposal for RRCConnectionReconfiguration Ericsson discussion Rel-15

=> To be updated based on agreements from email discussion #30.

=> SN release aspect still to be discussed based on contribution.

=> LTE RLC entity reset still to be discussed based on contribution.

=> Location of UL scheduling information still open

=> Can consider comments relating on forward compatibility to other architecture options.

=> Should identify aspects that are not applicable to EN-DC

=> Can clarify (e.g., in field description) fields that are only applicable to EN-DC and won’t be applicable to SA (e.g. EPS bearer ID)

=> Revised in R2-1711967 (Offline discussion #25). Aim is that the TP will be included into the TS after Friday.

[R2-1711967](file:///C:\Data\3GPP\Extracts\R2-1711967%20-%20TP%20for%20RRCReconfiguration%20Email-99-30.docx) LTE and NR text proposal for RRCConnectionReconfiguration Ericsson discussion Rel-15

=> Endorsed to be merged into the TS.

[R2-1710509](file:///C:\Data\3GPP\Extracts\R2-1710509%20-%20Signalling%20of%20security%20parameters.docx) Signalling of security parameters Ericsson discussion Rel-15 NR\_newRAT-Core

=> Not treated. Covered by email discussion.

[R2-1710616](file:///C:\Data\3GPP\Extracts\R2-1710616-SN%20Release_v01.docx) RRC signalling for SN release Intel Corporation discussion Rel-15 NR\_newRAT-Core

- Intel explain from the TP that the proposal is to do this from the SN side and SN builds the container to be carried by the MN, but think that final decision should be on the MN side.

- Ericsson think the proposal could be justified to avoid the MN to have to construct the NR message in order to release the SCG.

- Ericsson thinks all the release fields are hidden in the NR PDU and it is not so nice to duplicate these outside the PDU as well.

=> Offline discussion to conclude whether anything additional is needed for the SN release case. (Offline discussion #26, Intel)

[R2-1712012](file:///C:\Data\3GPP\Extracts\R2-1712012-Summary_report_on_RRC_signalling_for_SN_release_v01.docx) Offline Discussion#26: RRC signaling for SN release Intel Corporation discussion Rel-15 NR\_newRAT-Core

Agreements

1: MN provides an indication in the LTE RRCConnectionReconfiguration message to release the SCG configuration (e.g. SCellGroupRelease) to the UE

2: The UE needs to be explicitly signalled per SCG bearer in a Radio Bearer Configuration container whether SCG (split) bearer is released or changed to MCG bearer.

3: MN populates the radio bearer configuration to release the SCG bearer or change SCG bearer to MCG bearer.

[R2-1711820](file:///C:\Data\3GPP\Extracts\R2-1711820%20%20Explicit%20indicator%20to%20handle%20the%20LTE%20RLC%20entity%20in%20EN-DC.doc) Explicit indicator to handle the LTE RLC entity in EN-DC Samsung R&D Institute India discussion Rel-15

- Ericsson wonder if on the LTE side it is possible to release and add the RLC entity, by releasing and adding the DRB, which is now the logical channel as PDCP has been extracted. Samsung think the text for this will become quite complex.

- Ericsson think that if mobility control info is used to trigger MAC reset then this will also re-establish RLC.

- Nokia think the procedures would be simpler and also aligned to NR if we add an RLC re-establish indicator.

- Huawei think it is important to have this indicator.

Agreements

1: For EN-DC, during SCG change scenario and bearer type change scenario, LTE RRC reconfiguration message has explicit indicator to re-establish the MCG RLC entity of split bearer.

[R2-1710933](file:///C:\Data\3GPP\Extracts\R2-1710933_Discussion%20on%20the%20configuration%20of%20SDAP.docx) Discussion on the configuration of SDAP vivo discussion Rel-15 NR\_newRAT-Core [R2-1708500](file:///C:\Data\3GPP\Extracts\R2-1708500_Discussion%20on%20the%20configuration%20of%20SDAP.docx)

moved from 10.4.1.3.2 to 10.4.1.2.1

[R2-1710510](file:///C:\Data\3GPP\Extracts\R2-1710510%20-%20Cell%20specific%20parameter%20handling%20in%20EN-DC.docx) Cell specific parameter handling in EN-DC Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711137](file:///C:\Data\3GPP\Extracts\R2-1711137-%20Preserving%20NR%20PDCP%20version.docx) Preserving NR PDCP version Ericsson discussion Rel-15 NR\_newRAT-Core

##### 10.4.1.3.2 Connection reconfiguration message - L2 parameters

L2 parameter content of RRCConnectionReconfiguration message.

Including output from email discussion [99#23][NR] L2 Parameters (Huawei)

This agenda item is relevant to EN-DC completion.

[R2-1710587](file:///C:\Data\3GPP\Extracts\R2-1710587%20L2%20parameters_summary.doc) L2 parameter content of RRCConnectionReconfiguration message Huawei (Rapporteur) discussion Rel-15 NR\_newRAT-Core

=> Location of UL scheduling information still open

=> Aim to complete the SDAP configuration as much as possible by Dec 17.

=> SDAP config per DRB configures the QoS flows of the PDU session which are mapped to it.

=> TP revised in R2-1711968 (Offline discussion #27). Aim is that the TP will be included into the TS after Friday.

[R2-1711968](file:///C:\Data\3GPP\Extracts\R2-1711968%20TP%20for%20L2%20parameters.doc) [TP for L2 parameter contents] Huawei (Rapporteur) pCR Rel-15 NR\_newRAT-Core

=> Endorsed to be merged into the TS

[R2-1710615](file:///C:\Data\3GPP\Extracts\R2-1710615-SDAPsignalling.docx) SDAP configuration in RRC message Intel Corporation discussion Rel-15 NR\_newRAT-Core

- Ericsson explain that in the case that SDAP is not configured then we instead have the EPS bearer ID. So we could have a choice between SDAP and EPS bearer ID depending on the core.

=> No SDAP layer for EN-DC in the configuration signalling or in the user plane stack.

Late

R2-1711809 Considerations on support of supplementary uplink frequency CMCC discussion Rel-15 NR\_newRAT-Core

##### 10.4.1.3.3 Connection reconfiguration message - L1 parameters

L1 parameter content of RRCConnectionReconfiguration message.

Including output from email discussion [99#22][NR] L1 parameters (Ericsson)

This agenda item is relevant to EN-DC completion.

[R2-1711524](file:///C:\Data\3GPP\Extracts\R2-1711524%20-%20RAN2-99-22%20NR%2038331%20TP%20L1%20parametrs.docx) [RAN2-99#22] TP on L1 parameters for 38.331 Ericsson discussion Rel-15 NR\_newRAT-Core

=> Add FFS to indicate that field naming needs to be finalised also considering input from UP session and RAN1

=> Comments invited on any details (can either be addressing during this week or can be marked FFS if cannot be resolved). Attempt to capture the reason behind decisions for future reference.

=> Revised in R2-1711969 (Offline discussion #28). Aim is that the TP will be included into the TS after Friday.

=> Scope of email discussions for ongoing work to be confirmed on Friday.

* [99bis#xx][NR] TS 38.331 (Ericsson)

Phase 1 to merge TPs from this meeting (1 week)

Phase 2 to continue to progress draft TS. (by Thursday 2017-11-09), addressing any aspects not specifically in the scope of another email (e.g. RRM, L2, L1 parameters). To include:

- updating to capture agreements from this meeting

- attempt to address identified FFS points

- identify FFS points that need online discussion at next meeting

Phase 3 to merge outcome of other email discussion into updated draft TS (as soon as possible after Thursday 2017-11-09)

Intended outcome: TP (changes to draft TS) for next meeting

Deadline: As soon as possible after Thursday 2017-11-09

* [99bis#xx][NR] Reconfiguration and bearer handling (Ericsson)

After merge of TPs from this meeting in draft TS, continue to progress the L1 parameters ASN.1 and corresponding field descriptions and procedure text. To include:

- updating to capture agreements from this meeting

- attempt to address identified FFS points

- identifiy FFS points that need online discussion at next meeting

Intended outcome: TP (changes to draft TS) for next meeting

Deadline: Thursday 2017-11-09

* [99bis#xx][NR] L2 parameters in RRC (Huawei)

After merge of TPs from this meeting in draft TS, continue to progress the L2 parameters ASN.1 and corresponding field descriptions and procedure text. To include:

- updating to capture agreements from this meeting

discuss required parameters and value ranges (starting point those in TP)

- attempt to address identified FFS points

- identifiy FFS points that need online discussion at next meeting

Intended outcome: TP (changes to draft TS) for next meeting

Deadline: Thursday 2017-11-09

* [99bis#xx][NR] L1 parameters in RRC (Ericsson)

After merge of TPs from this meeting in draft TS, continue to progress the L1 parameters ASN.1 and corresponding field descriptions and procedure text. To include:

- updating to capture agreements from this meeting

- updating to capture latest information from RAN1

- attempt to address identified FFS points

- identifiy FFS points that need online discussion at next meeting

Intended outcome: TP (changes to draft TS) for next meeting

Deadline: Thursday 2017-11-09

* [99bis#xx][NR] RRM (Ericsson)

After merge of TPs from this meeting in draft TS, continue to progress RRM, ASN.1 and corresponding field descriptions and procedure text. To include:

- updating to capture agreements from this meeting

- attempt to address identified FFS points

- identifiy FFS points that need online discussion at next meeting

Intended outcome: TP (changes to draft TS) for next meeting

Deadline: Thursday 2017-11-09

[R2-1711969](file:///C:\Data\3GPP\Extracts\R2-1711969%20-%20RAN2-99-22%20NR%2038331%20TP%20L1%20parametrs.docx) [RAN2-99#22] TP on L1 parameters for 38.331 Ericsson discussion Rel-15 NR\_newRAT-Core

=> Endorsed. Can be merged into draft TS

[R2-1711060](file:///C:\Data\3GPP\Extracts\R2-1711060%20Multiband%20and%20variable%20RXTX%20distance%20support%20in%20NR.docx) Multiband and variable RX/TX support and NS signaling in NR Nokia discussion Rel-15 NR\_newRAT-Core

=> Noted

##### 10.4.1.3.4 Connection control procedures for EN-DCs

Stage 3 details related to SCG SRB, split SRB, etc.

This agenda item is relevant to EN-DC completion.

SRB3

[R2-1710862](file:///C:\Data\3GPP\Extracts\R2-1710862%20RRC%20Reconfiguration%20Message%20on%20SRB3.docx) RRC Reconfiguration Message on SRB3 MediaTek Inc. discussion

- Huawei is ok with the principle but the details need some more discussion.

- Qualcomm think that SRB3 could transmit the SCG change. Huawei think that SCG change or SN change would always involve the MN.

- MediaTek think it is important for implementation that it is clear from RRC spec what the UE should expect over SRB3.

- CATT think the UE should be able to receive any message over SRB1. What matters for the UE is what can be reconfigured over SRB3.

Agreements

1 Clarify in the spec which reconfigurations the UE must be able to handle when received via SRB3:

i/ the NR measurement configuration

ii/ NR MAC, RLC and PDCP configuration

iii/ NR physical layer reconfiguration. The physical layer reconfiguration includes the modification of physical parameters used by PSCell or SCell(s). It also includes add/release of NR SCell(s).

iv/ NR RLF Timer and Constants

v/ PSCell change that doesn't impact MN

FFS: Which PSCell change without security key change will involve the MN

[R2-1710618](file:///C:\Data\3GPP\Extracts\R2-1710618-SN%20Modification_v00.docx) Possible reconfiguration over SCG SRB or SBR3 Intel Corporation discussion Rel-15 NR\_newRAT-Core

=> Not treated as covered by previous paper.

[R2-1710622](file:///C:\Data\3GPP\Extracts\R2-1710622-SRB3-details.docx) Further details on SRB3 handling Intel Corporation discussion Rel-15 NR\_newRAT-Core

=> Noted

[R2-1710623](file:///C:\Data\3GPP\Extracts\R2-1710623-SRB3-intro.docx) TP for introduction of SRB3 in 38.331 Intel Corporation discussion Rel-15 NR\_newRAT-Core

Default configs

[R2-1710278](file:///C:\Data\3GPP\Extracts\R2-1710278.docx) Specified and default configurations for SRB3 and SRB1S SRB2S CATT discussion Rel-15 NR\_newRAT-Core

Agreements

1: The LCID of SRB1S/SRB2S should be the same with that of NR SRB1/SRB2 which can be 1/2 to align with the SRB ID. The LCID of the SRB3 should be 3.

2: The default configurations of SRB1S/SRB2S should be the same with that of NR SRB1/SRB2. The default configurations of NR SRB1 and SRB2 should be same except for the priority. The default configurations of the SRB3 should be the same with that of SRB1S.

[R2-1711098](file:///C:\Data\3GPP\Extracts\R2-1711098%20Default%20configuration%20of%20SRB1S%20and%20SRB2S%20in%20NR%20side%20for%20EN-DC.doc) Default configuration of SRB1S and SRB2S in NR side for EN-DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

PDCP version for SRB1/2

[R2-1711773](file:///C:\Data\3GPP\Extracts\R2-1711773_PDCP%20version%20for%20SRBs.doc) PDCP version for SRB1 and SRB2 Samsung Electronics GmbH discussion

- Intel wonder if the intent is to only split one of the SRBs. Samsung explain this is mainly just for simplification.

- Qualcomm doesn’t see any value in the flexibility.

Agreement

1: Same PDCP version is configured for SRB1 and SRB2

[R2-1710511](file:///C:\Data\3GPP\Extracts\R2-1710511%20-%20PDCP%20version%20for%20SRB1%20and%20SRB2.docx) PDCP version for SRB1&2 Ericsson discussion Rel-15 NR\_newRAT-Core

Other

[R2-1711530](file:///C:\Data\3GPP\Extracts\R2-1711530%20-%20RRC%20processing%20delays%20in%20NR%20and%20EN-DC.docx) RRC processing delays in NR and EN-DC Ericsson discussion Rel-15 NR\_newRAT-Core

- Vodafone support the proposal to shorten processing times.

- Intel think that the coordination between the 2 sides on the UE may result in a longer processing time than LTE today.

- Ericsson think the combined procedure should not be more than 15ms, preferably shorter.

* [99bis#xx][NR] RRC reconfiguration processing time for EN-DC (Ericsson)

To discuss the processing times for EN-DC and for some applicable cases in NR. Includes processing times for messages via SRB1 with embedded NR message and messages via SRB3. Processing times are for EN-DC capable UEs and not for LTE only UEs.

Intended outcome: Report to next meeting

Deadline: Thursday 2017-11-09

[R2-1710617](file:///C:\Data\3GPP\Extracts\R2-1710617-configuration_error.docx) UE handling of combined configuration messages Intel Corporation discussion Rel-15 NR\_newRAT-Core

moved from 10.4.1.3.1 to 10.4.1.3.4

[R2-1711053](file:///C:\Data\3GPP\Extracts\R2-1711053%20SIB%20handling%20in%20NR%20during%20handover.docx) SIB acquisition in connected mode and handover with BWP Nokia discussion Rel-15 NR\_newRAT-Core

[R2-1711774](file:///C:\Data\3GPP\Extracts\R2-1711774_Duplicated%20UL%20MCG%20SRB_r2.doc) Control of UL Split or Duplicate MCG SRB Samsung Electronics GmbH discussion [R2-1709163](file:///C:\Data\3GPP\Extracts\R2-1709163_Duplicated%20UL%20MCG%20SRB_r2.doc)

##### 10.4.1.3.5 Connection control message harmonisation

Harmonisation/merging of messages to be used for different procedures, UE identity and other message content to be used in different cases, etc.

This agenda item is not relevant to EN-DC completion but will be treated if time allows.

Maximum 1 tdoc per company

[R2-1711486](file:///C:\Data\3GPP\Extracts\R2-1711486%20Harmonization%20of%20the%20RRC%20procedures.doc) Harmonization of the RRC procedures Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core [R2-1709220](file:///C:\Data\3GPP\Extracts\R2-1709220%20Harmonization%20of%20the%20RRC%20procedures.doc)

[R2-1710093](file:///C:\Data\3GPP\Extracts\R2-1710093_nr_rrc_harmonization_v07.doc) Further discussion on merging NR RRC messages Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1710279](file:///C:\Data\3GPP\Extracts\R2-1710279.docx) RRC connection re-establishment and resume procedures in NR CATT discussion Rel-15 NR\_newRAT-Core [R2-1707896](file:///C:\Data\3GPP\Extracts\R2-1707896.docx)

[R2-1710593](file:///C:\Data\3GPP\Extracts\R2-1710593_NR_RRC-common.doc) NR common RRC procedures Intel Corporation discussion Rel-15 NR\_newRAT-Core [R2-1708800](file:///C:\Data\3GPP\Extracts\R2-1708800_NR_commonResumeReestabl.doc)

[R2-1710670](file:///C:\Data\3GPP\Extracts\R2-1710670%20(R15%20NR%20WI%20AI104135%20ConnectionControlHarmonization).doc) Harmonization of Connection Control Procedures and Messages InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710822](file:///C:\Data\3GPP\Extracts\R2-1710822_Unified_Connection.doc) Open issues for connection control Qualcomm Incorporated discussion [R2-1709636](file:///C:\Data\3GPP\Extracts\R2-1709636_Connection_Control.doc)

[R2-1710826](file:///C:\Data\3GPP\Extracts\R2-1710826%20-%20Harmonizing%20of%20the%20RRC%20procedures.docx) Harmonizing RRC Connection control messages and procedures Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711071](file:///C:\Data\3GPP\Extracts\R2-1711071%20Harmonization%20of%20RRC%20Connection%20Control%20management%20procedures.doc) Harmonization of RRC Connection Control management procedures Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711150](file:///C:\Data\3GPP\Extracts\R2-1711150_Simplification%20of%20RRC%20messages%20for%20NR.doc) Simplification of RRC messages for NR LG Electronics France discussion Rel-15 NR\_newRAT-Core [R2-1709113](file:///C:\Data\3GPP\Extracts\R2-1709113_Simplification%20of%20RRC%20messages%20for%20NR.doc)

[R2-1711747](file:///C:\Data\3GPP\Extracts\R2-1711747%20Harmonization%20of%20the%20RRC%20connection%20management%20procedures.doc) Harmonization of the RRC connection management procedures NTT DOCOMO INC. discussion Rel-15

Late

R2-1711480 Discussion on additional enhancement for INACTIVE to IDLE state transition procedure OPPO discussion [R2-1707084](file:///C:\Data\3GPP\Extracts\R2-1707084_Discussion on UE Release from INACTIVE to IDLE.doc)

##### 10.4.1.3.6 Connection control email

Output from email discussion [99#29][NR] Connection Control (Intel)

This agenda item is not relevant to EN-DC completion but will be treated if time allows.

Maximum 1 tdoc per company

[R2-1710594](file:///C:\Data\3GPP\Extracts\R2-1710594_EmailDisc-29_RRC_msg4.doc) Email discussion report on [99#29][NR] Connection Control Intel Corporation discussion Rel-15 NR\_newRAT-Core

=> Revised to [R2-1711839](file:///C:\Data\3GPP\Extracts\R2-1711839_EmailDisc-29_RRC_msg4__v2.doc)

[R2-1711839](file:///C:\Data\3GPP\Extracts\R2-1711839_EmailDisc-29_RRC_msg4__v2.doc) Email discussion report on [99#29][NR] Connection Control Intel Corporation discussion Rel-15 NR\_newRAT-Core

Show of hands:

1 - A UE in INACTIVE, trying to resume the RRC connection, cannot receive MSG4 sent over SRB1 with at least integrity protection to move the UE into IDLE. [7]

2- A UE in INACTIVE, trying to resume the RRC connection, can receive MSG4 sent over SRB1 with at least integrity protection to move the UE into IDLE. [10]

Show of hands:

1 - A UE in INACTIVE, trying to resume the RRC connection, cannot receive MSG4 sent over SRB0 without integrity protection to move the UE into IDLE.[11]

2- A UE in INACTIVE, trying to resume the RRC connection, can receive MSG4 sent over SRB0 without integrity protection to move the UE into IDLE.[9]

Agreements

1 A UE in INACTIVE, trying to resume an RRC connection, can receive MSG4 sent over SRB0 (without Integrity protection) to move the UE back into INACTIVE (i.e. rejected with wait timer).

2 INACTIVE related parameters/configuration should not be updated by a MSG4 sent over SRB0 (as it is a non-protected message).

3 A UE in INACTIVE, trying to resume an RRC connection, can receive MSG4 sent over SRB1 with at least integrity protection to move the UE back into INACTIVE (i.e. not rejected). (RNA update use case)

4 The MSG4 (i.e. not rejected) of agreement 3 can configure at least the same parameters as can be configured by the message that moves the UE to inactive (e.g. I-RNTI, RNA, RAN DRX cycle, periodic RNAU timer, redirect carrier frequency, for inactive mode mobility control information or reselection priority information). (security framework are to be discussed independently)

5 A UE in INACTIVE, trying to resume the RRC connection, can receive MSG4 sent over SRB1 with at least integrity protection to move the UE into IDLE.

5.1 This MSG4 (i.e. SRB1 release to IDLE) can carry same information as RRC Connection release kind of message (e.g. priority, redirect information, idle mode mobility control information, cause and idle mode re-selection information).

6 UE in INACTIVE, trying to resume an RRC connection, cannot receive MSG4 sent over SRB0 (without Integrity protection) to move the UE into IDLE to stay in IDLE (i.e. not precluding use of fallback to RRC Connection Establishment).

=> Send an LS to SA3 to check whether there is any security concern with proposal 1 and 2 e.g. due to DoS attach (i.e. rejection to INACTIVE by a fake gNB multiple successive times, and/or with long wait time) and replay attack (i.e. UE transmitting the same MAC-I multiple times). Can check is similar question was asked in relation to light connection and if so then reference the previous LS. Draft LS in R2-1712019 (Offline discussion #49, Intel)

[R2-1712019](file:///C:\Data\3GPP\Extracts\R2-1712019-LS-Inactive-security_v3.docx) [DRAFT] [LS to SA3 to check whether there are any security concerns with proposal 1] Intel LS out Rel-15 NR\_newRAT-Core To:SA3

=> Approved in R2-1712052

[R2-1710240](file:///C:\Data\3GPP\Extracts\R2-1710240-Discussion%20on%20Left%20Issues%20for%20RRC%20State%20Transitions.doc) Discussion on Left Issues for RRC State Transitions OPPO discussion

[R2-1710280](file:///C:\Data\3GPP\Extracts\R2-1710280.docx) Open Issues on Connection Control Procedure CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710638](file:///C:\Data\3GPP\Extracts\R2-1710638_draft-LS-NR_security_msg4.doc) [DRAFT] LS on security handling of MSG4 during INACTIVE to CONNECTED transition Intel Corporation LS-out Rel-15 NR\_newRAT-Core

[R2-1710680](file:///C:\Data\3GPP\Extracts\R2-1710680%20(R15%20NR%20WI%20A104136%20Open%20Issues%20from%20CC%20Email%20Discussion).doc) Open Issues on Email Discussion and Draft LS to SA3 InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710934](file:///C:\Data\3GPP\Extracts\R2-1710934_Remaining%20FFS%20Issues%20on%20RRC%20Connection%20Control.doc) Remaining FFS Issues on RRC Connection Control vivo discussion Rel-15 NR\_newRAT-Core

[R2-1711484](file:///C:\Data\3GPP\Extracts\R2-1711484%20RRC%20Reject.doc) RRC Reject on SRB0 Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

[R2-1711664](file:///C:\Data\3GPP\Extracts\R2-1711664%20Remaining%20issues%20of%20RRC%20connection%20control%20from%20INACTIVE.docx) Remaining issues of RRC connection control from INACTIVE Samsung Electronics discussion Rel-15

Withdrawn

R2-1710681 Draft LS to SA3 on Connection Control InterDigital discussion Rel-15 NR\_newRAT-Core Withdrawn

##### 10.4.1.3.7 Other (for non EN-DC)

Other aspects of connection control procedures, state transitions, etc that are not relevant for EN-DC (other aspects relevant for EN-DC should be submitted to 10.4.1.3.2)

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710199](file:///C:\Data\3GPP\Extracts\R2-1710199%20-%20Size%20of%20MSG3%20in%20NR.docx) Size of MSG3 in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710200](file:///C:\Data\3GPP\Extracts\R2-1710200%20-%20Draft%20LS%20on%20MSG3%20size.doc) Draft LS on MSG3 size Ericsson LS out Rel-15 NR\_newRAT-Core

[R2-1710235](file:///C:\Data\3GPP\Extracts\R2-1710235-Discussion%20on%20Batch%20Release%20of%20INACTIVE%20UEs.doc) Discussion on Batch Release of INACTIVE UEs OPPO discussion

[R2-1710313](file:///C:\Data\3GPP\Extracts\R2-1710313.docx) Consideration on the relation between access categories and establishment causes CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710569](file:///C:\Data\3GPP\Extracts\R2-1710569%20Remaining%20issues%20on%20State%20transition%20between%20RRC%20CONNECTED%20and%20INACTIVE.doc) Remaining issues on State transition between RRC CONNECTED and INACTIVE Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710570](file:///C:\Data\3GPP\Extracts\R2-1710570%20Timer%20based%20state%20transition%20from%20CONNECTED%20to%20INACTIVE.doc) Timer based state transmission from CONNECTED to inactive Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710666](file:///C:\Data\3GPP\Extracts\R2-1710666%20(R15%20NR%20WI%20A104137%20Open%20Issues%20on%20Connection%20Control%20Procedures).doc) Open Issues on Connection Control Procedures InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710671](file:///C:\Data\3GPP\Extracts\R2-1710671%20(R15%20NR%20WI%20AI104137%20TimerBasedInactivation).doc) Timer-based Inactivation for NR InterDigital discussion Rel-15 NR\_newRAT-Core [R2-1708740](file:///C:\Data\3GPP\Extracts\R2-1708740%20(R15%20NR%20WI%20AI104135%20TimerBasedInactivation).doc)

[R2-1710832](file:///C:\Data\3GPP\Extracts\R2-1710832%20-%20Text%20proposal%20to%2038331%20on%20UE%20states.docx) TP to 38.331 on RRC states Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710833](file:///C:\Data\3GPP\Extracts\R2-1710833%20-%20TP%20to%2038331%20Connection%20Control.docx) Text proposal to RRC connection control Ericsson discussion Rel-15 NR\_newRAT-Core

R2-1711019 UE capability in NR RRC connection request Sony discussion Rel-15 NR\_newRAT-Core [R2-1709507](file:///C:\Data\3GPP\Extracts\R2-1709507%20UE%20capability%20in%20NR%20RRC%20connection%20request.doc) Withdrawn

[R2-1711023](file:///C:\Data\3GPP\Extracts\R2-1711023_user%20plane%20integrity%20check%20and%20RAN%20sharing.doc) RAN sharing and user plane integrity check Sony discussion Rel-15 NR\_newRAT-Core

[R2-1711035](file:///C:\Data\3GPP\Extracts\R2-1711035%20Consideration%20on%20the%20triggers%20of%20transiting%20UE%20from%20INACTIVE%20to%20IDLE.docx) Consideration on the triggers of transiting UE from INACTIVE to IDLE Beijing Xiaomi Mobile Software discussion Rel-15 [R2-1709169](file:///C:\Data\3GPP\Extracts\R2-1709169%20Consideration%20on%20the%20triggers%20of%20transiting%20UE%20from%20INACTIVE%20to%20IDLE.docx)

[R2-1711072](file:///C:\Data\3GPP\Extracts\R2-1711072%20UE%20behaviour%20upon%20leaving%20RRC_CONNECTED%20state.doc) UE behaviour upon leaving RRC\_CONNECTED state Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711076](file:///C:\Data\3GPP\Extracts\R2-1711076.doc) State transition from RRC\_CONNECTED to RRC\_INACTIVE ASUSTeK discussion Rel-15 NR\_newRAT-Core [R2-1709058](file:///C:\Data\3GPP\Extracts\R2-1709058%20State%20transition%20from%20RRC_CONNECTED%20to%20RRC_INACTIVE.doc)

[R2-1711101](file:///C:\Data\3GPP\Extracts\R2-1711101%20Consideration%20on%20RRC%20connection%20establishment%20procedure.doc) Consideration on RRC connection establishment procedure Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711102](file:///C:\Data\3GPP\Extracts\R2-1711102%20%5bDRAFT%5d%20LS%20to%20RAN1%20on%20MSG3%20size.doc) Draft LS to RAN1 on MSG3 size Huawei, HiSilicon LS out Rel-15 NR\_newRAT-Core

[R2-1711103](file:///C:\Data\3GPP\Extracts\R2-1711103%20RRC%20Establishment%20Cause.doc) RRC Establishment Cause Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708406](file:///C:\Data\3GPP\Extracts\R2-1708406%20RRC%20Establishment%20Cause.doc)

[R2-1711104](file:///C:\Data\3GPP\Extracts\R2-1711104%20RRC%20support%20of%20multiple%20numerologies.doc) RRC Support of Multiple Numerologies Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711200](file:///C:\Data\3GPP\Extracts\R2-1711200%20RAN2%20impact%20of%20non-contiguous%20CA.docx) RAN2 impact of non-contiguous CA Samsung discussion Rel-15

[R2-1711201](file:///C:\Data\3GPP\Extracts\R2-1711201%20Draft%20reply%20LS%20to%20RAN1%20on%20non-contiguous%20CA.doc) Draft reply LS to RAN1 on non-contiguous CA Samsung LS out Rel-15

[R2-1711384](file:///C:\Data\3GPP\Extracts\R2-1711384%20Configurable%20cause%20for%20NR.doc) Configurable cause for NR LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708457](file:///C:\Data\3GPP\Extracts\R2-1708457%20Configurable%20cause%20for%20NR.doc)

[R2-1711410](file:///C:\Data\3GPP\Extracts\R2-1711410.doc) SN continuation on MN failure in EN-DC operation Samsung R&D Institute UK discussion

[R2-1711458](file:///C:\Data\3GPP\Extracts\R2-1711458%20NR%20RRC%20connection%20request.doc) NR RRC connection request Sony discussion Rel-15 NR\_newRAT-Core

[R2-1711483](file:///C:\Data\3GPP\Extracts\R2-1711483%20RRC%20connection%20release%20and%20inactivation%20procedures.docx) RRC connection release and inactivation procedures Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

[R2-1711506](file:///C:\Data\3GPP\Extracts\R2-1711506%20on%20Caputuring%20SA%20related%20agreements%20in%20NR%20RRC.docx) Capturing SA related agreements in 38.331 Samsung Telecommunications discussion Rel-15

[R2-1711513](file:///C:\Data\3GPP\Extracts\R2-1711513%20Enhance%20RRC%20configuration%20procedure%20in%20NR.doc) Enhance RRC configuration procedure in NR Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711515](file:///C:\Data\3GPP\Extracts\R2-1711515%20Open%20issues%20on%20security%20aspects%20for%20NR%20RRC%20connection%20control.doc) Open issues on security aspects for NR RRC connection control Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711623](file:///C:\Data\3GPP\Extracts\R2-1711623_NREstablishmentCause.docx) Considerations on Establishment cause for NR KDDI Corporation discussion Rel-15 [R2-1709655](file:///C:\Data\3GPP\Extracts\R2-1709655_NREstablishmentCause.docx)

[R2-1711797](file:///C:\Data\3GPP\Extracts\R2-1711797%20Information%20to%20include%20within%20RRC%20Activation%20and%20Inactivation.docx) Information to include within RRC Activation and Inactivation Samsung Electronics discussion Rel-15 NR\_newRAT-Core [R2-1709570](file:///C:\Data\3GPP\Extracts\R2-1709570%20Information%20to%20include%20within%20RRC%20Activation%20and%20Inactivation.docx)

#### 10.4.1.4 RRM measurements

No documents should be submitted to 10.4.1.4. Please submit to 10.4.1.4.x.

##### 10.4.1.4.1 RRM TP

Including output from email discussion [99#32][NR] TP on RRM (Ericsson)

0 tdoc per company (i.e. email discussion output from rapporteur only in this AI)

This agenda item is relevant to EN-DC completion

[R2-1710839](file:///C:\Data\3GPP\Extracts\R2-1710839%20RAN2-99-32-Email%20Discussion%2032%20TP%20on%20RRM-summary.doc) Summary of email discussion [99#32][NR] TP on RRM Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711963](file:///C:\Data\3GPP\Extracts\R2-1711963%20RAN2-99-32-Email%20Discussion%2032%20TP%20on%20RRM-summary.doc) Summary of email discussion [99#32][NR] TP on RRM Ericsson discussion Rel-15 NR\_newRAT-Core

Agreements

1: Measurement configuration can be provided in RRCConnectionReconfiguration and in RRCConnectionResume (or, as highlighted by 3 companies, an equivalent message from network to the UE used to resume the RRC connection from RRC\_INACTIVE to RRC\_CONNECTED).

2: In Rel-15, the only inter-RAT measurements that can be configured are E-UTRA measurements.

3: As in LTE, Measurement configuration is used for CGI reporting. The ASN.1 structure is FFS (after December).

4: Network can configure the RS type for s-Measure.

FFS AllowInterruptions.

FFS speed-based TTT scaling (to be discussed after December)

FFS alternativeTimeToTrigger (to be discussed after December)

5 The UE shall perform RSRP, RSRQ measurements for each serving cell. FFS whether SINR is always measured on serving cells or is configured by the network.

6 One RS type for serving cell measurement reporting and neighbour cell measurement reporting is configured in one reporting config.

7 Configuration of ue-RxTxTimeDiffPeriodical is not supported in Rel-15.

FFS Support T312 timer. (to be discussed after December)

FFS Support SSTD measurement configuration via NR. (to be discussed after December)

8: Measurement reporting shall only be initiated after successful security activation

9 Network can configure the UE to report the best neighbour cells in the serving frequencies.

FFS: Network can configure the UE with different filter coefficients per measurement quantity (e.g. RSRP, RSRQ, SINR or equivalent quantities as defined by RAN1/RAN4), RS Type and beam/cell measurements.

=> Offline discussion to attempt to conclude the terminology to be used for 'beams' e.g. SS/PBCH block index and CSI-RS index. Aim is that at the end of this meeting we have some terminology on which to move forward, even if this is not the final terminology. (Offline discussion #29, Huawei)

[R2-1712020](file:///C:\Data\3GPP\Extracts\R2-1712020.docx) Summary of offline discussion #29: Terminology for beam Huawei (rappporteur)

=> Merge the TP into the RRM TP using the term beam.

=> Add a definition of the term 'beam' within the scope of RAN2 specs

=> Add a note that we will align this definition when RAN1/4 have stabilised their terminology.

=> Offline discussion to progress the FFS on filter coefficients. (Offline discussion #30, MediaTek)

- Update from offline: Different filter coeffs can be configured for different measurement quantities and for different RS type and also for cell and beam reporting. 2 sets of coefficient can be configured in the quantity config and which one to be used is per frequency.

- Samsung is not sure whether there is a problem to just use a single set of coefficients.

- Ericsson think if there is a problem then it would be cleaner if the coeff was in the MO.

- Nokia prefer to have the 2 coefficient should be set and give the network freedom to configure per measurement, not in the MO.

[R2-1710840](file:///C:\Data\3GPP\Extracts\R2-1710840%20RAN2-99-32-Email%20Discussion%2032%20TP%20on%20RRM-ASN.1%20DRAFT.docx) Initial ASN.1 TP on RRM Ericsson discussion Rel-15 NR\_newRAT-Core

=> Comments are invited to be provided offline to be either addressed during this week or to be captured as an FFS requiring more discussion.

=> Merge in the procedures TP that was previously agreed and align field names, etc

=> Revised in R2-1711971 (Offline discussion #31). Aim is that the TP will be included into the TS after Friday.

[R2-1711971](file:///C:\Data\3GPP\Extracts\DRAFT%20R2-1711971%20-%20TP%20on%20RRM-ASN.1%20DRAFT_update-3.docx) Initial ASN.1 TP on RRM Ericsson discussion Rel-15 NR\_newRAT-Core

=> Structure and details can continue to be discussed via the RRM email discussion after it is merged into the draft TS

=> Endorsed to be merged into the draft TS.

R2-1712021 Reminder on reporting of beam level trigger quantities in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1712024](file:///C:\Data\3GPP\RAN2\Docs\R2-1712024.zip) Beam measurement quantity reporting Intel discussion Rel-15 NR\_newRAT-Core

Proposal: Report only ONE quantity (configurable from RSRP, RSRQ or SINR) for beam measurement

* [99bis#xx][NR] Filter coefficients (MediaTek)

Discuss the configuration flexibility available to the network in configuring different filter coefficients and reproting quantities for beam measurements. Needs to discuss the scale of the problem, where the complexity lies, and potential solutions. Can consider the proposal for 2 coefficients in the quantity config.

Outcome of the discussion coud be a draft LS to RAN4 for approval on the first day of the next meeting.

Intended outcome: Report and possible LS to the next meeting.

Deadline: Thursday 2017-11-09

##### 10.4.1.4.2 Measurement report content

Continue to progress the details of the measurement report content.

This agenda item is relevant to EN-DC completion

Maximum 1 tdoc per company

[R2-1710571](file:///C:\Data\3GPP\Extracts\R2-1710571%20Reamining%20issues%20on%20Measurement%20report%20.doc) Remaining issues on Measurement reporting Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

- MediaTek has some concern as the SSB and CSI-RS may have different periods and hence it is not clear what the UE does.

Agreements

1: A single periodical measurement configuration can be configured to report SS based measured results or CSI-RS based measured results (not both).

2 the UE is required to report all applicable cell up to maxCellReport for periodical measurement, where the applicable cells are defined as any neighbour cells detected on the associated frequency except for the cell in black cell list

[R2-1710845](file:///C:\Data\3GPP\Extracts\R2-1710845%20-%20Open%20issues%20related%20to%20the%20contents%20of%20measurement%20report.docx) Open issues related to the contents of measurement report Ericsson discussion Rel-15 NR\_newRAT-Core

=> Offline to look at text in TP and conclude whether RS type for serving cell measurements should be configurable. Also look at agreement 6 from discussion of [R2-1711963](file:///C:\Data\3GPP\Extracts\R2-1711963%20RAN2-99-32-Email%20Discussion%2032%20TP%20on%20RRM-summary.doc) to see if it needs to be reworded.(Offline discussion #39, Ericsson). In R2-1712047

Agreements:

1 The beam level information (beam IDs and/or available measurements results) of PCell/PSCell and SCell is included in the measurement report if the network has configured the UE to do so.

[R2-1712047](C:\\Data\\3GPP\\RAN2\\Docs\\R2-1712047.zip" \o "C:\Data\3GPP\RAN2\Docs\R2-1712047.zip) Summary of Offline #39: configurability of NR serving cell measurements Ericsson

Agreements

1 An MO is provided to the UE for all carriers on which measurements are to be performed (as in LTE)

2 The following text is clarification of agreement 6 from discussion of R2-1711963

- The information provided in reportConfig(s) is used to derive serving cell measurements;

- UE derives what to measure for serving cells using the RS type(s) as identified in the different reportConfig(s);

- UE performs serving cell measurements, even if a serving frequency MO is not linked to any reportConfig/measID;

- As in LTE, UE performs serving cell measurements for all serving frequencies for all measurement quantities (RSRP and RSRQ. FFS SINR);

- If a measurement report is triggered, associated to any measurement ID, the UE includes all available measurement results for PCell and configured SCells.

[R2-1710281](file:///C:\Data\3GPP\Extracts\R2-1710281.docx) Considerations on measurement reporting related to serving cells CATT discussion Rel-15 NR\_newRAT-Core [R2-1707901](file:///C:\Data\3GPP\Extracts\R2-1707901.docx)

[R2-1710433](file:///C:\Data\3GPP\Extracts\R2-1710433%20Remaining%20issues%20on%20measurement%20report%20content.doc) Remaining issues on measurement report content ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710514](file:///C:\Data\3GPP\Extracts\R2-1710514%20Reporting%20both%20NR-SS%20and%20CSI-RS%20in%20the%20measurement%20report.docx) Reporting both NR-SS and CSI-RS in the measurement report PANASONIC R&D Center Germany discussion Rel-15

[R2-1711062](file:///C:\Data\3GPP\Extracts\R2-1711062%20How%20to%20report%20beams,%20neighbour%20and%20serving%20cells.docx) How to report beams, neighbour and serving cells Nokia discussion Rel-15 NR\_newRAT-Core

##### 10.4.1.4.3 Measurement configuration

Continue to progress the details of the measurement report configuration.

Including output from email discussion [99#31][NR] Additional information for SSB and CSI-RS config (Ericsson)

This agenda item is relevant to EN-DC completion

Maximum 1 tdoc per company

[R2-1711336](file:///C:\Data\3GPP\Extracts\R2-1711336%20-SSB%20and%20CSI-RS%20config%20EMAILDISC%2099_31%20NR%20Summary.doc) Email discussion #31: Additional information for SSB and CSI-RS config Ericsson discussion Rel-15 NR\_newRAT-Core

- Samsung wonder why the second timing configuration is needed although understand that RAN1 agreed to have 2. Can't UE just measure on the longer periodicity and how does UE compare cells of different periodicity.

- Ericsson think that if the network knows that periodicity is different for some cells then the time to acquire those could be shorter.

- Intel understand the RAN1 agreement was a single SMTC for the inter-frequency case and 2 SMTC for intra-frequency case. Ericsson have the same understanding and think this would be captured in the field description.

=> TP to be updated based on agreements and FFS from this meeting.

=> Coding of the 2 SMTC configuration options can be considered offline.

=> TP revised in R2-1711989 (Offline discussion #40)

[R2-1711989](file:///C:\Data\3GPP\Extracts\R2-1711989%20-SSB%20and%20CSI-RS%20config%20OFFLINE%2099bis_40.doc) OFFLINE#40 Additional information for SSB and CSI-RS config (Ericsson) Ericsson pCR

=> Discussion of structure can be continued after merge into TS and in comparison with the CSI reources in the L1 parameters TP.

=> Endorsed to be merged into the TS.

[R2-1710935](file:///C:\Data\3GPP\Extracts\R2-1710935_Measurement%20configuration%20for%20measurement%20object.doc) Measurement configuration for measurement object vivo discussion Rel-15 NR\_newRAT-Core

Agreements

1 cellIndividualOffset in MO is enough, no need for the cell offset in report configuration.

FFS How MO can be used in the case of a location of the SSB is distant in frequency from the CSI-RS resources to be measures. (e.g. is it possible to configure an MO with no SSB and to reference another MO for the SSB that provides timing reference, or SSB configuration is provided in every MO, etc)

[R2-1711063](file:///C:\Data\3GPP\Extracts\R2-1711063%20Measurement%20Configuration%20in%20NR%20with%20BWP,%20RRM%20and%20beams.docx) Measurement Configuration in NR with BWP, RRM and beams Nokia discussion Rel-15 NR\_newRAT-Core

=> Offline discussion on introduction of quantity configuration (filters) to be configurable differently for each measurement object (included in scope of offline discussion #30)

=> We will revisit decision on MO containing a centre frequency plus offset to locate the SSB frequency when RAN4 has concluded discussion of the measurement raster.

[R2-1711717](file:///C:\Data\3GPP\Extracts\R2-1711717%20%20CSI-RS%20configuration%20details%20for%20NR%20RRM%20measurement_r1.doc) CSI-RS configuration details for NR RRM measurement Samsung Electronics discussion

=> Check within the RRM TP how the UE identifies the CSI-RS resources from those configured in the MO for the serving cell for the purpose of RRM measurement.

[R2-1710239](file:///C:\Data\3GPP\Extracts\R2-1710239_Discussion%20on%20NR%20S-Measure%20Configuration.doc) Discussion on NR S-Measure Configuration OPPO discussion

[R2-1710431](file:///C:\Data\3GPP\Extracts\R2-1710431%20Discussion%20on%20the%20measurement%20configuration.doc) Discussion on the configuration of the measurement object ZTE Corporation, Sane Chips discussion Rel-15

[R2-1711021](file:///C:\Data\3GPP\Extracts\R2-1711021%20S-measure.doc) S-measure for Connected Mode Measurements Sony discussion Rel-15 NR\_newRAT-Core [R2-1709510](file:///C:\Data\3GPP\Extracts\R2-1709510%20S-measure.doc)

[R2-1711338](file:///C:\Data\3GPP\Extracts\R2-1711338%20-%20Remaining%20details%20for%20MO.docx) Remaining details for MO Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711674](file:///C:\Data\3GPP\Extracts\R2-1711674%20-%20Details%20of%20SS%20Block%20and%20CSI-RS%20Measurement%20Configurations.docx) Details of SS Block and CSI-RS Measurement Configurations AT&T discussion

[R2-1711815](file:///C:\Data\3GPP\Extracts\R2-1711815.docx) Measurement configuration and procedures for CSI-RS Huawei, HiSilicon discussion Rel-15

Withdrawn

R2-1711551 Remaining issues of measurement object configuration for single BWP Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core To:RAN4 Cc:RAN1 Withdrawn

[R2-1710544](file:///C:\Data\3GPP\Extracts\R2-1710544.docx) Measurement configuration and procedures for CSI-RS Huawei, HiSilicon discussion Rel-15 [R2-1708214](file:///C:\Data\3GPP\Extracts\R2-1708214.docx)

##### 10.4.1.4.4 Measurement events

Any additional aspects of measurement events. Potential support for Cx events will be discussed when input has been received from RAN1 on beam management

This agenda item is relevant to EN-DC completion

[R2-1711064](file:///C:\Data\3GPP\Extracts\R2-1711064%20Events%20in%20NR%20for%20any%20reference%20symbol.docx) Events in NR for any reference symbol Nokia discussion Rel-15 NR\_newRAT-Core

=> Noted

[R2-1711339](file:///C:\Data\3GPP\Extracts\R2-1711339%20-%20Measurement%20events%20Cx%20in%20NR.docx) Measurement events Cx in NR Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1709293](file:///C:\Data\3GPP\Extracts\R2-1709293%20-%20Measurement%20events%20Cx%20in%20NR.docx)

[R2-1711347](file:///C:\Data\3GPP\Extracts\R2-1711347-Discussion%20on%20C1C2%20events.doc) Discussion on C1/C2 events Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711509](file:///C:\Data\3GPP\Extracts\R2-1711509%20Reconfiguration%20of%20CSI%20RS%20config%20upon%20intra-cell%20mobility.doc) Reconfiguration beam management CSI RS config upon intra-cell mobility Samsung Telecommunications discussion Rel-15

[R2-1710282](file:///C:\Data\3GPP\Extracts\R2-1710282.docx) Further considerations on events C1 and C2 CATT, OPPO, vivo, MediaTek discussion Rel-15 NR\_newRAT-Core [R2-1707900](file:///C:\Data\3GPP\Extracts\R2-1707900%20Further%20considerations%20on%20events%20C1%20and%20C2_v2.docx)

[R2-1710432](file:///C:\Data\3GPP\Extracts\R2-1710432%20Discussion%20on%20the%20introduction%20of%20SS-block%20specific%20events.doc) Discussion on the introduction of SS-block specific events ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710672](file:///C:\Data\3GPP\Extracts\R2-1710672%20(R15%20NR%20WI%20AI104144%20MeasAxCx).docx) Measurement Configuration with Ax and Cx Events InterDigital discussion Rel-15 NR\_newRAT-Core [R2-1708748](file:///C:\Data\3GPP\Extracts\R2-1708748%20(R15%20NR%20WI%20AI104144%20MeasAxCx).docx)

[R2-1710846](file:///C:\Data\3GPP\Extracts\R2-1710846%20-%20Triggering%20conditions%20for%20A1-A6%20events%20in%20NR.docx) Triggering condition for A1-A6 events in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710847](file:///C:\Data\3GPP\Extracts\R2-1710847%20-%20Impact%20of%20Cell%20Quality%20scaling.docx) Impact of cell quality scaling in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711452](file:///C:\Data\3GPP\Extracts\R2-1711452%20C1%20and%20C2%20events.docx) C1/C2 events support in NR Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core [R2-1708679](file:///C:\Data\3GPP\Extracts\R2-1708679%20C1%20and%20C2%20events_v1.1.docx)

##### 10.4.1.4.5 Measurement gaps

For initial discussion in RAN2 but may be difficult to progress without input from RAN4.

This agenda item is relevant to EN-DC completion

[R2-1711564](file:///C:\Data\3GPP\Extracts\R2-1711564.doc) Measurement capability and measurement gap handling in EN-DC Qualcomm Incorporated discussion Rel-15 NR\_newRAT

[R2-1711751](file:///C:\Data\3GPP\Extracts\R2-1711751_MeasGapENDC.doc) Measurement Gap Configuration signalling design for MR-DC NTT DOCOMO INC. discussion Rel-15 NR\_newRAT-Core

[R2-1710373](file:///C:\Data\3GPP\Extracts\R2-1710373.doc) Considerations for measurement gap for NR in EN DC Spreadtrum Communications discussion Rel-15

[R2-1710375](file:///C:\Data\3GPP\Extracts\R2-1710375.doc) Sliding measurement gap Spreadtrum Communications discussion Rel-15 [R2-1707974](file:///C:\Data\3GPP\Extracts\R2-1707974.doc)

[R2-1710574](file:///C:\Data\3GPP\Extracts\R2-1710574.doc) Measurement gap configuration in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710591](file:///C:\Data\3GPP\Extracts\R2-1710591.doc) Measurement gap in NR Intel Corporation discussion Rel-15 NR\_newRAT-Core [R2-1708780](file:///C:\Data\3GPP\Extracts\R2-1708780.doc)

[R2-1710937](file:///C:\Data\3GPP\Extracts\R2-1710937_Consideration%20on%20measurement%20gap%20in%20NR.doc) Consideration on measurement gap in NR vivo discussion Rel-15 NR\_newRAT-Core

[R2-1711340](file:///C:\Data\3GPP\Extracts\R2-1711340%20-%20Measurement%20gap%20configuration%20in%20NR.docx) Configuration of measurement gap in NR Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1709294](file:///C:\Data\3GPP\Extracts\R2-1709294%20-%20Measurement%20gap%20configuration%20in%20NR.docx)

[R2-1711683](file:///C:\Data\3GPP\Extracts\R2-1711683%20Measurement%20gap%20considering%20beam.doc) Measurement gap considering beam LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1709131](file:///C:\Data\3GPP\Extracts\R2-1709131%20Measurement%20gap%20considering%20beam.doc)

[R2-1710575](file:///C:\Data\3GPP\Extracts\R2-1710575%20Definition%20of%20GAP%20assisted%20measurement%20in%20NR.doc) Definition of GAP assisted measurement in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

moved from 10.4.1.4.6 to 10.4.1.4.5

##### 10.4.1.4.6 Other (for EN-DC)

Other RRM related aspects that are relevant to EN-DC

This agenda item is relevant to EN-DC completion

[R2-1710576](file:///C:\Data\3GPP\Extracts\R2-1710576%20Measurement%20trigger%20type%20in%20NR.doc) Measurement trigger type in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

- Qualcomm wonder whether we need reportCGI to resolve PCI confusion so it is not just for ANR.

=> Include an extension marker in the measurement trigger type mechanism.

[R2-1710801](file:///C:\Data\3GPP\Extracts\R2-1710801%20Measurement%20Quantities%20and%20Cell%20Quality%20Derivation%20in%20NR.docx) Measurement Quantities and Cell Quality Derivation in NR MediaTek Inc. discussion

Agreements

1: Cell-level RSRQ is derived by averaging beam RSRQ measurements, and the averaging is done on linear domain.

2 Introduce RS-SINR based on SS/PBCH block and CSI-RS for L3 mobility. Can be used for triggering Ax events and reporting.

3: Cell-level RS-SINR is derived in the same way as other cell quantities. The averaging is performed by averaging beam RS-SINR measurements, and the averaging is done on linear domain.

[R2-1710797](file:///C:\Data\3GPP\Extracts\R2-1710797%20Miscellaneous%20Issues%20in%20TP%20on%20NR%20RRM.docx) Miscellaneous Issues in TP on NR RRM MediaTek Inc. discussion

[R2-1711508](file:///C:\Data\3GPP\Extracts\R2-1711508%20Avoiding%20deficiencies%20LTE%20measurement%20information%20structure.doc) Measurement configuration and reporting, avoiding LTE deficiencies Samsung Telecommunications discussion Rel-15

[R2-1710844](file:///C:\Data\3GPP\Extracts\R2-1710844%20-%20Further%20details%20related%20beam%20level%20L3%20filtering.docx) Further details related beam level L3 filtering Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710378](file:///C:\Data\3GPP\Extracts\R2-1710378.doc) Measurement requirement issue due to different DRX configurations Spreadtrum Communications discussion Rel-15

[R2-1710577](file:///C:\Data\3GPP\Extracts\R2-1710577%20S-measure%20in%20NR%20and%20in%20LTE%20for%20EN-DC.doc) S-measure in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710842](file:///C:\Data\3GPP\Extracts\R2-1710842%20%20-%20ANR%20framework%20in%20NR.docx) ANR framework in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710843](file:///C:\Data\3GPP\Extracts\R2-1710843%20-%20TP%20on%20ANR%20to%2036.300.docx) TP on inter-RAT ANR to 36.300 for EN-DC Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710861](file:///C:\Data\3GPP\Extracts\R2-1710861%20RLC%20failure%20in%20CA%20duplication.docx) RLC failure in CA duplication MediaTek Inc. discussion NR\_newRAT-Core

[R2-1710882](file:///C:\Data\3GPP\Extracts\R2-1710882%20RRM%20Measurement%20Considering%20Bandwidth%20Part%20Operation.docx) RRM Measurement Considering Bandwidth Part Operation MediaTek Inc. discussion

[R2-1711136](file:///C:\Data\3GPP\Extracts\R2-1711136%20-%20Race%20conditions%20in%20case%20of%20SgNB%20release.docx) Race conditions in case of SgNB release procedures Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708022](file:///C:\Data\3GPP\Extracts\R2-1708022%20-%20Race%20conditions%20in%20case%20of%20SgNB%20release.docx)

[R2-1711138](file:///C:\Data\3GPP\Extracts\R2-1711138%20-%20Measurement%20configurations%20and%20signaling%20for%20fast%20setup.docx) Measurement configurations and signaling for fast setup Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708026](file:///C:\Data\3GPP\Extracts\R2-1708026%20-%20Measurement%20configurations%20and%20signaling%20for%20fast%20setup.docx)

[R2-1711202](file:///C:\Data\3GPP\Extracts\R2-1711202%20RRM%20considerations%20for%20adaptive%20BW.docx) RRM considerations for adaptive bandwidth in NR Samsung discussion Rel-15

[R2-1711203](file:///C:\Data\3GPP\Extracts\R2-1711203%20Reference%20and%20virtual%20SS%20block%20in%20NR_r0.docx) Reference and virtual SS block in NR Samsung discussion Rel-15

[R2-1711468](file:///C:\Data\3GPP\Extracts\R2-1711468%20-%20L3%20filtering%20configuration.docx) L3 filtering configuration Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711479](file:///C:\Data\3GPP\Extracts\R2-1711479%20Measurements%20configuration%20enhancement%20to%20enable%20faster%20SN%20addition%20for%20EN-DC.doc) Measurement configuration enhancement to enable faster SN addition for EN-DC OPPO discussion [R2-1707083](file:///C:\Data\3GPP\Extracts\R2-1707083_Discussion on%20measurement%20configuration%20enhancement%20in INACTIVE%20state.doc)

Withdrawn

R2-1710580 Speed dependent scaling of measurement parameters in EN-DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core To:RAN1 Withdrawn

R2-1710883 RRM Measurement Considering Bandwidth Part Operation MediaTek Inc. discussion Withdrawn

R2-1711054 Intra and Inter-frequency definitions and Measurement gaps in NR Nokia discussion Rel-15 NR\_newRAT-Core Withdrawn

##### 10.4.1.4.7 Inter-RAT measurements

Inter-RAT E-UTRA measurements for the purpose of inter-RAT handover from NR to E-UTRA

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710437](file:///C:\Data\3GPP\Extracts\R2-1710437%20Inter-RAT%20measurements%20for%20NR%20handover%20to%20EUTRAN.doc) Inter-RAT measurements for NR handover to EUTRAN ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710572](file:///C:\Data\3GPP\Extracts\R2-1710572%20On%20the%20need%20for%20Cx%20events.doc) On the need for Cx events Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710573](file:///C:\Data\3GPP\Extracts\R2-1710573%20Remaining%20issues%20on%20Events%20and%20measurements%20for%20handover%20from%20E-UTRA%20to%20NR.doc) Remaining issue on Events and measurements for handover from NR to E-UTRA Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

moved from 10.4.1.4.5 to 10.4.1.4.7

##### 10.4.1.4.8 Other (for non EN-DC)

Other RRM related aspects that are not relevant for EN-DC

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710377](file:///C:\Data\3GPP\Extracts\R2-1710377.doc) ANR for NR Cell Spreadtrum Communications discussion Rel-15

[R2-1710579](file:///C:\Data\3GPP\Extracts\R2-1710579%20Speed%20dependent%20mobility%20in%20connected%20state.docx) Speed dependent mobility in connected state Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710841](file:///C:\Data\3GPP\Extracts\R2-1710841%20-%20Mobility%20states%20and%20speed%20based%20parameter%20scaling%20in%20NR.docx) Mobility states and speed based parameter scaling in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711204](file:///C:\Data\3GPP\Extracts\R2-1711204%20RRM%20measurement%20for%20multiple%20numerologies%20in%20NR.docx) RRM measurement for multiple numerologies in NR Samsung discussion Rel-15

[R2-1711601](file:///C:\Data\3GPP\Extracts\R2-1711601%20-%20Discussion%20on%20s-Measure%20Considering%20NR-SS%20and%20CSI-RS.docx) Discussion on s-Measure Considering NR-SS and CSI-RS Samsung Electronics discussion [R2-1709605](file:///C:\Data\3GPP\Extracts\R2-1709605%20-%20Discussion%20on%20s-Measure%20Considering%20NR-SS%20and%20CSI-RS.docx)

[R2-1711603](file:///C:\Data\3GPP\Extracts\R2-1711603%20-%20Discussion%20on%20Adaptation%20of%20Measurement%20Related%20Parameters%20for%20Different%20Mobility%20Scenarios.docx) Discussion on Adaptation of Measurement Related Parameters for Different Mobility Scenarios Samsung Electronics discussion [R2-1709601](file:///C:\Data\3GPP\Extracts\R2-1709601%20-%20Discussion%20on%20Adaptation%20of%20Measurement%20Related%20Parameters%20for%20Different%20Mobility%20Scenarios.docx)

[R2-1711606](file:///C:\Data\3GPP\Extracts\R2-1711606%20-%20The%20Impact%20of%20Beam%20Sweeping%20on%20RRM%20Measurement.docx) The Impact of Beam Sweeping on RRM Measurement Samsung Electronics discussion [R2-1709606](file:///C:\Data\3GPP\Extracts\R2-1709606%20-%20The%20Impact%20of%20Beam%20Sweeping%20on%20RRM%20Measurement.docx)

#### 10.4.1.5 Mobility

No documents should be submitted to 10.4.1.5. Please submit to 10.4.1.5.x.

##### 10.4.1.5.1 Beam selection for HO access

Including output from email discussion [99#28][NR] Beam selection for HO access (Intel)

This agenda item is relevant to EN-DC completion.

Maximum 1 tdoc per company

[R2-1710588](file:///C:\Data\3GPP\Extracts\R2-1710588.docx) Summary of [NR#28][NR] beam selection for HO access Intel Corporation discussion Rel-15 NR\_newRAT-Core

moved from 10.2.9 to 10.4.1.5.1

Show of hands on order of access of dedicated RACH

1 - UE implementation [16]

2 - Specified order [7]

Agreements

1 Dedicated RACH resources (if provided) where the beam quality measured on the associated NR-SS or CSI-RS is above a threshold are prioritized. Common NR-SS threshold and a dedicated NR-SS/CSI-RS threshold, if required, is configured in handover command.

2 The order to access the dedicated RACH resources is up to UE implementation

=> RAN2 understanding that Common RACH configuration in the HO command should be the same as in system information (not to be captured in any specification)

Proposal 2: Further discussion of the following options for how long should the dedicated RACH resources be prioritised:

• Option 1: UE attempts up to K suitable dedicated RACH resources that satisfy the condition in Q1 where K is configured by the network, if all RACH attempts on dedicated resources fail then it is up to UE implementation to access common or dedicated RACH (K is small and can be 1)

• Option 2: UE attempts all the suitable dedicated RACH that satisfy the condition in Q1 (at least once for each dedicated RACH or as long as it is satisfied), if all RACH attempts on dedicated resources fail then UE may fall back to common RACH resource

• Option 3: Up to UE implementation

- Option 4: UE attempts suitable dedicated RACH as long as one dedicated RACH satisfies condition in Q1. Only if not dedicated RACH meet the criteria then UE may fall back to common RACH resource.

the definition of “suitable” aligns with RAN1 agreements in RAN1#90

[R2-1711461](file:///C:\Data\3GPP\Extracts\R2-1711461%20%20Beam%20selection%20during%20NR%20HO.docx) Beam selection during NR HO Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

[R2-1710082](file:///C:\Data\3GPP\Extracts\R2-1710082_Beam%20Selection%20for%20HO%20Access.doc) Beam Selection for HO Access Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core

[R2-1711365](file:///C:\Data\3GPP\Extracts\R2-1711365-Remaining%20issues%20of%20beam%20selection%20for%20handover%20access.doc) Remaining issues of beam selection for handover access Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1710852](file:///C:\Data\3GPP\Extracts\R2-1710852%20-%20On%20beam%20selection%20during%20hand-over.docx) On beam selection during hand-over, SCG addition and SCG change Ericsson discussion Rel-15 NR\_newRAT-Core

- Above 4 papers discussed together

Option 1: UE initiates the random access procedure using a dedicated RACH configuration if at least one of the dedicated beams is suitable. Further details of the prioritization (such as which dedicated beam should be selected, and how long the UE should prioritize the dedicated RACH configuration etc) are left up to the UE implementation.

Option 2:.

Show of handles

Option 1 [8]

Option 2 [12]

Agreements for handover and PSCell change involving RACH:

1 UE shall not switch to contention-based RACH resources if there are dedicated RACH resources fulfilling the quality threshold specified above

2 Same behaviour as for LTE for T304 and T307

=> MAC and RRC TP relating to these agreements in R2-1711994 (Offline discussion #41, Ericsson)

[R2-1711994](file:///C:\Data\3GPP\Extracts\R2-1711994%20-%20Text%20proposal%20for%20Random%20access%20r1.docx) Offline discussion #41: Text proposal for MAC and RRC relating to beam selection during handover Ericsson pCR Rel-15 NR\_newRAT-Core

* [99bis#xx][NR] TP on beam selection (Ericsson)

Rapporteur can set an earlier deadline to make the MAC TP available earlier for inclusion in MAC TS. (Parameters will be covered by the RRC emails discussions)

Intended outcome: Agreed TP for inclusion in MAC TS

Deadline: Thursday 2017-11-09

[R2-1710263](file:///C:\Data\3GPP\Extracts\R2-1710263%20Beam%20selection%20during%20handover.doc) Beam selection during handover Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710442](file:///C:\Data\3GPP\Extracts\R2-1710442_rachBeams.docx) RACH beam selection for handover access ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710675](file:///C:\Data\3GPP\Extracts\R2-1710675%20(R15%20NR%20WI%20AI104151%20Beam%20selection).doc) Beam Selection for Handover in NR InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710938](file:///C:\Data\3GPP\Extracts\R2-1710938_Clarification%20on%20the%20PRACH%20resource%20selection%20of%20multiple%20beams.docx) Clarification on the PRACH resource selection of multiple beams vivo discussion Rel-15 NR\_newRAT-Core

[R2-1711371](file:///C:\Data\3GPP\Extracts\R2-1711371%20Beam%20selection%20in%20NR%20handover.doc) Beam selection in NR handover Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core

[R2-1711766](file:///C:\Data\3GPP\Extracts\R2-1711766_Discussion%20on%20how%20the%20dedicated%20RACH%20resources%20should%20be%20prioritized_V0.doc) Discussion on how the dedicated RACH resources should be prioritized ITRI discussion NR\_newRAT-Core

[R2-1710589](file:///C:\Data\3GPP\Extracts\R2-1710589.doc) Remaining issue in RACH procedure during handover Intel Corporation discussion Rel-15 NR\_newRAT-Core

moved from 10.2.9 to 10.4.1.5.1

[R2-1711482](file:///C:\Data\3GPP\Extracts\R2-1711482 Beam selection for RACH procedure during HO.doc) Beam selection for RACH procedure during HO OPPO discussion

moved from 10.4.1.3.5 to 10.4.1.5.1

##### 10.4.1.5.2 SCG change for EN-DC

Stage 3 details of SCG change for EN-DC.

This agenda item is relevant to EN-DC completion.

[R2-1710848](file:///C:\Data\3GPP\Extracts\R2-1710848%20-%20Further%20details%20of%20HO%20execution%20in%20NR.docx) Further details of handover execution/SCG change in NR Ericsson discussion Rel-15 NR\_newRAT-Core

=> Noted

##### 10.4.1.5.3 SCG failure for EN-DC

Stage 3 details for SCF failure for EN-DC, including both the NR and LTE aspects of the procedure.

This agenda item is relevant to EN-DC completion.

[R2-1710283](file:///C:\Data\3GPP\Extracts\R2-1710283.docx) open issues for SCG failure CATT discussion Rel-15 NR\_newRAT-Core

P1

- Samsung is not sure that beam measurement results are useful in this case. Can they be reliable and the measurements not changed between when they are performed and when the SCG is selected.

- Nokia think there is value in reporting beam level measurements if available. ZTE also support and the measurements are still fresh as the measurements continue at RLF. Ericsson also support the proposal and think the situation is the same as SeNB addition.

- Samsung wonders what happens with this beam information. What actions can be taken on it or is it used for SON/ANR type purposes. Nokia think it was agreed last time that the measurements are forwarded to the SN. Ericsson also think that we have a decision that the MN can keep change or release the SN and if needed they can be forward.

- Nokia clarify this discussion relates to the SN part.

- CATT explain that the measurements are not intended on one particular purpose. The network may use for different reasons. Ericsson think that the beam measurements are not just relevant for RACH configuration, but also for handover decision

P5

- Huawei prefer a different structure from measurement report so the SN does not need to know the configuration. CATT think they are encoded in NR format from UE to MN. Ericsson think we already agreed that they should be encoded with ARFCN so SN doesn't need to know the configuration.

Agreements

1 Available beam level measurements for serving cell and neighbour cells are included as SN part measurement results in SCGFailureInformation, and can be beam identifier and beam measurement results. What information is reported is determined from the SN measurement configuration.

2 Available beam level measurements for NR neighbour cells are included as MN part measurement results in SCGFailureInformation, and can be beam identifier and beam measurement results. What information is reported is determined from the MN inter-RAT NR measurement configuration.

[R2-1711301](file:///C:\Data\3GPP\Extracts\R2-1711301%20Remaining%20Issues%20for%20UE%20Procedures%20on%20SCG%20Failure.doc) Remaining Issues for UE Procedures on SCG Failure Samsung R&D Institute India discussion

Agreements

1: Define scg-ConfigurationFailure failure type in TS 36.331 for SgNB configuration failure

[R2-1710859](file:///C:\Data\3GPP\Extracts\R2-1710859%20Considerations%20for%20the%20format%20of%20NR%20cell%20measurements%20for%20SCGFailureIndication.docx) Considerations for the format of NR cell measurements for SCGFailureIndication Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

- Ericsson think we already agreed that SCG failure would have 2 parts. Ericsson agree with Ericsson as the MN measurements are not needed in the SN.

- MediaTek also think this is not very necessary.

- CATT think the MN would be able to read some results for frequencies that are not configured by the MN.

=> Can be discuss as part of the discussion of the running CR and RRM TP.

[R2-1711758](file:///C:\Data\3GPP\Extracts\R2-1711758_SCGfailure.doc) Remaining issues on SCG failure handling NTT DOCOMO INC., Nokia, Nokia Shanghai Bell, NEC, Fujitsu discussion Rel-15 NR\_newRAT-Core

moved from 10.2.7 to 10.4.1.5.3

- Ericsson think we already agreed the MN will keep change or release. These proposals seems to go against this decision. Also this is a failure case.

- Nokia think proposal 1 and 2 describe the expected behaviour. Think the MN does have the final decision what to do but before this is should wait for the SN to process the measurement results that were forwarded

- Samsung think it is good in most cases that the MN takes the decision and SN should not have to be involved in every case. Can be considered as an optimisation in future. Huawei have a similar view. MN does not need to wait for the SN.

- IDC support the view of Nokia and think the MN takes the final decision but based on some feedback from the SN.

- CATT think there is nothing that prevents this in the network.

- Intel think that now we have agreed that the configuration is kept in the UE then this optimisation may not be so critical.

=> Noted

[R2-1710331](file:///C:\Data\3GPP\Extracts\R2-1710331%20Handling%20on%20SN%20measurement%20results%20upon%20SCG%20failure.docx) Handling on SN measurement results upon SCG failure ZTE Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1711099](file:///C:\Data\3GPP\Extracts\R2-1711099%20NR%20failure%20handling%20for%20both%20SA%20and%20NSA.doc) NR failure handling for both SA and NSA Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711131](file:///C:\Data\3GPP\Extracts\R2-1711131%20-%20Remaining%20issues%20on%20SCG%20RLF.docx) Remaining issues regarding SCG Failure Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711134](file:///C:\Data\3GPP\Extracts\R2-1711134%20-%20Further%20consideration%20on%20SCell%20RLF%20for%20CA.docx) Further consideration on SCell RLF for CA Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711256](file:///C:\Data\3GPP\Extracts\R2-1711256%20On%20measurement%20results%20in%20SCGFailureInformation.doc) On measurement results in SCGFailureInformation CMCC discussion Rel-15 NR\_newRAT-Core

[R2-1711139](file:///C:\Data\3GPP\Extracts\R2-1711139%20-%20SCG%20reconfiguration%20failure%20handling%20in%20EN-DC%20.docx) SCG reconfiguration failure handling in EN-DC Ericsson discussion Rel-15 NR\_newRAT-Core To:SA2 Cc:CT1, RAN3

moved from 10.4.1.3.4 to 10.4.1.5.3

[R2-1710931](file:///C:\Data\3GPP\Extracts\R2-1710931_Behavior%20on%20SCG%20failure%20and%20TP%20for%2037340.doc) Behavior on SCG failure and TP for 37340 vivo discussion Rel-15 NR\_newRAT-Core

moved from 10.2.7 to 10.4.1.5.3

TPs

[R2-1710885](file:///C:\Data\3GPP\Extracts\R2-1710885%20TP%20on%20Radio%20Link%20Monitor%20Related%20Actions%20in%2038.331.docx) TP on Radio Link Monitor related actions in 38.331 MediaTek Inc. discussion NR\_newRAT-Core

=> Comments are invited to be provided offline, including agreements that may not have be taken into account.

=> To be updated with any agreements from this meeting

=> Revised in R2-1712009 (Offline discussion #44)

[R2-1712009](file:///C:\Data\3GPP\Extracts\R2-1712009.docx) TP on Radio Link Monitor related actions in 38.331 MediaTek Inc. discussion NR\_newRAT-Core

=> Remove " for an SCG SRB, SCG or split DRB ". Similar change needed for other references t bearer types.

=> Endorsed to be merged into the draft TS.

[R2-1710886](file:///C:\Data\3GPP\Extracts\R2-1710886%20TP%20to%20Support%20SCG%20Failure%20in%20EN-DC.docx) TP to support SCG Failure in EN-DC MediaTek Inc. discussion NR\_newRAT-Core

- Intel point out that this uses a new version of FailureReportSCG

- Ericsson think there is a need to differentiate in the procedure description where the configuration was received for SCG reconfig failure.

- Nokia ask how to progress the measurement results format.

=> Comments are invited to be provided offline, including agreements that may not have be taken into account.

=> To be updated with any agreements from this meeting

=> Final ASN.1 structure for the measurements in SCG failure will be decided when NR measurement report format is stable.

=> Revised in R2-172010 (Offline discussion #45)

[R2-1712010](file:///C:\Data\3GPP\RAN2\Docs\R2-1712010.zip) TP to support SCG Failure in EN-DC MediaTek Inc. discussion NR\_newRAT-Core

=> Revised in R2-1712062

[R2-1712062](file:///C:\Data\3GPP\Extracts\R2-1712062.docx) TP to support SCG Failure in EN-DC MediaTek Inc. discussion NR\_newRAT-Core

=> Endorsed to be merged into draft TS, and running LTE RRC CR.

[R2-1711132](file:///C:\Data\3GPP\Extracts\R2-1711132%20-%20TP%20for%20TS%2036.331%20SCG%20RLF.docx) TP for TS 36.331 - SCG Failure Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711133](file:///C:\Data\3GPP\Extracts\R2-1711133%20-%20TP%20for%20TS%2038.331%20SCG%20RLF.docx) TP for TS 38.331 - SCG Failure Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710624](file:///C:\Data\3GPP\Extracts\R2-1710624-TP-36-38-331-EN-DC-SCG-failure-v1.docx) TPs for 38.331 and 36.331 for SCG failure in EN-DC Intel Corporation discussion Rel-15 NR\_newRAT-Core

moved from 10.4.1.3.4 to 10.4.1.5.3

#### 10.4.1.6 System information

No documents should be submitted to 10.4.1.6. Please submit to 10.4.1.6.x.

##### 10.4.1.6.1 MIB content

Including confirmation (or otherwise) of working assumption from last meeting, and any further details of the MIB content required for EN-DC operation.

This agenda item is relevant to EN-DC completion

[R2-1711518](file:///C:\Data\3GPP\Extracts\R2-1711518%20Considerations%20on%20NR%20PBCH%20contents.doc) Open issues on PBCH contents for NR Qualcomm Incorporated, NTT DoCoMo, Samsung, KT, vivo, Panasonic, LG Electronics Inc., KDDI discussion Rel-15 NR\_newRAT-Core

- Huawei prefer to confirm the WA. Also think the behaviour should be a bit different for the 2 bits. And the bit in MIB is specifically for a future SA UE to know that this frequency is NAS. And the bit in SIB is the same as the LTE barring bit.

- Qualcomm think SA cells could be on the same carrier as NSA cells. But the new bit forces UE to move to another carrier. Vodafone think this deployment where both NSA and SA are in the same area will not happen.

- Vivo understand the new bit is for the NSA case only. It limits the UE as the UE cannot make intra-freq reselection.

- Lenovo support the Qualcomm paper.

- ZTE share Huawei's view.

Show of hands

1 - Confirm working assumption [13]

2 - Revisit working assumption [15]

1 - WA is not acceptable [11]

2 - Approach in 1518 not acceptable [3]

Agreements (replace the WA from previous meeting that is not confirmed)

1: "cellBarred" IE (corresponding to "Information for quick identification that UE can't camp on the cell" in RAN1 LS) is present in the MIB and it has the same effect as the LTE "cellBarred" IE.

FFS Duration of the barring timer.

2: "intraFreqReselection" IE is present in the MIB and it has the same effect as the LTE "intraFreqReselection" IE

FFS Whether additional "cellBarred" and "intraFreqReselection" IEs are signalled in NR SIB1

=> Draft LS to RAN1 to inform them of our decision that RAN2 needs 2 bits plus one spare bit. Draft LS in R2-1712011 (Offline discussion #46, Qualcomm)

[R2-1712011](file:///C:\Data\3GPP\Extracts\R2-1712011%20LS%20on%20NR%20MIB.doc) [DRAFT] LS on PBCH content Qualcomm LS out Rel-15 NR\_newRAT-Core To:RAN1

=> Approved in R2-1712056

[R2-1710382](file:///C:\Data\3GPP\Extracts\R2-1710382%20Open%20issues%20on%20MIB%20contents.docx) Open issues on MIB contents Ericsson discussion Rel-15 NR\_newRAT-Core

=> Offline checking of the status in RAN1 regarding the size of the MIB. (Aim to comeback Thursday)

- AT+T explain that the current number of spare bits is 14(9) and 17(12) for the two cases that RAN1 is working on (sub six and above six) but some may also be needed for RMSI config. Number in brackets relates to 24bit CRS. This assumes the 2 bits from RAN2.

Agreements

- At least one spare bit is needed for RAN2 purposes in future

=> Include in email regarding offline discussion #46

[R2-1710416](file:///C:\Data\3GPP\Extracts\R2-1710416_nsaBit.docx) Multi-PLMN aspects of NSA bit in MIB ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710392](file:///C:\Data\3GPP\Extracts\R2-1710392%20-%20TTI%20for%20NR-MIB%20and%20NR-SIB1.docx) Transmission time interval for NR-MIB and NR-SIB1 Ericsson discussion Rel-15 NR\_newRAT-Core

- Qualcomm think this is not aligned to RAN1 agreement. The TTI could be 160 but RAN1 have defined a TTI of 80ms.

- Ericsson think it would be strange for a TTI of 80ms with a period of 160ms.

- Samsung understand that 80ms is the maximum in RAN1.

=> Offline checking of the status in RAN1 regarding the MIB TTI and the SSB periodicity.

- Update from offline: RAN1 have agreed that the SSB can be sent 80ms or 160ms but is modeling the TTI at 80ms. Question is what RAN2 would like the TTI of SIB1 to be (current option 80 or 160).

=> We wait for expected RAN1 input.

[R2-1710454](file:///C:\Data\3GPP\Extracts\R2-1710454.doc) Discussion on barring indication in NR-MIB Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710455](file:///C:\Data\3GPP\Extracts\R2-1710455.doc) Discussion on maximum idle mode DRX value in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708066](file:///C:\Data\3GPP\Extracts\R2-1708066%20Discussion%20on%20maximum%20idle%20mode%20DRX%20value%20in%20NR.doc)

[R2-1710456](file:///C:\Data\3GPP\Extracts\R2-1710456.doc) [DRAFT] Reply LS on maximum idle mode DRX value Huawei, HiSilicon LS out Rel-15 NR\_newRAT-Core [R2-1708067](file:///C:\Data\3GPP\Extracts\R2-1708067%20Draft%20reply%20LS%20on%20maximum%20idle%20mode%20DRX%20value%20to%20reply%20SA2%20LS%20S2-175192.doc)

[R2-1711022](file:///C:\Data\3GPP\Extracts\R2-1711022%20Cell%20barring%20timer.docx) Cell Barring timer Sony discussion Rel-15 NR\_newRAT-Core

[R2-1711616](file:///C:\Data\3GPP\Extracts\R2-1711616_CellBarred%20in%20NR%20MIB.doc) Cell barred indication in NR MIB NEC discussion Rel-15 NR\_newRAT-Core

[R2-1711743](file:///C:\Data\3GPP\Extracts\R2-1711743_PBCH_Contents.doc) Remaining aspects of PBCH and Some SIB1 contents Samsung R&D Institute India discussion

Late

R2-1710284 MIB contents for EN-DC CATT discussion Rel-15 NR\_newRAT-Core

##### 10.4.1.6.2 System information content/structure

Progress details of the content and structure of system information (excluding MIB content covered in AI 10.4.1.5.2)

This agenda item is not relevant to EN-DC completion but will be treated if time allows .

[R2-1710180](file:///C:\Data\3GPP\Extracts\%5bNR-CP%5dR2-1710180_Initial%20Consideration%20on%20Content%20of%20Other%20SI%20for%20NR.doc) Initial considerations on Content of Other SI for NR OPPO discussion

[R2-1710383](file:///C:\Data\3GPP\Extracts\R2-1710383%20System%20information%20structure%20and%20contents.docx) System Information Structure and Content Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710389](file:///C:\Data\3GPP\Extracts\R2-1710389%20SIBs%20needed%20for%20stand-alone%20NR%20deployments.docx) SIBs needed for stand-alone NR deployments Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708163](file:///C:\Data\3GPP\Extracts\R2-1708163%20SIBs%20needed%20for%20initial%20NR%20deployments.docx)

[R2-1710391](file:///C:\Data\3GPP\Extracts\R2-1710391%20System%20information%20content%20at%20network%20sharing.docx) System information content at network sharing Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710417](file:///C:\Data\3GPP\Extracts\R2-1710417Consideration%20on%20the%20content%20of%20the%20NR-RMSI.doc) Consideration on the Content of NR-RMSI(Revision) ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710458](file:///C:\Data\3GPP\Extracts\R2-1710458.docx) Detailed design on of the contents of System Information Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710459](file:///C:\Data\3GPP\Extracts\R2-1710459.doc) SIBs needed for NSA Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709620](file:///C:\Data\3GPP\Extracts\R2-1709620%20SIBs%20needed%20for%20NSA%20v01.doc)

[R2-1711372](file:///C:\Data\3GPP\Extracts\R2-1711372%20-%20Quasi-co-location%20information%20in%20SIB1.docx) Quasi-co-location information in SIB1 and RRC Reconfiguration Ericsson LM discussion Rel-15 NR\_newRAT-Core

[R2-1711514](file:///C:\Data\3GPP\Extracts\R2-1711514%20Organization%20of%20NR%20system%20information.doc) Organization of NR System Information Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711587](file:///C:\Data\3GPP\Extracts\R2-1711587%20On_NR_SIB1_Content.docx) Structure and Content of Remaining Minimum SI Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core [R2-1709561](file:///C:\Data\3GPP\Extracts\R2-1709561%20On_NR_SIB1_Content.docx)

[R2-1711740](file:///C:\Data\3GPP\Extracts\R2-1711740_38331%20TP%20on%20SI.doc) Endorsed TP to 38.331 on System Information Samsung R&D Institute India other

##### 10.4.1.6.3 Stored system information

Further details of stored SI including index/identifier format

This agenda item is not relevant to EN-DC completion but will be treated if time allows.

Maximum 1 tdoc per company

[R2-1710139](file:///C:\Data\3GPP\Extracts\R2-1710139.docx) Area ID and details on value tag message structure for NR Gemalto N.V. discussion

[R2-1710285](file:///C:\Data\3GPP\Extracts\R2-1710285.docx) Indexed SI in NR CATT discussion Rel-15 NR\_newRAT-Core [R2-1707906](file:///C:\Data\3GPP\Extracts\R2-1707906.docx)

[R2-1710361](file:///C:\Data\3GPP\Extracts\R2-1710361%20The%20index%20of%20stored%20system%20information.doc) The index of stored system information Fujtisu discussion Rel-15 NR\_newRAT-Core

[R2-1710384](file:///C:\Data\3GPP\Extracts\R2-1710384%20-%20SS%20Block%20Index%20dependent%20System%20Information.docx) SS Block index dependent system information Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710385](file:///C:\Data\3GPP\Extracts\R2-1710385%20-%20Stored%20system%20information.docx) Stored System Information Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710418](file:///C:\Data\3GPP\Extracts\R2-1710418Consideration%20on%20the%20stored%20other%20SI.doc) Consideration on the Stored other SI(Resubmit) ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710460](file:///C:\Data\3GPP\Extracts\R2-1710460.doc) Area ID and value tag for SIBs Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708069](file:///C:\Data\3GPP\Extracts\R2-1708069%20Area%20ID%20and%20value%20tag%20for%20SIBs.doc)

[R2-1710673](file:///C:\Data\3GPP\Extracts\R2-1710673%20(R15%20NR%20WI%20AI104163%20StoredSystemInformation).doc) Details of Stored System Information for NR InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710814](file:///C:\Data\3GPP\Extracts\R2-1710814%20SI%20valid%20area%20configuration.doc) SI valid area configuration LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708908](file:///C:\Data\3GPP\Extracts\R2-1708908%20SI%20valid%20area%20configuration.doc)

[R2-1710939](file:///C:\Data\3GPP\Extracts\R2-1710939_Stored%20system%20information%20in%20NR.docx) Stored SI for NR vivo discussion Rel-15 NR\_newRAT-Core [R2-1708423](file:///C:\Data\3GPP\Extracts\R2-1708423_Stored%20system%20information%20in%20NR.docx)

[R2-1711308](file:///C:\Data\3GPP\Extracts\R2-1711308%20On%20structure%20of%20SI%20index.doc) On structure of SI index MediaTek Inc. discussion [R2-1708042](file:///C:\Data\3GPP\Extracts\R2-1708042%20On%20structure%20of%20SI%20index.doc)

[R2-1711589](file:///C:\Data\3GPP\Extracts\R2-1711589%20Signalling%20of%20System%20Information%20Area.docx) Signalling of System Information Area Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core [R2-1709562](file:///C:\Data\3GPP\Extracts\R2-1709562%20Signalling%20of%20System%20Information%20Area.docx)

[R2-1711670](file:///C:\Data\3GPP\Extracts\R2-1711670.doc) Necessity of Area ID for on-demand SI NTT DOCOMO, INC., Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core [R2-1707776](file:///C:\Data\3GPP\Extracts\R2-1707776.doc)

[R2-1711752](file:///C:\Data\3GPP\Extracts\R2-1711752_Index_approaches.doc) Index based approach and Stored SI SAMSUNG Electronics Co., Ltd. discussion [R2-1709497](file:///C:\Data\3GPP\Extracts\R2-1709497_Index_approaches.doc)

##### 10.4.1.6.4 System information modification

This agenda item is not relevant to EN-DC completion but will be treated if time allows

Maximum 1 tdoc per company

[R2-1710094](file:///C:\Data\3GPP\Extracts\R2-1710094_SI%20Update%20in%20NR.doc) System Information Update in NR Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core [R2-1707676](file:///C:\Data\3GPP\Extracts\R2-1707676_SI%20Update%20in%20NR.doc)

[R2-1710181](file:///C:\Data\3GPP\Extracts\%5bNR-CP%5dR2-1710181_Discussion%20on%20NR%20SI%20Modification.doc) Discussion on NR SI Modification OPPO discussion [R2-1707766](file:///C:\Data\3GPP\Extracts\R2-1707766_Discussion%20on%20NR%20SI%20Modification.doc)

[R2-1710286](file:///C:\Data\3GPP\Extracts\R2-1710286.docx) SI Modification CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710386](file:///C:\Data\3GPP\Extracts\R2-1710386%20-%20Change%20of%20System%20Information%20in%20NR.docx) Change of System information in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710461](file:///C:\Data\3GPP\Extracts\R2-1710461.doc) SI Update procedure Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708070](file:///C:\Data\3GPP\Extracts\R2-1708070%20SI%20Update%20procedure.doc)

[R2-1710674](file:///C:\Data\3GPP\Extracts\R2-1710674%20(R15%20NR%20WI%20AI104164%20SIModification).doc) SI Modification Procedure in NR InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710940](file:///C:\Data\3GPP\Extracts\R2-1710940_SI%20change%20notification.docx) SI Change Notification vivo discussion Rel-15 NR\_newRAT-Core [R2-1708424](file:///C:\Data\3GPP\Extracts\R2-1708424_SI%20change%20notification.docx)

[R2-1711307](file:///C:\Data\3GPP\Extracts\R2-1711307%20NR%20SI%20%20Update.doc) NR SI Update MediaTek Inc. discussion [R2-1708051](file:///C:\Data\3GPP\Extracts\R2-1708051%20NR%20SI%20%20Update.doc)

[R2-1711390](file:///C:\Data\3GPP\Extracts\R2-1711390%20System%20information%20modification.doc) System information modification LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708465](file:///C:\Data\3GPP\Extracts\R2-1708465%20System%20information%20modification.doc)

[R2-1711566](file:///C:\Data\3GPP\Extracts\R2-1711566%20SI%20modification%20for%20Stored%20SI.doc) SI modification for Stored SI ITL discussion Rel-15

[R2-1711592](file:///C:\Data\3GPP\Extracts\R2-1711592%20System%20Information%20Modification%20in%20NR.docx) System Information Modification in NR Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core [R2-1709564](file:///C:\Data\3GPP\Extracts\R2-1709564%20System%20Information%20Modification%20in%20NR.docx)

[R2-1711767](file:///C:\Data\3GPP\Extracts\R2-1711767_SI_change_notification.doc) Discussion on the granularity of SI change notification ITRI discussion NR\_newRAT-Core [R2-1709080](file:///C:\Data\3GPP\Extracts\R2-1709080_SI_change_notification.doc)

##### 10.4.1.6.5 System information scheduling

This agenda item is not relevant to EN-DC completion and but will be treated if time allows

Maximum 1 tdoc per company

[R2-1710095](file:///C:\Data\3GPP\Extracts\R2-1710095_SI%20Message%20TX-RX%20in%20NR.doc) SI Message TX/RX in NR Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core [R2-1707677](file:///C:\Data\3GPP\Extracts\R2-1707677_SI%20Message%20TX-RX%20in%20NR.doc)

[R2-1710179](file:///C:\Data\3GPP\Extracts\%5bNR-CP%5dR2-1710179_Consideration%20on%20NR%20SI%20Scheduling.doc) Consideration on NR SI Scheduling OPPO discussion [R2-1707767](file:///C:\Data\3GPP\Extracts\R2-1707767_Consideration%20on%20NR%20SI%20Scheduling.doc)

[R2-1710387](file:///C:\Data\3GPP\Extracts\R2-1710387%20System%20information%20scheduling.docx) System Information Scheduling Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708167](file:///C:\Data\3GPP\Extracts\R2-1708167%20System%20information%20scheduling.docx)

R2-1710462 Considerations on System Information scheduling Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708071](file:///C:\Data\3GPP\Extracts\R2-1708071%20Considerations%20on%20System%20Information%20scheduling.doc) Withdrawn

[R2-1710488](file:///C:\Data\3GPP\Extracts\R2-1710488.doc) Considerations on System Information scheduling Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710941](file:///C:\Data\3GPP\Extracts\R2-1710941.docx) Scheduling of Other SI vivo discussion Rel-15 NR\_newRAT-Core [R2-1708425](file:///C:\Data\3GPP\Extracts\R2-1708425_Scheduling%20of%20Other%20SI.docx)

[R2-1711089](file:///C:\Data\3GPP\Extracts\R2-1711089.doc) Details of Other SI scheduling information ETRI discussion Rel-15 NR\_newRAT-Core [R2-1707943](file:///C:\Data\3GPP\Extracts\R2-1707943.doc)

[R2-1711391](file:///C:\Data\3GPP\Extracts\R2-1711391%20System%20information%20scheduling.doc) System information scheduling LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708466](file:///C:\Data\3GPP\Extracts\R2-1708466%20System%20information%20scheduling.doc)

##### 10.4.1.6.6 On demand system information

Including need for additional bit to indicate if SI message is actually being broadcast

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710096](file:///C:\Data\3GPP\Extracts\R2-1710096_On%20Demand%20SI_Remaining%20Issues.doc) On Demand SI: Remaining Issues Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core [R2-1707678](file:///C:\Data\3GPP\Extracts\R2-1707678_On%20Demand%20SI_Remaining%20Issues.doc)

[R2-1710161](file:///C:\Data\3GPP\Extracts\R2-1710161%20Resolving%20remaining%20FFSs.doc) Resolving remaining FFSs Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core [R2-1708063](file:///C:\Data\3GPP\Extracts\R2-1708063%20Resolving%20remaining%20FFSs.doc)

[R2-1710178](file:///C:\Data\3GPP\Extracts\%5bNR-CP%5dR2-1710178_Discussion%20on%20Remaining%20Issues%20of%20On-Demand%20SI.doc) Discussion on Remaining Issues of On-Demand SI OPPO discussion [R2-1707765](file:///C:\Data\3GPP\Extracts\R2-1707765_Discussion%20on%20Remaining%20Issues%20of%20On-Demand%20SI.doc)

[R2-1710250](file:///C:\Data\3GPP\Extracts\R2-1710250.doc) Discussion on Multiple On-demand System Information Acquisition SHARP Corporation discussion

[R2-1710388](file:///C:\Data\3GPP\Extracts\R2-1710388%20Remaining%20issues%20on%20On-demand%20SI.docx) Remaining issues on On-demand SI Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708168](file:///C:\Data\3GPP\Extracts\R2-1708168%20-%20Remaining%20issues%20for%20on-demand%20SI.docx)

[R2-1710419](file:///C:\Data\3GPP\Extracts\R2-1710419%20On-demand%20SI-%20further%20consideration%20on%20the%20Msg3%20Content.docx) On-demand SI- further consideration on the Msg3 Content ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710463](file:///C:\Data\3GPP\Extracts\R2-1710463.docx) On demand SI acquisition and failure handling Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710676](file:///C:\Data\3GPP\Extracts\R2-1710676%20(R15%20NR%20WI%20AI104166%20OnDemandSIRequestProcedure).doc) On Demand SI Request Procedure InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710812](file:///C:\Data\3GPP\Extracts\R2-1710812%20Other-SI%20request%20and%20acquisition%20in%20CONNECTED.doc) Other-SI request and acquisition in CONNECTED LG Electronics Inc. discussion Rel-15 LTE\_euCA-Core [R2-1708901](file:///C:\Data\3GPP\Extracts\R2-1708901%20Other-SI%20request%20and%20acquisition%20in%20CONNECTED.doc)

[R2-1710942](file:///C:\Data\3GPP\Extracts\R2-1710942.docx) Remaining issues of on demand SI vivo discussion Rel-15 NR\_newRAT-Core

[R2-1711030](file:///C:\Data\3GPP\Extracts\R2-1711030%20Remain%20issues%20of%20on-demand%20SI.doc) Remain issues of on-demand SI Beijing Xiaomi Mobile Software discussion Rel-15 [R2-1709164](file:///C:\Data\3GPP\Extracts\R2-1709164%20Remain%20issues%20of%20on-demand%20SI.doc)

[R2-1711309](file:///C:\Data\3GPP\Extracts\R2-1711309%20Indicator%20for%20Other%20SI%20Transmission.docx) Indicator for Other SI Transmission MediaTek Inc. discussion [R2-1708041](file:///C:\Data\3GPP\Extracts\R2-1708041%20Indicator%20for%20Other%20SI%20Transmission.docx)

[R2-1711389](file:///C:\Data\3GPP\Extracts\R2-1711389%20On%20demand%20SI%20procedure_R0.doc) Remaining issues on on-demand SI request procedure LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708461](file:///C:\Data\3GPP\Extracts\R2-1708461%20On%20demand%20SI%20procedure_R0.doc)

[R2-1711516](file:///C:\Data\3GPP\Extracts\R2-1711516%20Open%20issues%20on%20NR%20on-demand%20SI.doc) Open issues on NR on-demand SI Qualcomm Incorporated discussion Rel-15 NR\_newRAT-Core

[R2-1711768](file:///C:\Data\3GPP\Extracts\R2-1711768_OSI_additional_indication.doc) Discussion on the additional indication for on-demand SI ITRI discussion NR\_newRAT-Core [R2-1709079](file:///C:\Data\3GPP\Extracts\R2-1709079_OSI_additional_indication.doc)

[R2-1711827](file:///C:\Data\3GPP\Extracts\R2-1711827.docx) UE Requirements for SI on demand Vodafone Group Plc discussion

##### 10.4.1.6.7 System information -other

Other system information related aspects

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting

[R2-1710390](file:///C:\Data\3GPP\Extracts\R2-1710390%20-%20Dedicated%20System%20Information%20(resubmission%20of%20R2-1708170).docx) Dedicated System Information Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708170](file:///C:\Data\3GPP\Extracts\R2-1710390%20-%20Dedicated%20System%20Information%20(resubmission%20of%20R2-1708170).docx)

[R2-1710464](file:///C:\Data\3GPP\Extracts\R2-1710464.doc) Assisted Delivery of "Minimum SI" Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708073](file:///C:\Data\3GPP\Extracts\R2-1708073%20Assisted%20Delivery%20of%20Minimum%20SI.doc)

[R2-1710465](file:///C:\Data\3GPP\Extracts\R2-1710465.doc) Public Warning system for NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708074](file:///C:\Data\3GPP\Extracts\R2-1708074%20Public%20Warning%20system%20for%20NR.doc)

[R2-1710943](file:///C:\Data\3GPP\Extracts\R2-1710943_Discussion%20on%20other%20SI%20request.docx) Discussion on other SI request vivo discussion Rel-15 NR\_newRAT-Core [R2-1708428](file:///C:\Data\3GPP\Extracts\R2-1708428_Discussion%20on%20on-demand%20SI%20request.docx)

[R2-1711392](file:///C:\Data\3GPP\Extracts\R2-1711392%20UE%20dedicated%20on-demand%20SI.doc) UE dedicated on-demand SI delivery in NR LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708467](file:///C:\Data\3GPP\Extracts\R2-1708467%20UE%20dedicated%20on-demand%20SI.doc)

[R2-1711510](file:///C:\Data\3GPP\Extracts\R2-1711510%20Dedicated%20transfer%20of%20SI%20upon%20UE%20mobility.doc) Dedicated signalling of SI upon UE mobility Samsung Telecommunications discussion Rel-15

[R2-1711630](file:///C:\Data\3GPP\Extracts\R2-1711630.doc) On supporting multiple modification periods in NR Samsung discussion NR\_newRAT-Core

[R2-1711757](file:///C:\Data\3GPP\Extracts\R2-1711757_List%20of%20FFS.doc) List of FFS for SI handling Samsung R&D Institute India other

[R2-1711807](file:///C:\Data\3GPP\Extracts\R2-1711807%20Initial%20access%20for%20SUL.docx) Initial access for supplementary uplink frequency Samsung Electronics discussion Rel-15 NR\_newRAT-Core

#### 10.4.1.7 Inactive state

No documents should be submitted to 10.4.1.6. Please submit to 10.4.1.6.x.

##### 10.4.1.7.1 RAN area configuration

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

Maximum 1 tdoc per company

[R2-1711984](file:///C:\Data\3GPP\Extracts\R2-1711984%20DRAFTLSresponsetoLSR3-173427.doc) [DRAFT] LS reply to LS on definition of RAN Notification Area in inactive state Nokia LS out Rel-15 NR\_newRAT-Core To:RAN3

- Summary of offline #08 from Nokia: All agreed it was feasible to support all options but results in more UE and network testing and it would be preferable to limit options. But also understanding that it is difficult to support all deployment options. So most people were ok to support all options.

- Intel think that UE support should be a separate discussion after the work is complete.

- Vodafone doesn’t see a use case why all need to be supported, but if supported the UE should support them all from the beginning. If that can’t be agreed then we should select one option. Intel is concerned that not all option will be testable if networks don't support all options.

- Samsung also has concern on testability but also think it will not be practical to have IOT bits for all these options. Also consider that the options 2 and 3 are marginal from signalling point of view.

- LG think capability should be discussed later and prefer to focus on spec.

=> Discussion on availability of networks for testing to be had in future as per normal process.

=> Change to " RAN2 understanding of the package would be that:

1. The specification supports all the options.

2. For a UE, only one option is configured at a time (no mixing of options).

3. NW may provide different options for different UEs.

4. A UE that supports inactive will support all these options. "

=> Approved in [R2-1712006](file:///C:\Data\3GPP\Extracts\R2-1712006%20LSresponsetoLSR3-173427.doc)

[R2-1710829](file:///C:\Data\3GPP\Extracts\R2-1710829%20-%20RNA%20configuration.docx) RAN Notification Area configuration Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710581](file:///C:\Data\3GPP\Extracts\R2-1710581%20RAN%20notification%20area%20configuration.doc) RAN notification area configuration Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710120](file:///C:\Data\3GPP\Extracts\R2-1710120_nr_area_v16.doc) RAN paging area for NR Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1710233](file:///C:\Data\3GPP\Extracts\R2-1710233_Discussion%20on%20Assistance%20Information%20for%20RAN-based%20Notification%20Area%20Decision.doc) Discussion on Assistance Information for RAN-Based Notification Area Decision OPPO discussion

[R2-1710287](file:///C:\Data\3GPP\Extracts\R2-1710287.docx) RAN-based notification area configuration (related to RAN3 LS R3-173427) CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710428](file:///C:\Data\3GPP\Extracts\R2-1710428%20Consideration%20on%20RAN%20area%20configuration.docx) Consideration on RAN area configuration ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710595](file:///C:\Data\3GPP\Extracts\R2-1710595_NR_RNA_Config.doc) RAN notification area configuration Intel Corporation discussion Rel-15 NR\_newRAT-Core [R2-1708805](file:///C:\Data\3GPP\Extracts\R2-1708805_NR_RNA_Config.doc)

[R2-1710830](file:///C:\Data\3GPP\Extracts\R2-1710830%20-%20Draft_LS%20RAN3%20RNA.doc) Draft LS response to RAN3 LS on RAN Notification Areas Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711144](file:///C:\Data\3GPP\Extracts\R2-1711144_Definition%20of%20RAN%20Notification%20Area.doc) Definition of RAN Notification Area LG Electronics France discussion NR\_newRAT-Core

[R2-1711465](file:///C:\Data\3GPP\Extracts\R2-1711465.doc) Discussion on RAN Notification Area Configuration SHARP Corporation discussion [R2-1708178](file:///C:\Data\3GPP\Extracts\R2-1708178.doc)

[R2-1711780](file:///C:\Data\3GPP\Extracts\R2-1711780-RNA%20configuration.docx) RNA configuration China Telecom Corporation Ltd. discussion

[R2-1711061](file:///C:\Data\3GPP\Extracts\R2-1711061%20%20-%20Draft%20Reply%20to%20LS%20on%20definition%20of%20RAN%20Notification%20Area%20in%20inactive%20state.doc) Draft LS resposne on RAN paging are to RAN3 LS R3-173427 Nokia discussion Rel-15 NR\_newRAT-Core

moved from 10.1 to 10.4.1.7.1

=> Revised in [R2-1711984](file:///C:\Data\3GPP\Extracts\R2-1711984%20DRAFTLSresponsetoLSR3-173427.doc)

[R2-1711057](file:///C:\Data\3GPP\Extracts\R2-1711057%20RANnotifarea.doc) RAN based notification area Nokia discussion Rel-15 NR\_newRAT-Core [R2-1708474](file:///C:\Data\3GPP\Extracts\R2-1708474%20RANnotifarea.doc)

moved from 10.4.1.6.1 to 10.4.1.7.1

##### 10.4.1.7.2 RAN area update procedure

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

Maximum 1 tdoc per company

[R2-1710121](file:///C:\Data\3GPP\Extracts\R2-1710121_nr_area_proc_v11.doc) RRC procedures for the RAN paging area Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1710429](file:///C:\Data\3GPP\Extracts\R2-1710429%20Consideration%20on%20periodic%20RAN%20area%20update%20procedure.docx) Consideration on periodic RAN area update procedure ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710582](file:///C:\Data\3GPP\Extracts\R2-1710582%20Discussion%20on%20CN%20location%20Update%20and%20RNA%20Update%20for%20inactive%20state.doc) Discussion on CN location Update and RNA Update for inactive state Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710596](file:///C:\Data\3GPP\Extracts\R2-1710596_NR_RNAU.doc) RNAU failure handling Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710677](file:///C:\Data\3GPP\Extracts\R2-1710677%20(R15%20NR%20WI%20AI104172%20RLAU%20Procedure).doc) RAN Location Area Update Procedure for NR InterDigital discussion Rel-15 NR\_newRAT-Core

[R2-1710825](file:///C:\Data\3GPP\Extracts\R2-1710825%20Retrieve%20UE%20ctxt%20for%20RLAU.doc) Retrieve UE Context via CN for RLAU Potevio discussion

[R2-1710827](file:///C:\Data\3GPP\Extracts\R2-1710827%20-%20RAN%20area%20update%20in%20RRC_INACTIVE.docx) RAN area update in RRC\_INACTIVE Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710982](file:///C:\Data\3GPP\Extracts\R2-1710982%20-%20Discussion%20on%20RAN-based%20location%20area%20update%20procedure%20in%20NR%20(Resubmission%20to%2099b).docx) Discussion on RAN-based location area update procedure in NR ASTRI, TCL Communication Ltd. discussion

[R2-1711149](file:///C:\Data\3GPP\Extracts\R2-1711149_Timer%20handling%20of%20RAN-based%20location%20area%20update_v2.doc) Timer handling of RAN-based location area update LG Electronics France discussion Rel-15 NR\_newRAT-Core

[R2-1711373](file:///C:\Data\3GPP\Extracts\R2-1711373%20Discussion%20on%20RAN%20notification%20area%20update.doc) Discussion on RAN notification area update Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core

[R2-1711760](file:///C:\Data\3GPP\Extracts\R2-1711760%20Periodic%20RNA%20update(resubmission%20of%20R2-1707908).docx) Periodic RNA update CATT discussion Rel-5 NR\_newRAT-Core [R2-1707908](file:///C:\Data\3GPP\Extracts\R2-1711760%20Periodic%20RNA%20update(resubmission%20of%20R2-1707908).docx)

##### 10.4.1.7.3 Paging in inactive

RRC procedure to respond to paging, including any differences between RAN and CN paging

This agenda item is not relevant to EN-DC completion but will be treated if time allows

[R2-1710122](file:///C:\Data\3GPP\Extracts\R2-1710122_nr_paging_v08.doc) Further considerations on the CN and RAN paging Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1710231](file:///C:\Data\3GPP\Extracts\R2-1710231_Introduction%20of%20the%20Non-Contention%20Based%20RACH%20for%20INACTIVE%20UE.doc) Introduction of the Non-Contention based RACH for INACTIVE UE OPPO discussion

[R2-1710288](file:///C:\Data\3GPP\Extracts\R2-1710288.docx) Procedure of paging in inactive CATT discussion Rel-15 NR\_newRAT-Core [R2-1707909](file:///C:\Data\3GPP\Extracts\R2-1707909.docx)

[R2-1710597](file:///C:\Data\3GPP\Extracts\R2-1710597_NR_RAN-initiated-paging.doc) RAN-initiated paging details Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1711126](file:///C:\Data\3GPP\Extracts\R2-1711126_CN-initiated%20paging%20for%20a%20UE%20in%20RRC_INACTIVE.doc) CN-initiated paging for a UE in RRC\_INACTIVE LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1709107](file:///C:\Data\3GPP\Extracts\R2-1709107_CN-initiated%20paging%20for%20a%20UE%20in%20RRC_INACTIVE.doc)

[R2-1711153](file:///C:\Data\3GPP\Extracts\R2-1711153%20Paging%20Failure%20Handling%20in%20RRC_INACTIVE%20Revision%20of%20R2-1708990.doc) Paging Failure Handling in RRC\_INACTIVE CMCC discussion Rel-15 NR\_newRAT-Core

[R2-1711366](file:///C:\Data\3GPP\Extracts\R2-1711366%20-%20Paging%20in%20RRC_INACTIVE.docx) Paging in RRC\_INACTIVE Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708171](file:///C:\Data\3GPP\Extracts\R2-1708171%20-%20Paging%20in%20RRC_INACTIVE.docx)

[R2-1711393](file:///C:\Data\3GPP\Extracts\R2-1711393%20RAN%20Paging%20DRX%20in%20RRC_INACTIVE.doc) RAN paging DRX in RRC\_INACTIVE LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708464](file:///C:\Data\3GPP\Extracts\R2-1708464%20RAN%20Paging%20DRX%20in%20RRC_INACTIVE.doc)

[R2-1711502](file:///C:\Data\3GPP\Extracts\R2-1711502%20RAN%20initiated%20Paging.doc) RAN initiated paging Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709529](file:///C:\Data\3GPP\Extracts\R2-1709529%20RAN%20initiated%20Paging.doc)

##### 10.4.1.7.4 Inter-RAT mobility between NR Inactive and E-UTRA/5GC Inactive

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710123](file:///C:\Data\3GPP\Extracts\R2-1710123_nr_irat_mobility_v21.doc) Inter-RAT mobility in the RRC INACTIVE state Samsung discussion Rel-15 NR\_newRAT-Core

[R2-1710124](file:///C:\Data\3GPP\Extracts\R2-1710124_nr_irat_tp_v10.doc) Text proposal UE inter-RAT re-selection in INACTIVE Samsung, Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

[R2-1710583](file:///C:\Data\3GPP\Extracts\R2-1710583%20Inter-RAT%20mobility%20for%20inactive%20UE.docx) Inter-RAT mobility for inactive UE Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710598](file:///C:\Data\3GPP\Extracts\R2-1710598_NR_Inactive_Inter-RAT.doc) Mobility of UE in INACTIVE between NR and E-UTRA connected to 5GC Intel Corporation discussion Rel-15 NR\_newRAT-Core [R2-1708807](file:///C:\Data\3GPP\Extracts\R2-1708807_NR_Inactive_Inter-RAT.doc)

[R2-1710836](file:///C:\Data\3GPP\Extracts\R2-1710836%20-%20Mobility%20between%20LTE%20and%20NR%20for%20inactive%20UEs.docx) Mobility between LTE and NR for inactive Ues Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711353](file:///C:\Data\3GPP\Extracts\R2-1711353%20Additional%20SIB%20in%20EUTRAN%20for%20NR%20SA%20support.docx) Additional SIB in EUTRAN for supporting NR SA deployments Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711690](file:///C:\Data\3GPP\Extracts\R2-1711690%20Inter-RAT%20mobility%20between%20NR%20and%20eLTE%20for%20Inactive%20state.doc) Inter-RAT mobility between NR and eLTE for Inactive state LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1709284](file:///C:\Data\3GPP\Extracts\R2-1709284%20Inter-RAT%20mobility%20between%20NR%20and%20eLTE%20for%20Inactive%20state.doc) To:SA1

##### 10.4.1.7.5 Security framework for inactive

Security framework for inactive UEs to address FFS arising from email discussion 98#30.

This agenda item is not relevant to EN-DC completion but will be treated if time allows

[R2-1710568](file:///C:\Data\3GPP\Extracts\R2-1710568%20Security%20of%20INACTIVE%20to%20CONNECTED%20state%20transition.doc) Security of INACTIVE to CONNECTED state transition Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711771](file:///C:\Data\3GPP\Extracts\R2-1711771_Security%20from%20Inactive.doc) Security procedure from RRC\_INACTIVE state in NR SAMSUNG Electronics Co., Ltd. discussion [R2-1709501](file:///C:\Data\3GPP\Extracts\R2-1709501_Security%20from%20Inactive_update.doc)

[R2-1711056](file:///C:\Data\3GPP\Extracts\R2-1711056%20security%20consideration%20for%20inactive%20state.doc) Security in inactive state Nokia discussion Rel-15 NR\_newRAT-Core [R2-1708473](file:///C:\Data\3GPP\Extracts\R2-1708473%20security%20consideration%20for%20inactive%20state.doc)

moved from 10.4.1.6.5 to 10.4.1.7.5

[R2-1710835](file:///C:\Data\3GPP\Extracts\R2-1710835%20-%20Security%20for%20MSG3%20resume.docx) Security for RRCConnectionResumeRequest message Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710599](file:///C:\Data\3GPP\Extracts\R2-1710599_NR_RRC-security-optim.doc) NR security framework Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710600](file:///C:\Data\3GPP\Extracts\R2-1710600_draft-LS-NR_security_optim.doc) [DRAFT] LS on security handling for resumption, re-establishment and handover Intel Corporation LSout Rel-15 NR\_newRAT-Core

[R2-1710944](file:///C:\Data\3GPP\Extracts\R2-1710944_Security%20Aspects%20in%20RRC%20INACTIVE.docx) Security aspects in RRC INACTIVE vivo discussion Rel-15 NR\_newRAT-Core

[R2-1711147](file:///C:\Data\3GPP\Extracts\R2-1711147_Consideration%20on%20security%20aspect%20for%20inactive%20UEs_v2.doc) Consideration on security aspect for inactive UEs LG Electronics France discussion Rel-15 NR\_newRAT-Core

[R2-1711796](file:///C:\Data\3GPP\Extracts\R2-1711796%20LS%20to%20SA3.docx) [DRAFT] LS on security framework for INACTIVE in NR Samsung R&D Institute India LSout

[R2-1710667](file:///C:\Data\3GPP\Extracts\R2-1710667%20(R15%20NR%20WI%20A104175%20Security%20Aspects%20of%20Connection%20Control).doc) Security Aspects of Connection Control InterDigital discussion Rel-15 NR\_newRAT-Core

moved from 10.4.1.3.7 to 10.4.1.7.5

##### 10.4.1.7.6 Inactive - other

Other inactive state related aspects

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710232](file:///C:\Data\3GPP\Extracts\R2-1710232-Discussion%20on%20cell%20reselection%20priority%20for%20INACTIVE%20UE.doc) Discussion on Cell Reselection Priority for INACTIVE UE OPPO discussion

[R2-1710234](file:///C:\Data\3GPP\Extracts\R2-1710234-Discussion%20on%20Cached%20Data%20Handling%20for%20INACTIVE%20UE.doc) Discussion on Cached Data Handling for INACTIVE UE OPPO discussion

R2-1710381 Consideration on UE Identity in RNA Spreadtrum Communications discussion Rel-15 Withdrawn

[R2-1710473](file:///C:\Data\3GPP\Extracts\R2-1710473.docx) RAN Sharing and identifier aspects in NR Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708172](file:///C:\Data\3GPP\Extracts\R2-1708172%20-%20RAN%20Sharing%20and%20NR%20Identifier%20Aspects.docx)

[R2-1710545](file:///C:\Data\3GPP\Extracts\R2-1710545.doc) RLAU procedure and interaction with TAU Huawei, HiSilicon discussion Rel-15 [R2-1708215](file:///C:\Data\3GPP\Extracts\R2-1708215.doc)

[R2-1710584](file:///C:\Data\3GPP\Extracts\R2-1710584%20RRC%20state%20transition%20from%20INACTIVE%20to%20IDLE.docx) RRC state transition from INACTIVE to IDLE Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710585](file:///C:\Data\3GPP\Extracts\R2-1710585%20Cell%20reselection%20for%20inactive%20UEs.docx) Cell reselection for inactive UEs Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710586](file:///C:\Data\3GPP\Extracts\R2-1710586%20Support%20of%20Redistribution%20priority%20in%20NR.doc) Support of redistribution priority in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710601](file:///C:\Data\3GPP\Extracts\R2-1710601_NR_NAS-AS_resumption.doc) NAS/AS interaction when resuming Intel Corporation discussion Rel-15 NR\_newRAT-Core [R2-1708809](file:///C:\Data\3GPP\Extracts\R2-1708809_NR_NAS-AS_resumption.doc)

[R2-1710627](file:///C:\Data\3GPP\Extracts\R2-1710627.doc) Cell reselection for inactive UEs Intel Corporation discussion Rel-15 NR\_newRAT-Core [R2-1708815](file:///C:\Data\3GPP\Extracts\R2-1708815.doc)

[R2-1710786](file:///C:\Data\3GPP\Extracts\R2-1710786_RRC%20Inactive%20Principles.doc) RRC\_INACTIVE Principles Qualcomm Incorporated discussion [R2-1709635](file:///C:\Data\3GPP\Extracts\R2-1709635_RRC%20Inactive%20Principles.doc)

[R2-1710828](file:///C:\Data\3GPP\Extracts\R2-1710828%20-%20CN%20area%20updating%20in%20RRC_INACTIVE.docx) CN area updating in RRC\_INACTIVE Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710831](file:///C:\Data\3GPP\Extracts\R2-1710831%20-%20UE%20context%20ID%20discussion.docx) UE context ID discussion Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711079](file:///C:\Data\3GPP\Extracts\R2-1711079.DOC) UE actions upon cell reselection in RRC\_INACTIVE ASUSTEK COMPUTER (SHANGHAI) discussion Rel-15 NR\_newRAT-Core [R2-1709332](file:///C:\Data\3GPP\Extracts\R2-1709332%20Cell%20reselection%20in%20inactive%20state_v2.DOC)

[R2-1711124](file:///C:\Data\3GPP\Extracts\R2-1711124_Consideration%20on%20MICO%20mode%20for%20RRC_INACTIVE.doc) Consideration on MICO mode for RRC\_INACTIVE LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1709104](file:///C:\Data\3GPP\Extracts\R2-1709104_Consideration%20on%20MICO%20mode%20for%20RRC_INACTIVE.doc)

[R2-1711125](file:///C:\Data\3GPP\Extracts\R2-1711125_Support%20for%20PLMN%20selection%20in%20RRC_INACTIVE.doc) Support for PLMN selection in RRC\_INACTIVE LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1709108](file:///C:\Data\3GPP\Extracts\R2-1709108_Support%20for%20PLMN%20selection%20in%20RRC_INACTIVE.doc)

[R2-1711143](file:///C:\Data\3GPP\Extracts\R2-1711143_Offloading_UEs_in_RRC_INACTIVE.doc) Offloading UEs in RRC\_INACTIVE LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1709110](file:///C:\Data\3GPP\Extracts\R2-1709110_Offloading_UEs_in_RRC_INACTIVE.doc)

[R2-1711395](file:///C:\Data\3GPP\Extracts\R2-1711395%20Handling%20of%20radio%20bearers%20and%20security%20for%20data%20transmission%20in%20RRC_INACTIVE.doc) Handling of radio bearers and security for data transmission in RRC\_INACTIVE LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708459](file:///C:\Data\3GPP\Extracts\R2-1708459%20Handling%20of%20radio%20bearers%20and%20security%20for%20data%20transmission%20in%20RRC_INACTIVE.doc)

[R2-1711818](file:///C:\Data\3GPP\Extracts\R2-1711818_PLMN_Selection.doc) PLMN Selection in RRC INACTIVE state SAMSUNG Electronics Co., Ltd. discussion [R2-1709500](file:///C:\Data\3GPP\Extracts\R2-1709500_PLMN_Selection_update.doc)

[R2-1711055](file:///C:\Data\3GPP\Extracts\R2-1711055%20(Support%20of%20RRC-INACTIVE).doc) Consistent support of RRC\_INACTIVE Nokia discussion Rel-15 NR\_newRAT-Core R2-1708472

moved from 10.4.1.6.5 to 10.4.1.7.6

#### 10.4.1.8 Access control

Continue to progress unified access control

This agenda item is not relevant to EN-DC completion but will be treated if time allows

* [99bis#xx][NR] AC (Intel)

Gather questions on the SA1 requirements and clarifications that may be needed.

Intended outcome: LS to SA1 for approval at beginning of next RAN2 meeting.

Deadline: Thursday 2017-11-09

[R2-1710602](file:///C:\Data\3GPP\Extracts\R2-1710602_5G_AC_RAN_requirement.DOC) RAN implications of 5G Access Control requirements Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710170](file:///C:\Data\3GPP\Extracts\R2-1710170%20AC%20for%20Connected%20Mode.doc) QoS Flow based Access Control for CONNECTED Mode in NR TCL discussion NR\_newRAT-Core

[R2-1710261](file:///C:\Data\3GPP\Extracts\R2-1710261%20-%20Discussion%20on%20access%20control%20in%20NR.doc) Discussion on access control in NR OPPO discussion Rel-15 NR\_newRAT-Core [R2-1706340](file:///C:\Data\3GPP\Extracts\R2-1706340%20-%20Discussion%20on%20access%20control%20in%20NR.doc)

[R2-1710289](file:///C:\Data\3GPP\Extracts\R2-1710289.docx) Consideration on access control CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710423](file:///C:\Data\3GPP\Extracts\R2-1710423%20Establishment%20cause%20and%20Call%20type%20for%20NR%20access%20control.doc) Establishment cause and call type for NR access control ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710424](file:///C:\Data\3GPP\Extracts\R2-1710424%20Consideration%20on%20the%20access%20control%20in%20NR.doc) Consideration on the access control in NR ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710477](file:///C:\Data\3GPP\Extracts\R2-1710477%20-%20Signalling%20of%20Access%20Control%20Parameters.docx) Signaling of access control parameters Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710478](file:///C:\Data\3GPP\Extracts\R2-1710478%20-%20Access%20Control%20for%20NR.docx) Access control for NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710479](file:///C:\Data\3GPP\Extracts\R2-1710479%20-%20Access%20Control%20for%20RRC-initiated%20access%20attempts.docx) Access Control for RRC-initiated Access Attempts Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710480](file:///C:\Data\3GPP\Extracts\R2-1710480%20-%20Establishment%20Causes%20for%20NR.docx) Establishment causes for NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710481](file:///C:\Data\3GPP\Extracts\R2-1710481%20-%20DRAFT%20LS%20on%20Establishment%20Causes.doc) Drat LS to CT1 on establishment causes Ericsson LS out Rel-15 NR\_newRAT-Core

[R2-1710482](file:///C:\Data\3GPP\Extracts\R2-1710482%20-%20DRAFT%20Reply%20LS%20on%20Unified%20Access%20Control.doc) Draft Reply LS to SA1 on Unified Access Control for 5G NR Ericsson LS out Rel-15 NR\_newRAT-Core

[R2-1710603](file:///C:\Data\3GPP\Extracts\R2-1710603_5G_Access_Control_Idle-Inactive.doc) 5G access control mechanism in IDLE and INACTIVE Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710604](file:///C:\Data\3GPP\Extracts\R2-1710604_NR_Access_Control_Connected.doc) 5G access control mechanism in CONNECTED Intel Corporation discussion Rel-15 NR\_newRAT-Core [R2-1708812](file:///C:\Data\3GPP\Extracts\R2-1708812_NR_Access_Control_Connected.doc)

[R2-1710800](file:///C:\Data\3GPP\Extracts\R2-1710800_NR_Access_Control.doc) Unified Access Control in different RRC Modes Qualcomm Incorporated discussion [R2-1709648](file:///C:\Data\3GPP\Extracts\R2-1709648_NR_Access_Control.doc)

[R2-1710897](file:///C:\Data\3GPP\Extracts\R2-1710897.doc) Considerations on Access Control in NR KT Corp. discussion

[R2-1711273](file:///C:\Data\3GPP\Extracts\R2-1711273%20Access%20Barring%20in%20NG-RAN.docx) Access Barring in NG-RAN Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

[R2-1711274](file:///C:\Data\3GPP\Extracts\R2-1711274%20Access%20Control%20applicability%20to%20different%20RRC%20states.docx) Access Control applicability to different RRC states Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

[R2-1711275](file:///C:\Data\3GPP\Extracts\R2-1711275%20Congestion%20Control%20for%20RRC_CONNECTED.docx) Congestion Control for RRC\_CONNNECTED Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core [R2-1709208](file:///C:\Data\3GPP\Extracts\R2-1709208%20Congestion%20Control.docx)

[R2-1711385](file:///C:\Data\3GPP\Extracts\R2-1711385%20Category%20based%20access%20barring%20in%20IDLE%20and%20INACTIVE.doc) Access category based access barring for RRC\_IDLE and RRC\_INACTIVE LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708455](file:///C:\Data\3GPP\Extracts\R2-1708455%20Category%20based%20access%20barring%20in%20IDLE%20and%20INACTIVE.doc)

[R2-1711394](file:///C:\Data\3GPP\Extracts\R2-1711394%20RA%20backoff%20and%20Access%20Barring.doc) Random Access Backoff and Access Barring LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708463](file:///C:\Data\3GPP\Extracts\R2-1708463%20RA%20backoff%20and%20Access%20Barring.doc)

[R2-1711398](file:///C:\Data\3GPP\Extracts\R2-1711398%20Access%20control%20for%20RRC_CONNECTED.doc) Access category based access barring mechanism for RRC\_CONNECTED LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708458](file:///C:\Data\3GPP\Extracts\R2-1708458%20Access%20control%20for%20RRC_CONNECTED.doc)

[R2-1711487](file:///C:\Data\3GPP\Extracts\R2-1711487%20Basic%20Access%20Control%20in%20NR.doc) Basic Access Control in NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709545](file:///C:\Data\3GPP\Extracts\R2-1709545%20Basic%20Access%20Control%20in%20NR.doc)

[R2-1711498](file:///C:\Data\3GPP\Extracts\R2-1711498%20Access%20Control%20in%20NR%20for%20RRC_CONNECTED.doc) Access Control in NR for RRC\_CONNECTED Huawei Technologies France discussion Rel-15 NR\_newRAT-Core [R2-1709551](file:///C:\Data\3GPP\Extracts\R2-1709551%20Access%20Control%20in%20NR%20for%20RRC_CONNECTED.doc)

[R2-1711499](file:///C:\Data\3GPP\Extracts\R2-1711499%20Access%20Control%20in%20RRC_INACTIVE.doc) Access Control in RRC\_INACTIVE Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709542](file:///C:\Data\3GPP\Extracts\R2-1709542%20Access%20Control%20in%20RRC_INACTIVE.doc)

[R2-1711500](file:///C:\Data\3GPP\Extracts\R2-1711500%20Access%20Control%20for%20MT.doc) Access Control for MT Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1709552](file:///C:\Data\3GPP\Extracts\R2-1709552%20Access%20Control%20for%20MT.doc)

[R2-1711624](file:///C:\Data\3GPP\Extracts\R2-1711624.doc) Way-forward for NR access control Samsung discussion NR\_newRAT-Core

[R2-1711625](file:///C:\Data\3GPP\Extracts\R2-1711625.doc) NR access control procedure Samsung discussion NR\_newRAT-Core

[R2-1711626](file:///C:\Data\3GPP\Extracts\R2-1711626.doc) On linking Establishment Cause and standardized access category Samsung discussion

[R2-1711627](file:///C:\Data\3GPP\Extracts\R2-1711627.doc) Barring configuration in NR access control Samsung discussion NR\_newRAT-Core

[R2-1711628](file:///C:\Data\3GPP\Extracts\R2-1711628.doc) Barring skip indicator in NR Samsung discussion NR\_newRAT-Core

[R2-1711635](file:///C:\Data\3GPP\Extracts\R2-1711635%20NR%20Unified%20Access%20Control.doc) Unified Access Control MediaTek Beijing Inc. discussion

#### 10.4.1.9 Inter-Node RRC messages

Structure and content of the Inter-Node RRC messages used for EN-DC procedures.

This agenda item is relevant to EN-DC completion.

[R2-1711503](file:///C:\Data\3GPP\Extracts\R2-1711503%20on%20Defining%20initial%20baseline%20inter-node%20signalling%20for%20TS%2038331.docx) Defining initial baseline inter-node signalling for 38.331 Samsung Telecommunications discussion Rel-15

- Ericsson would prefer to add these in the LTE RRC spec. in order to reuse IEs defined in that spec.

Agreements

1 Introduce in the NR RRC specification inter-node messages (INM) for:

a) SCG (re-)configuration, to be used for SCG establishment/ reconfiguration/ change involving an NR SN (used regardless of the RAT used by MN)

b) Handover: to be used upon change to an NR target MN (used regardless of the RAT used by source MN)

2 Introduce inter node messages in NR RRC as follows (LTE names merely used by example), and with contents according to Tab. 1. These messages are used regardless of the RAT used by source RAN:

o HandoverPreparationInformation

o HandoverCommand

o SCG-ConfigInfo

o SCG-Config

3 No additional RRC inter node messages are introduced specifically for SN initiated change of SN, i.e:

a) There is a single RRC inter-node message to cover SgNB Change Required, SgNB Addition Request and SgNB Modification Request

b) There is a single RRC inter-node message to cover SgNB Change Required Ack, SgNB Addition Request Ack and SgNB Modification Request Ack

* [99bis#xx][NR] Inter-node RRC messages (Samsung)

Progress details of internode RRC messages based on agreements from this meeting. First version can already take into account contributions submitted to this meeting.

Intended outcome: TP for the RRC inter node messages

Deadline: Thursday 2017-11-09

[R2-1710513](file:///C:\Data\3GPP\Extracts\R2-1710513%20-%20Internode%20RRC%20messages%20for%20EN-DC.docx) Internode RRC messages for EN-DC Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710853](file:///C:\Data\3GPP\Extracts\R2-1710853%20-%20Text%20proposal%20for%20mobility%20related%20inter-node%20messages.docx) Text proposal for mobility related inter-node messages Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711100](file:///C:\Data\3GPP\Extracts\R2-1711100%20Inter-node%20message%20design%20for%20LTE-NR%20DC.doc) Inter-node message design for EN-DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711400](file:///C:\Data\3GPP\Extracts\R2-1711400.docx) Measurement result contents for SN addition in MRDC Samsung R&D Institute UK discussion

[R2-1711823](file:///C:\Data\3GPP\Extracts\R2-1711823%20Inconsistencies%20of%20inter-node%20messages%20in%20RAN2%20and%20RAN3.doc) Inconsistencies of inter-node messages in RAN2 and RAN3 HTC Corporation discussion

#### 10.4.1.10 Other (non EN-DC)

Other RRC related aspects

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710483](file:///C:\Data\3GPP\Extracts\R2-1710483.docx) Wait Timer in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711806](file:///C:\Data\3GPP\Extracts\R2-1711806%20UE%20Assistance%20Information%20for%20energy%20efficiency%20enhancement.doc) UE Assistance Information for energy efficiency enhancement Samsung Electronics discussion Rel-15 NR\_newRAT-Core [R2-1709580](file:///C:\Data\3GPP\Extracts\R2-1709580%20UE%20Assistance%20Information%20for%20energy%20efficiency%20enhancement.doc)

[R2-1711819](file:///C:\Data\3GPP\Extracts\R2-1711819_NR%20Co-existence.doc) RRC signalling to support LTE+NR Co-existence SAMSUNG Electronics Co., Ltd. discussion [R2-1709504](file:///C:\Data\3GPP\Extracts\R2-1709504_NR%20Co-existence.doc)

### 10.4.2 LTE RRC changes for EN-DC

No documents should be submitted to 10.4.2. Please submit to 10.4.2.x.

Note that changes to LTE RRCConnectionReconfiguration for configuring EN-DC will be discussed jointly with NR RRCConnectionReconfiguration in 10.4.1.3.1, and NR and :LTE aspects of SCG failure for EN-DC will be jointly discussed in 10.4.1.5.3.

#### 10.4.2.1 Running CR

This agenda item is relevant to EN-DC completion

[R2-1711505](file:///C:\Data\3GPP\Extracts\36331_CRxxxx_(Rel-15)_R2-1711505_On%20introducing%20NR-v2.docx) Introducing support for NR (draft running CR to 36.331) Samsung Telecommunications CR Rel-15 36.331 14.4.0 3115 - B NR\_newRAT-Core [R2-1709488](file:///C:\Data\3GPP\Extracts\R2-1709488.doc)

- Samsung clarify that it captures agreements for SA and EN-DC.

=> Comments invited on agreements that have been missed or aspects that have not yet been agreed.

=> Other comments can also be provided offline.

=> Separate into 2 CRs. One for EN-DC and common aspects, and one for the additional aspects to support interworking with NR SA.

=> Also to be updated to capture agreements from this meeting (included agreed TPs).

* [99bis#xx][NR] LTE RRC running CRs (Samsung)

Intended outcome: 2 running CRs for LTE RRC

Deadline: Thursday 2017-11-09

[R2-1711128](file:///C:\Data\3GPP\Extracts\R2-1711128%20-%20CR%20for%20TS%2036331%20general%20changes%20to%20support%20EN-DC.docx) CR for TS 36.331 - general changes to support EN-DC Ericsson discussion Rel-15 NR\_newRAT-Core

=> Aspects can be input to the email discussion.

#### 10.4.2.2 RRM measurements

Introduction of inter-RAT NR measurements within LTE RRC.

This agenda item is relevant to EN-DC completion.

[R2-1710436](file:///C:\Data\3GPP\Extracts\R2-1710436%20Discussion%20on%20requirement%20of%20measurement%20in%20E-UTRAN.doc) Discussion on requirement of measurement in E-UTRAN ZTE Corporation, Sane Chips discussion Rel-15

- Ericsson think it could be a subset of what is NR, for example CSI-RS. IDC agree with Ericsson.

- Qualcomm also has some concern and think the LTE measurement gap may not be long enough.

- Ericsson explain that the B events don’t currently consider cell specific offsets.

- DOCOMO think the MN needs to convert the measurements from LTE to NR RRC format in order to provide then to the SN.

Agreements

1 NR measurement reporting in LTE will follow NR RRC decisions but may not include all parameters (e.g. CSI-RS measurements would not be included).

FFS: Whether the white list is supported.

2 For inter-RAT measurement on NR frequency configured by E-UTRAN, UE can report on detected cells.

3 Frequency specific offset is supported for NR measurement in LTE

4 Cell specific offset will not be supported for NR measurement in LTE

5 LTE Inter-RAT measurement report that includes SSB based beam measurement results should be encoded in LTE RRC format.

[R2-1710668](file:///C:\Data\3GPP\Extracts\R2-1710668%20(R15%20NR%20WI%20A10423%20LTE%20Measurement%20Report%20Content%20for%20ENDC).doc) LTE Measurement Reports for EN-DC InterDigital discussion Rel-15 NR\_newRAT-Core

- Samsung wonder whether all NR serving cells are needed or whether PSCell is sufficient.

- LG think the MN initiated SN change is only for load balancing and hence the NR serving cell do not need to be included.

- Intel support the proposal and think the MN can configure independent measurements if needed. OPPO share this view and support the proposal. Huawei also support the proposal.

- ZTE share the view of LG that this is not needed.

- Nokia think for inter MN handover case there is value so the target MN can decided whether to keep or release the SN and hence would like them for A events. Ericsson share this view and think it could be configurable by the network. Intel think the MN can still get the information if it is really required. Samsung see the LTE DC case was very different as the MN was responsible for all SN configuration.

=> Offline discussion to conclude on when NR serving cell measurements are provided (Offline discussion #35, IDC). Ouctome in R2-1712057

[R2-1712057](file:///C:\Data\3GPP\Extracts\R2-1712057_Summary_of_offline_discussion_35_v6.docx) Summary of offline discussion [#35] to conclude on when NR serving cell measurements are provided Interdigital

Agreements

1: The UE can report NR serving cell measurements in Bx events related to NR measurements.

1.1: The NR serving cell measurements included in Bx events include both PSCell and SCell.

3: The UE includes ARFCN and PCI of the NR serving cells to identify the NR serving cell measurements. SCellIndex is not used for this purpose. (May be revisited depending on the putcome of the discussion the uniqueness of the SCell index)

FFS: The UE does not send NR serving cell measurements in measurement reports associated with LTE Ax events or in periodic measurement reports.

[R2-1711120](file:///C:\Data\3GPP\Extracts\R2-1711120.doc) SSTD measurements for EN-DC NTT DOCOMO, INC. discussion Rel-15 NR\_newRAT-Core

- Intel think this may not be so critical for first release of EN-DC especially considering that it is only needed for asynchronous. DOCOMO explain that the SI agreed that EN-DC will support both sync and async.

- NEC support to have this from the start of EN-DC.

- Intel think that UE support of async and sync capability may be needed.

- Ericsson wonder if his could also be reported for cells that are not yet configured. DOCOMO think this was discussed for LTE-DC and it was not done due to the gap required to read the MIB.

Agreements:

1: SSTD measurements for EN-DC are supported with the following principles (as in LTE):

a. MeNB can configure SFN/subframe offset reporting for PSCell only when EN-DC is configured.

b. UE only needs to read MIB to measure/report SFN/subframe offset.

c. MeNB forwards the SFN/subframe offset from MeNB to SgNB using “SCG-ConfigInfo” (FFS on IE name).

d. One shot reporting (i.e. eNB configures measurement and UE sends single report to eNB, not periodical).

2 The definition of LTE SSTD is reused for NR (to be confirmed by RAN4).

3 Attempt to introduce in LTE RRC by reusing the reporting for LTE DC.

FFS: Whether to extend SSTD measurement reporting for cells that are not yet configured.

[R2-1711121](file:///C:\Data\3GPP\Extracts\R2-1711121.doc) [DRAFT] LS on SSTD measurements for EN-DC NTT DOCOMO, INC. LS out Rel-15 NR\_newRAT-Core

- Intel think we should also ask if RAN4 sees any issues from their point of view

=> Revised in [R2-1711985](file:///C:\Data\3GPP\Extracts\R2-1711985.doc) (Offline discussion #36)

[R2-1711985](file:///C:\Data\3GPP\Extracts\R2-1711985.doc) [DRAFT] LS on SSTD measurements for EN-DC NTT DOCOMO, INC. LS out Rel-15 NR\_newRAT-Core To:RAN4 Cc:RAN1

=> Change final sentence of action to "whether the RAN2 reporting can be reused as it is".

=> Approved in [R2-1712029](file:///C:\Data\3GPP\Extracts\R2-1712029.doc)

[R2-1710238](file:///C:\Data\3GPP\Extracts\R2-1710238_Discussion%20on%20NR%20Events%20Configuration%20in%20EN-DC.doc) Discussion on NR Events Configuration in EN-DC OPPO discussion

[R2-1710362](file:///C:\Data\3GPP\Extracts\R2-1710362%20inter-RAT%20measurement.docx) Inter-RAT measurement for EN-DC Fujitsu discussion Rel-15 NR\_newRAT-Core

[R2-1710619](file:///C:\Data\3GPP\Extracts\R2-1710619-servCellMeasurement_v00.docx) Measurement reporting of NR serving cells in EN-DC Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710809](file:///C:\Data\3GPP\Extracts\R2-1710809%20Inter-RAT%20measurement%20of%20NR%20in%20LTE.doc) Inter-RAT measurement of NR in LTE LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708899](file:///C:\Data\3GPP\Extracts\R2-1708899%20NR%20cell%20measurement%20in%20LTE.doc)

[R2-1710863](file:///C:\Data\3GPP\Extracts\R2-1710863%20Remaining%20issues%20for%20inter-RAT%20measurements%20from%20LTE%20to%20NR.docx) Remaining issues for inter-RAT measurements from LTE to NR MediaTek Inc. discussion

[R2-1711097](file:///C:\Data\3GPP\Extracts\R2-1711097%20Consideration%20on%20inter-RAT%20measurement%20in%20EN-DC.doc) Consideration on inter-RAT measurement in EN-DC Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711129](file:///C:\Data\3GPP\Extracts\R2-1711129%20-%20TP%20for%2036.331%20measurement%20change%20for%20inter-RAT%20NR%20and%20EN-DC.docx) TP for TS 36.331 - inter-RAT NR measurements Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711298](file:///C:\Data\3GPP\Extracts\R2-1711298%20Inter-RAT%20NR%20Measurement%20Framework.doc) Inter-RAT Measurement Framework Samsung R&D Institute India discussion

[R2-1711299](file:///C:\Data\3GPP\Extracts\R2-1711299%20Measurement%20Gap%20Configuration%20for%20EN-DC.doc) Measurement Gap Configuration for EN-DC Samsung R&D Institute India discussion

[R2-1711459](file:///C:\Data\3GPP\Extracts\R2-1711459%20Support%20of%20reportOnLeave%20for%20E-UTRA%20B1%20and%20B2.docx) Support of reportOnLeave for E-UTRA B1 and B2 Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT-Core

[R2-1711460](file:///C:\Data\3GPP\Extracts\36331_CR3109_(Rel-15)_R2-1711460%20Support_of_reportOnLeave_for_E-UTRA_B1_and_B2.doc) 36.331 CR: Support of reportOnLeave for E-UTRA B1 and B2 Nokia, Nokia Shanghai Bell CR Rel-15 36.331 14.4.0 3109 - B NR\_newRAT-Core

[R2-1710936](file:///C:\Data\3GPP\Extracts\R2-1710936_Remaining%20measurement%20event%20for%20EN-DC.doc) Remaining measurement event for EN-DC vivo discussion Rel-15 NR\_newRAT-Core [R2-1708408](file:///C:\Data\3GPP\Extracts\R2-1708408_Remaining%20on%20measurement%20event%20for%20EN-DC.docx)

Moved from 10.4.1.4.4 to 10.4.2.2

[R2-1711130](file:///C:\Data\3GPP\Extracts\R2-1711130-%20Inclusion%20of%20NR%20SN%20serving%20cell%20measurements%20in%20LTE%20measurement%20reports.docx) Inclusion of NR SN serving cell measurements in LTE measurement reports Ericsson discussion Rel-15 NR\_newRAT-Core

moved from 10.4.1.4.6 to 10.4.2.2

[R2-1710855](file:///C:\Data\3GPP\Extracts\R2-1710855%20NR%20SN%20serving%20cell%20measurements%20in%20LTE%20measurement%20reports.docx) NR SN serving cell measurements in LTE measurement reports Nokia, Nokia Shanghai Bell discussion Rel-15 NR\_newRAT

moved from 10.2.4 to 10.4.2.2

[R2-1710276](file:///C:\Data\3GPP\Extracts\R2-1710276.docx) Measurement results of serving cells CATT discussion Rel-15 NR\_newRAT-Core [R2-1707886](file:///C:\Data\3GPP\Extracts\R2-1707886.docx)

moved from 10.2.4 to 10.4.2.2

#### 10.4.2.3 Other

Including the NR indication in LTE system information, etc

This agenda item is relevant to EN-DC completion.

[R2-1710512](file:///C:\Data\3GPP\Extracts\R2-1710512%20-%20Introducing%205G%20indication%20in%20LTE%20RRC%20SIB.docx) Introducing 5G indication in LTE RRC SIB Ericsson discussion Rel-15 NR\_newRAT-Core

- DOCOMO think we agreed it is not related to AS functionality and hence wonder whether we need it at all. Think the presence of the new SIB for idle mode mobility might be sufficient. SIB could be empty if the reselection to NR SA is not supported.

=> Can be discussed again when we have received confirmation that the 5G indication is needed.

[R2-1711135](file:///C:\Data\3GPP\Extracts\R2-1711135%20-%20Tunneling%20of%20NR%20messages%20via%20LTE.docx) Tunneling of NR RRC messages via LTE Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710119](file:///C:\Data\3GPP\Extracts\R2-1710119.doc) How to implement an NR indicator in LTE system information NTT DOCOMO, INC. discussion Rel-15 NR\_newRAT-Core

[R2-1710694](file:///C:\Data\3GPP\Extracts\R2-1710694%20Fast%20DC%20configuration%20in%20EN-DC.docx) Fast DC configuration in EN-DC MediaTek Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708271](file:///C:\Data\3GPP\Extracts\R2-1708271%20Fast%20DC%20configuration%20in%20EN-DC.docx)

### 10.4.3 UE capabilities

No documents should be submitted to 10.4.3. Please submit to 10.4.3.x.

#### 10.4.3.1 Decoupling UL/DL bands

Output from email discussion [99#24][NR] Decoupling DL band and UL bands (Intel)

This agenda item is relevant to EN-DC completion and SA.

Maximum 1 tdoc per company

[R2-1710609](file:///C:\Data\3GPP\Extracts\R2-1710609_Email%20report_DL_UL_decoupling_v4.doc) Email discussion report on [99#24][NR] Decoupling DL band and UL bands Intel Corporation discussion Rel-15 NR\_newRAT-Core

=> Noted

[R2-1710691](file:///C:\Data\3GPP\Extracts\R2-1710691.docx) Further analysis on decoupling DL and UL bands Intel Corporation discussion Rel-15 NR\_newRAT-Core

- DOCOMO think in the email most companies preferred approach 1 and think this could be a viable option. Think it also depends whether the some things such as MIMO capability is included in the BC.

- Intel think we need to consider if option 3 has a problem with duplicating capabilities. The MIMO aspects needs to be discussed based on other email but think MIMO should be in the BC.

=> Comeback to discussion after other capability discussion

- Update from offline: Other discussions have not progressed enough to continue this discussion.

=> Can be discussed as part of the UE capability email discussion.

#### 10.4.3.2 UE capability structure

Including output from email discussion [99#25][NR] Capability coordination, Part 1 (Intel)

Including output from email discussion [99#26][NR] Capability coordination, Part 2 (DOCOMO)

This agenda item is relevant to EN-DC completion and SA.

Maximum 1 tdoc per company

[R2-1710632](file:///C:\Data\3GPP\Extracts\R2-1710632.docx) Email Disc on [99#25][NR] Capability coordination - Part 1 Intel Corporation discussion Rel-15 NR\_newRAT-Core

Agreements

1 MR-DC band combination consists of list of MR-DC band combination parameter(s) and each MR-DC band combination parameter consists of list of band parameter(s) where each band parameter is chosen from CHOICE of LTE and NR band.

2 MR-DC band combination is signalled as a separate container from LTE and NR capability container and both nodes need to interpret the container.

2a MN can request that the UE provides this container (separate request from the request for UE to provide other RAT capabilities)

3 MR-DC band combination is specified in NR RRC.

4 The ASN.1 example shown in the paper can be considered as starting point (EN-DC corrected to MR-DC)

5 The table (without conclusion, i.e. “X”, and possibly with some table format change) is to be maintained by the spec rapporteur and updated according to the related discussion and decision.

* [99bis#xx][NR] L2/3 capabilities (Intel)

Progress the L2/3 capability table from email discussion#25. Aim to progress which features are baseline, which need IOT or capability bits, etc

Intended outcome: Report to next meeting

Deadline: Thursday 2017-11-09

* [99bis#xx][NR] UE capability ASN.1 structure (Intel)

Progress the ASN.1 structure for UE capabilities in NR and LTE RRC spec and the corresponding field descriptions.

Intended outcome: TP to next meeting

Deadline: Thursday 2017-11-09

[R2-1710115](file:///C:\Data\3GPP\Extracts\R2-1710115_%5b99%2326%5d%5bNR%5dCapaCoorPart2.doc) Summary of email discussion [99#26][NR] Capability coordination - Part 2 NTT DOCOMO, INC. (Email discussion rapporteur) report Rel-15 NR\_newRAT-Core

P1

- Intel think that RAN1/4 still consider that MIMO is an RF capability and so should be in the BC and also in the baseband capabilities. The MIMO capability in the baseband capabilities is indicate for other purpose for the calculation of the intended baseband processing capability.

- Samsung think there are different views on how dependent the MIMO capability is on the BC.

- Qualcomm think it would be OK to indicate the MIMO capability per band but not needed per BC. The signalling per BC would be allowed for exceptional cases.

- Ericsson would prefer to go for MIMO in the baseband combination and per band if that is possible. Concern with signalling per BC is that it will again lead to huge sizes.

- Intel think the MIMO capability per BC would only be signalled if different from the MIMO capability per band.

Agreements

1 UE can report the number of MIMO layers per band

2 The concept of baseband capability combination is applied at least for the LTE part of EN-DC. (Whether to apply for LTE only operation can be discussed separately under TEI15 after it is stable for EN-DC)

3 The fallback mechanism similar to Rel-14 LTE CA is considered for the baseband processing combination signaling. Details are FFS.

=> Offline discussion to progress on P1 (The UE reports the MIMO capability as part of the baseband processing capabilities) and P3 (Proposal 3: For a certain band combination, if the supported MIMO capability is different from the one for the baseband and single frequency band, the UE can report the different MIMO capability per CC in the band combination signalling) (Offline discussion #32, DOCOMO)

[R2-1712007](file:///C:\Data\3GPP\Extracts\R2-1712007.doc) Outcome of offline #32; MIMO capability reporting in BPC and BC NTT DOCOMO, INC. discussion Rel-15 NR\_newRAT-Core

Working assumption:

1 The UE reports the MIMO capability per CC as part of the baseband processing capabilities.

2 The MIMO capability is not included in the band combination signalling.

=> ASN.1 example in the documents can be a starting point in the UE capability email discussion

=> Draft LS to inform RAN1/4 of our agreements and working assumption. Ask them for any feedback and ask them to take it into account when providing their feature lists. Draft LS in R2-1712048

* [99bis#xx][NR] UE capabilities LS (DOCOMO)

Intended outcome: Approved LS

Deadline: Thursday 2017-11-09

[R2-1710342](file:///C:\Data\3GPP\Extracts\R2-1710342%20Capability%20design%20for%20SA%20NR.doc) Capability design for SA NR Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710690](file:///C:\Data\3GPP\Extracts\R2-1710690.docx) Baseband processing capability structure for NSA Intel Corporation discussion Rel-15 NR\_newRAT-Core

#### 10.4.3.3 UE capability coordination

Output from email discussion [99#27][NR] Capability coordination, Part 3 (Nokia)

This agenda item is relevant to EN-DC completion.

Maximum 1 tdoc per company

[R2-1710860](file:///C:\Data\3GPP\Extracts\R2-1710860%20%5b99%2327%5d%5bNR%5dCapability%20Coordination%20Part%203%20report.doc) Email discussion summary for [99#27][NR] Capability coordination, Part 3 Nokia, Nokia Shanghai Bell report Rel-15 NR\_newRAT

- Nokia explain that this is described for SN addition but can be extended also to reconfiguration cases.

- Samsung think it should be left to the network to decide when to coordinate again after a reconfiguration within one node.

- Samsung ask if the SN can initiate this. LG think this should only be done by the MN.

P2

- DOCOMO ask why the expected data rate it needed. Nokia think the network only know the BPC of its own node so it can note determine the data rate that may be provided by the other node. See it can reduce back and forth negotiation.

- ZTE think this looks like a dynamic parameter.

- Qualcomm still has some confusion how this would be used.

Agreements

1 The MN decides the LTE (resp NR) part of BC and BPC and provide SN indicating its choice of LTE (resp NR) part and SN continues further to determine the set of supportable NR (resp LTE) BCs and NR (resp LTE) BPC and then select an NR BC (resp LTE) and NR BPC (resp LTE)

1i Similar process can be initiated by the SN as a request as part of SN initiated reconfiguration. MN may reject the request.

[R2-1711560](file:///C:\Data\3GPP\Extracts\R2-1711560.doc) MR-DC UE capability dependency and coordination Qualcomm Incorporated discussion Rel-15 NR\_newRAT

- DOCOMO assumed that the LTE baseband capability would be in the MR DC band combination container otherwise it could be used for LTE only operation. If it is applied for standalone then it could be moved.

- Intel think for the BPC case it should be ok to use the index approach. This will increase the BPC overhead due to additional fallback combinations if we go for the index approach. The BPC could be included in the MR DC container.

- Huawei wonder how this approach can work for the shared capabilities. This is why it adds additional overhead. It adds more BPC combinations for the shared capabilities.

- Nokia think we should think about it when we know which capabilities are shared between LTE and NR.

=> Offline discussion to try to progress on the next level of detail on how the coordination works (Offline discussion #33, Qualcomm)

[R2-1712043](file:///C:\Data\3GPP\Extracts\R2-1712043.doc) Summary for offline discussion #33 on the next level of detail on MR-DC UE capability coordination Qualcomm

Agreements

1: The concept of baseband capability combination is applied at least for the LTE part of MR-DC. (the same agreement for EN-DC from discussion on R2-1710115 also applies to MR-DC).

2: Multiple combinations of LTE-NR baseband capabilities may be applicable per MR-DC band combination

3: Baseband capability combinations for LTE and NR applied for MR-DC are signalled in the UE capability of each RAT

4: “Dependency” of LTE and NR baseband capability combinations is signalled

FFS Whether this is in the “MR-DC capability container” or in the individual RAT capabilities

=> Details can be progressed as part of the capabilities email discussion

#### 10.4.3.4 Other aspects for EN-DC

Any other aspect related to UE capabilities relevant for EN-DC

This agenda item is relevant to EN-DC completion.

[R2-1710116](file:///C:\Data\3GPP\RAN2\Docs\R2-1710116.zip) TP on UE capability structure and retrieval procedures NTT DOCOMO, INC. pCR Rel-15 38.331 0.0.5 NR\_newRAT-Core

=> TPs can be updated to take into account any agreements from this meeting, consistency with previous agreements checked, and be used as starting point in the email discussion.

[R2-1710612](file:///C:\Data\3GPP\Extracts\R2-1710612_Peak%20data%20rate_v1.doc) Further consideration on peak data rate calculation Intel Corporation discussion Rel-15 NR\_newRAT-Core

- Ericsson think we should aim to have this only in the baseband capabilities.

- Qualcomm think modulation can be part of baseband capabilities.

- LG think if MIMO is to be in the BC then modulation should also be in the BC.

P3

- Ericsson think this is opposite of what was agreed last time and RAN1 and Ran4 indicated that it was possible. Intel don’t intend to revert the agreement but propose an additional upper limit.

- Samsung thinks this conflicts with the RAN decision that category is for marketing purposes only.

- ZTE think for the DC case we previously agreed not to do this.

- LG think this additional information is not required.

- Intel think the achievable throughput should not be derived only the calculated peak data rate.

Agreements

1 Modulation order is in included in the BPC.

[R2-1711523](file:///C:\Data\3GPP\Extracts\R2-1711523%20-%20L2%20Buffer%20Size%20capability.docx) L2 Buffer Size capability Ericsson discussion Rel-15 NR\_newRAT-Core

P2

- DOCOMO wonder if this DC requirement is required for UE supporting only SCG bearer.

- Qualcomm think we had an assumption how to split the max data rate between the MCG and SCG. Intel think we had some assumption on the split between MCG and SCG but for NR we may not need this as the data rate is separately determined on the 2 sides.

- Intel wonder how we determine the RTT and Xn delay. Think we can assume a smaller value than in LTE. DOCOMO think 50ms is assumed by UP session for NR side and SN lengths were designed on this assumption.

- Intel think that for LTE it was based on assumption on HARQ retransmission and RLC behaviour.

- Qualcomm think the buffer size is not needed for the network operation but is more for UE implementation guidance. DOOCOMO think the buffer size is important for network scheduling point of view.

Agreements

1 The same formula as in LTE is used to determine the required L2 buffer size in NR: Minimum L2 Buffer Size = MaxDLDataRate \* RoundTripTime + MaxULDataRate \* RoundTripTime (Calculated for highest rate NR BC)

2 The same formula as in LTE DC is used to determine the required L2 buffer size for split bearer operation in NR/MR-DC: MaxULDataRate \* RTT + MaxDLDataRate\_SeNB \* RTT + MaxDLDataRate\_MeNB \* (RTT + Xn delay + Queuing in SN) (Calculated for highest rate MR-DC BC)

FFS RTT and Xn delay and queuing delay values.

3 Capture the formula for determining the L1 data rate and the formulas for determining the L2 buffer size (using the L1 data rate as input) in 38.306.

=> Draft LS to ask RAN1 to provide a formula or table for determining the L1 data rate from the UE’s band combinations and baseband capabilities as proposed by RAN2-99 (Offline discussion #34, Ericsson). Draft LS in [R2-1711983](file:///C:\Data\3GPP\Extracts\R2-1711983%20-%20Draft%20LS%20on%20formula%20or%20table%20for%20L1%20data%20rate.docx)

[R2-1711983](file:///C:\Data\3GPP\Extracts\R2-1711983%20-%20Draft%20LS%20on%20formula%20or%20table%20for%20L1%20data%20rate.docx) [DRAFT] LS on formula or table for L1 data rate Ericsson LS out Rel-15 NR\_newRAT-Core To:RAN1

=> Remove "the UE does not need to signal a UE category explicitly (see previous RAN2 LS in [R2-1709979](file:///C:\Data\3GPP\Extracts\R2-1709979%20LS%20to%20RAN1%20and%20RAN4%20on%20UE%20categories%20and%20capabilities.doc)) for DC supporting UEs. RAN1 and RAN4 confirmed this. Because of the agreement not to specify L1 peak data rates in categories, also"

=> Remove "(as proposed by RAN2-99 in [R2-1709979](file:///C:\Data\3GPP\Extracts\R2-1709979%20LS%20to%20RAN1%20and%20RAN4%20on%20UE%20categories%20and%20capabilities.doc))."

=> Approved in [R2-1712026](file:///C:\Data\3GPP\Extracts\R2-1712026%20-%20LS%20on%20formula%20or%20table%20for%20L1%20data%20rate.docx)

[R2-1711618](file:///C:\Data\3GPP\Extracts\R2-1711618_L2%20buffer%20calculation%20for%20NR.doc) Total L2 buffer size calculation NTT DOCOMO INC. discussion Rel-15 NR\_newRAT-Core

#### 10.4.3.5 Temporary capability restriction

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

Maximum 1 tdoc per company

[R2-1710344](file:///C:\Data\3GPP\Extracts\R2-1710344%20UE%20temporary%20access%20capability%20%20restriction.doc) UE temporary access capability restriction Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710611](file:///C:\Data\3GPP\Extracts\R2-1710611_NR_temp_capa_change_v0.doc) Temporary capability restriction Intel Corporation discussion Rel-15 NR\_newRAT-Core [R2-1708788](file:///C:\Data\3GPP\Extracts\R2-1708788_NR_temp_capa_change_v0.doc)

[R2-1710945](file:///C:\Data\3GPP\Extracts\R2-1710945_UE%20radio%20access%20capabilities%20change.docx) UE radio access capabilities change vivo discussion Rel-15 NR\_newRAT-Core [R2-1708415](file:///C:\Data\3GPP\Extracts\R2-1708415_UE%20radio%20access%20capabilities%20change.docx)

[R2-1711521](file:///C:\Data\3GPP\Extracts\R2-1711521%20-%20UE%20capability%20restrictions.docx) UE Capability Restrictions Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708033](file:///C:\Data\3GPP\Extracts\R2-1708033%20-%20UE%20capability%20restrictions.docx)

#### 10.4.3.6 Other aspects for non EN-DC

Any other stage 2 aspect related to UE capabilities relevant for non EN-DC cases

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710343](file:///C:\Data\3GPP\Extracts\R2-1710343%20Network%20handling%20on%20UE%20static%20access%20capability.doc) Network handling on UE static access capability Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1711420](file:///C:\Data\3GPP\Extracts\R2-1711420.doc) NR UE Capability Size Reduction LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1709453](file:///C:\Data\3GPP\Extracts\R2-1709453.doc)

[R2-1711504](file:///C:\Data\3GPP\Extracts\R2-1711504%20on%20use%20of%20identifier%20to%20represent%20NR%20UE%20capabilities.doc) Use of identifier representing NR UE capabilities, baseline Samsung Telecommunications discussion Rel-15

[R2-1711522](file:///C:\Data\3GPP\Extracts\R2-1711522%20-%20UE%20capability%20compression.docx) UE Capability Compression Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708034](file:///C:\Data\3GPP\Extracts\R2-1708034%20-%20UE%20capability%20compression.docx)

[R2-1711561](file:///C:\Data\3GPP\Extracts\R2-1711561.doc) Reducing the size of UE capabilities Qualcomm Incorporated discussion Rel-15 NR\_newRAT [R2-1707837](file:///C:\Data\3GPP\Extracts\R2-1707837.doc)

[R2-1711745](file:///C:\Data\3GPP\Extracts\R2-1711745%20UE%20capability%20retrieval%20framework%20in%20NR.doc) UE capability retrieval framework in NR NTT DOCOMO INC. discussion

#### 10.4.3.7 TS

Latest 38.306, other rapporteur inputs, anything related to specification methodology.

This agenda item is relevant to EN-DC completion

### 10.4.4 Idle/inactive mode procedures

[R2-1711205](file:///C:\Data\3GPP\Extracts\R2-1711205%20Paging%20for%20wideband%20NR%20carrier.docx) Paging for wideband carrier in NR Samsung discussion Rel-15

#### 10.4.4.1 TS

Latest 38.304, other rapporteur inputs, anything related to specification methodology. Please submit any new text proposals to the appropriate agenda item.

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1711588](file:///C:\Data\3GPP\RAN2\Docs\R2-1711588.zip) New Generation Radio Access Network; User Equipment (UE) procedures in Idle mode Qualcomm Incorporated draft TS Rel-15 38.304 0.0.5 NR\_newRAT-Core [R2-1709627](file:///C:\Data\3GPP\TSGR2\TSGR2_99\Docs\R2-1709627.zip)

#### 10.4.4.2 Selection/reselection rules

Basic criteria and rules for cell selection and reselection

Maximum 1 tdoc per company

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710447](file:///C:\Data\3GPP\Extracts\R2-1710447%20-%20Cell%20selection%20and%20reselection%20criteria%20and%20measurement%20configuration.docx) Cell selection and reselection criteria and measurement configuration Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710466](file:///C:\Data\3GPP\Extracts\R2-1710466.doc) Cell selection and reselection rules Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710628](file:///C:\Data\3GPP\Extracts\R2-1710628.doc) Further considerations for cell (re)selection Intel Corporation discussion Rel-15 NR\_newRAT-Core

[R2-1710726](file:///C:\Data\3GPP\Extracts\R2-1710726-Service%20based%20Inter-RAT%20cell%20reselection.docx) Service based Inter-RAT cell reselection China Telecom discussion

[R2-1710946](file:///C:\Data\3GPP\Extracts\R2-1710946_Cell%20selection%20reselection%20in%20NR.docx) Cell selection reselection in NR vivo discussion Rel-15 NR\_newRAT-Core [R2-1708431](file:///C:\Data\3GPP\Extracts\R2-1708431_Cell%20selection%20reselection%20in%20NR.docx)

[R2-1711591](file:///C:\Data\3GPP\Extracts\R2-1711591_Discussion%20on%20cell%20(re)selection%20while%20the%20beam%20number%20is%20less%20than%20N.doc) Discussion on cell (re)selection while the beam number is less than N HTC Corporation, Mediatek discussion Rel-15 NR\_newRAT-Core [R2-1708315](file:///C:\Data\3GPP\Extracts\R2-1708315_Discussion%20on%20cell%20(re)selection%20while%20the%20beam%20number%20is%20less%20than%20N.doc)

[R2-1711716](file:///C:\Data\3GPP\Extracts\R2-1711716%20%20Cell%20selection%20reselection%20method%20for%20NR%20IDLE%20mode.doc) Cell Selection/Reselection method for NR IDLE mode Samsung Electronics discussion

[R2-1711059](file:///C:\Data\3GPP\Extracts\R2-1711059%20Implementing%20Reselections%20in%20NR%20-%20cell%20selection%20and%20reselection.docx) Cell selection and reselection for NR IDLE - cell selection/reselection criteria Nokia discussion Rel-15 NR\_newRAT-Core [R2-1708476](file:///C:\Data\3GPP\Extracts\R2-1708476%20Implementing%20Reselections%20in%20NR%20-%20cell%20selection%20and%20reselection.docx)

moved from 10.4.2.2 to 10.4.4.2

#### 10.4.4.3 Cell quality derivation

Derivation of cell quantity from beam measurements (including filtering and FFS points from previous meetings)

Maximum 1 tdoc per company

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710444](file:///C:\Data\3GPP\Extracts\R2-1710444%20-%20Cell%20Quality%20Derivation%20in%20Idle%20mode.docx) Cell quality derivation for idle/inactive UEs Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708579](file:///C:\Data\3GPP\Extracts\R2-1708579%20-%20Cell%20Quality%20Derivation%20in%20Idle%20mode.docx)

[R2-1710467](file:///C:\Data\3GPP\Extracts\R2-1710467.doc) Derivation of cell quality in IDLE/INACTIVE Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708076](file:///C:\Data\3GPP\Extracts\R2-1708076%20Derivation%20of%20cell%20quality%20in%20IDLE-INACTIVE.doc)

[R2-1710629](file:///C:\Data\3GPP\Extracts\R2-1710629.doc) Cell quality derivation for idle mobility Intel Corporation discussion Rel-15 NR\_newRAT-Core [R2-1708817](file:///C:\Data\3GPP\Extracts\R2-1708817.doc)

[R2-1710807](file:///C:\Data\3GPP\Extracts\R2-1710807%20Cell%20quality%20derivation%20in%20IDLEINACTIVE.doc) Cell quality derivation in IDLEINACTIVE LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708898](file:///C:\Data\3GPP\Extracts\R2-1708898%20Cell%20quality%20derivation%20in%20IDLEINACTIVE.doc)

[R2-1710947](file:///C:\Data\3GPP\Extracts\R2-1710947_Cell%20quality%20derivation%20in%20idle%20inactive%20mode.docx) Cell quality derivation in idle inactive mode vivo discussion Rel-15 NR\_newRAT-Core [R2-1708430](file:///C:\Data\3GPP\Extracts\R2-1708430_Cell%20quality%20derivation%20in%20idle%20inactive%20mode.docx)

[R2-1711442](file:///C:\Data\3GPP\Extracts\R2-1711442%20(Cell%20Quality%20Derivation).docx) Cell Quality Derivation for Cell Reselection Convida Wireless LLC discussion Rel-15 NR\_newRAT-Core

[R2-1711715](file:///C:\Data\3GPP\Extracts\R2-1711715%20%20Cell%20quality%20derivation%20method%20for%20NR%20IDLE%20mode.doc) Cell quality derivation method for NR IDLE mode Samsung Electronics discussion

[R2-1711058](file:///C:\Data\3GPP\Extracts\R2-1711058%20Implementing%20Reselections%20in%20NR%20-%20cell%20quality%20derivation.docx) Cell selection and reselection for NR IDLE - cell quality derivation Nokia discussion Rel-15 NR\_newRAT-Core [R2-1708475](file:///C:\Data\3GPP\Extracts\R2-1708475%20Implementing%20Reselections%20in%20NR%20-%20cell%20quality%20derivation.docx)

moved from 10.4.2.3 to 10.4.4.3

#### 10.4.4.4 Service based reselection

Maximum 1 tdoc per company

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710104](file:///C:\Data\3GPP\Extracts\R2-1710104_Cell%20Reselection_Service%20Specific%20Frequency%20Prioritisation%20in%20NR.doc) Cell Re-selection: Service Specific Frequency Prioritisation in NR Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core [R2-1707687](file:///C:\Data\3GPP\Extracts\R2-1707687_Cell%20Reselection_Service%20Specific%20Frequency%20Prioritisation%20in%20NR.doc)

[R2-1710469](file:///C:\Data\3GPP\Extracts\R2-1710469.doc) Service-based camping Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708077](file:///C:\Data\3GPP\Extracts\R2-1708077%20service%20based%20camping.doc)

[R2-1710484](file:///C:\Data\3GPP\Extracts\R2-1710484%20-%20Service-based%20RAT_frequency%20selection%20in%20INACTIVE%20or%20in%20IDLE.docx) Service-based RAT/frequency selection in INACTIVE or in IDLE [2] Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708174](file:///C:\Data\3GPP\Extracts\R2-1708174%20-%20Service-based%20RAT_frequency%20selection%20in%20INACTIVE%20or%20in%20IDLE.docx)

[R2-1710630](file:///C:\Data\3GPP\Extracts\R2-1710630.doc) Service based cell reselection Intel Corporation discussion Rel-15 NR\_newRAT-Core [R2-1708818](file:///C:\Data\3GPP\Extracts\R2-1708818.doc)

[R2-1710813](file:///C:\Data\3GPP\Extracts\R2-1710813%20Service%20based%20cell%20reselection.doc) Service based cell reselection LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708904](file:///C:\Data\3GPP\Extracts\R2-1708904%20Service%20based%20cell%20reselection.doc) To:SA2

[R2-1711769](file:///C:\Data\3GPP\Extracts\R2-1711769_Service-based%20cell%20reselection%20discussion_V2.doc) Service-based cell reselection discussion ITRI, ASUSTeK discussion NR\_newRAT-Core [R2-1709078](file:///C:\Data\3GPP\Extracts\R2-1709078_r1_clean.doc)

#### 10.4.4.5 Selection/reselection - other aspects

Including, for example mobility states, speed dependent scaling, forward compatibility for CSG, cell reservations, etc

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710448](file:///C:\Data\3GPP\Extracts\R2-1710448-%20Mobility%20states%20and%20state%20based%20scaling.docx) Mobility states and state based scaling Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1709299](file:///C:\Data\3GPP\Extracts\R2-1709299-%20Mobility%20states%20and%20state%20based%20scaling.docx)

[R2-1710449](file:///C:\Data\3GPP\Extracts\R2-1710449%20-%20Considering%20the%20number%20of%20good%20beams%20for%20cell%20reselection.docx) Considering the number of good beams for cell reselection Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710450](file:///C:\Data\3GPP\Extracts\R2-1710450%20-%20Cell%20reselection%20measurement%20rules.docx) Cell reselection measurement rules Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710451](file:///C:\Data\3GPP\Extracts\R2-1710451%20-%20Cell%20Reselection%20in%20RRC_INACTIVE%20State.docx) Cell selection and reselection rules for inactive UEs Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710452](file:///C:\Data\3GPP\Extracts\R2-1710452%20-%20Cell-specific%20prioritisation%20at%20reselection.docx) Cell-specific prioritisation at reselection Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710468](file:///C:\Data\3GPP\Extracts\R2-1710468.docx) Speed dependent mobility for idle mode Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core [R2-1708078](file:///C:\Data\3GPP\Extracts\R2-1708078%20Speed%20dependent%20mobility%20in%20idle%20and%20Inactive.docx)

[R2-1710470](file:///C:\Data\3GPP\Extracts\R2-1710470.doc) Cell reservation and forward compatibility for CSG in N Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-1710475](file:///C:\Data\3GPP\Extracts\R2-1710475%20-%20Camping%20in%20NR.docx) Camping in NR Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708176](file:///C:\Data\3GPP\Extracts\R2-1708176%20-%20Camping%20in%20NR.docx)

[R2-1710476](file:///C:\Data\3GPP\Extracts\R2-1710476.docx) CSG-like selection and camping limitations in NR Ericsson discussion Rel-15 NR\_newRAT-Core [R2-1708175](file:///C:\Data\3GPP\Extracts\R2-1708175%20-%20CSG-like%20selection%20and%20camping%20limitations%20in%20NR.docx)

[R2-1710805](file:///C:\Data\3GPP\Extracts\R2-1710805_NR_Cell_Reservation.doc) Cell Barring and Reservations for NR Qualcomm Incorporated discussion [R2-1709633](file:///C:\Data\3GPP\Extracts\R2-1709633_NR_Cell_Reservation.doc)

[R2-1710806](file:///C:\Data\3GPP\Extracts\R2-1710806_NR_CSG.doc) CSG Type Functionality for NR Qualcomm Incorporated, Deutsche Teleko discussion [R2-1709630](file:///C:\Data\3GPP\Extracts\R2-1709630_NR_CSG.doc)

[R2-1710948](file:///C:\Data\3GPP\Extracts\R2-1710948_Consideration%20on%20forward%20compatiabilitiy.doc) Consideration on forward compatibilitiy vivo discussion Rel-15 NR\_newRAT-Core [R2-1708432](file:///C:\Data\3GPP\Extracts\R2-1708432_Consideration%20on%20forward%20compatiabilitiy.docx)

[R2-1711646](file:///C:\Data\3GPP\Extracts\R2-1711646%20NR%20forward%20compatibility%20issue%20for%20CSG.doc) NR forward compatibility issue for CSG LG Electronics Inc. discussion Rel-15 [R2-1709279](file:///C:\Data\3GPP\Extracts\R2-1709279%20NR%20forward%20compatibility%20issue%20for%20CSG.doc)

[R2-1711648](file:///C:\Data\3GPP\Extracts\R2-1711648%20Idle%20Measurement%20Enhancement%20using%20UE%20speed.doc) Idle Measurement Enhancement using UE speed LG Electronics Inc. discussion Rel-15 [R2-1709281](file:///C:\Data\3GPP\Extracts\R2-1709281%20Idle%20Measurement%20Enhancement%20using%20UE%20speed.doc)

[R2-1711722](file:///C:\Data\3GPP\Extracts\R2-1711722%20%20Speed%20dependant%20parameters%20in%20NR%20IDLE%20and%20INACTIVE%20mode%20mobility_r1.doc) Speed dependant parameters in NR IDLE and INACTIVE mode mobility Samsung Electronics discussion

#### 10.4.4.6 Idle/inactive paging

Including beam related aspects, response driven paging and calculation of paging occasion.

This agenda item is not relevant to EN-DC completion and is not expected to be treated at this meeting.

[R2-1710097](file:///C:\Data\3GPP\Extracts\R2-1710097_Paging%20in%20NR_Beamforming%20Aspects.doc) Paging in NR – Beamforming Aspects Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core [R2-1707688](file:///C:\Data\3GPP\Extracts\R2-1707688_Paging%20in%20NR_Beamforming%20Aspects.doc)

[R2-1710101](file:///C:\Data\3GPP\Extracts\R2-1710101_PO%20Determination%20for%20Paging%20Reception.doc) PO Determination for Paging Reception Samsung R&D Institute India discussion Rel-15 NR\_newRAT-Core [R2-1707689](file:///C:\Data\3GPP\Extracts\R2-1707689_PO%20Determination%20for%20Paging%20Reception.doc)

[R2-1710290](file:///C:\Data\3GPP\Extracts\R2-1710290.docx) Issues for Paging Occasion CATT discussion Rel-15 NR\_newRAT-Core

[R2-1710340](file:///C:\Data\3GPP\Extracts\R2-1710340_Reply%20LS%20on%20Paging%20Ocassion.doc) Reply LS on NR Paging Occasion Samsung R&D Institute India LS out Rel-15 NR\_newRAT-Core

[R2-1710425](file:///C:\Data\3GPP\Extracts\R2-1710425%20Calculation%20of%20paging%20occasion%20in%20NR.doc) Calculation of paging occasion in NR ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710426](file:///C:\Data\3GPP\Extracts\R2-1710426%20Paging%20occasion%20mechanism%20comparision.doc) Paging occasion mechanism comparision ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710427](file:///C:\Data\3GPP\Extracts\R2-1710427%20Overhead%20Reduction%20for%20Paging%20in%20Multi-beam%20Operation.doc) Overhead Reduction for Paging in Multi-beam Operation ZTE Corporation, Sane Chips discussion Rel-15

[R2-1710445](file:///C:\Data\3GPP\Extracts\R2-1710445%20-%20Paging%20delivery%20in%20NR%20(Revision%20of%20R2-1708536).docx) Delivery of paging messages Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710446](file:///C:\Data\3GPP\Extracts\R2-1710446%20-%20Response-driven%20paging%20to%20reduce%20beam%20sweeping%20overhead%20in%20NR.docx) Response-driven paging to reduce beam sweeping overhead in NR Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1710540](file:///C:\Data\3GPP\Extracts\R2-1710540.doc) Definition of Paging Frame and Paging Occasion Huawei, HiSilicon discussion Rel-15 [R2-1708216](file:///C:\Data\3GPP\Extracts\R2-1708216.doc)

[R2-1710541](file:///C:\Data\3GPP\Extracts\R2-1710541.docx) Efficiency of direct and response-driven paging Huawei, HiSilicon discussion Rel-15 [R2-1709662](file:///C:\Data\3GPP\Extracts\R2-1709662.docx)

[R2-1710631](file:///C:\Data\3GPP\Extracts\R2-1710631.doc) Calculation of paging occasion Intel Corporation discussion Rel-15 NR\_newRAT-Core [R2-1708819](file:///C:\Data\3GPP\Extracts\R2-1708819.doc)

[R2-1710678](file:///C:\Data\3GPP\Extracts\R2-1710678%20(R15%20NR%20WI%20AI10446%20PagingHF).doc) Paging In High Frequency InterDigital discussion Rel-15 NR\_newRAT-Core [R2-1708745](file:///C:\Data\3GPP\Extracts\R2-1708745%20(R15%20NR%20WI%20AI10426%20PagingHF).doc)

[R2-1710679](file:///C:\Data\3GPP\Extracts\R2-1710679%20(R15%20NR%20WI%20AI10446%20PagingIndicatorDetails).doc) Paging Indicator Details InterDigital discussion Rel-15 NR\_newRAT-Core [R2-1708746](file:///C:\Data\3GPP\Extracts\R2-1708746%20(R15%20NR%20WI%20AI10426%20PagingIndicatorDetails).doc)

[R2-1710793](file:///C:\Data\3GPP\Extracts\R2-1710793_NR%20paging%20design.docx) Consideration on NR paging Qualcomm Incorporated discussion [R2-1709642](file:///C:\Data\3GPP\Extracts\R2-1709642_NR%20paging%20design.docx)

[R2-1710798](file:///C:\Data\3GPP\Extracts\R2-1710798_Multiple%20P-RNTI.doc) Use of multiple P-RNTIs for NR paging Qualcomm Incorporated discussion [R2-1709641](file:///C:\Data\3GPP\Extracts\R2-1709641_Multiple%20P-RNTI.doc)

[R2-1710802](file:///C:\Data\3GPP\Extracts\R2-1710802%20NR%20Paging%20Occasion%20for%20Paging%20DCI%20and%20Paging%20Message.docx) NR Paging Occasion for Paging DCI and Paging Message MediaTek Inc. discussion

[R2-1710803](file:///C:\Data\3GPP\Extracts\R2-1710803%20Draft%20Reply%20LS%20on%20NR%20Paging%20Occasion.docx) Draft Reply LS on NR Paging Occasion MediaTek Inc. discussion

[R2-1710979](file:///C:\Data\3GPP\Extracts\R2-1710979%20-%20Discussion%20on%20downlink%20overhead%20reduction%20for%20NR%20paging.docx) Discussion on downlink overhead reduction for NR paging ASTRI, TCL Communication Ltd. discussion

[R2-1710985](file:///C:\Data\3GPP\Extracts\R2-1710985%20-%20Discussion%20on%20response%20beam%20selection%20in%20indication-based%20paging.docx) Discussion on response beam selection in indication-based paging ASTRI, TCL Communication Ltd. discussion

[R2-1711046](file:///C:\Data\3GPP\Extracts\R2-1711046%20Providing%20more%20information%20relating%20to%20MT%20data%20in%20Paging.doc) Providing more information relating to MT data in Paging Beijing Xiaomi Mobile Software discussion Rel-15 [R2-1709178](file:///C:\Data\3GPP\Extracts\R2-1709178%20Providing%20more%20information%20relating%20to%20MT%20data%20in%20Paging.doc)

[R2-1711367](file:///C:\Data\3GPP\Extracts\R2-1711367.docx) DRX in idle state Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711368](file:///C:\Data\3GPP\Extracts\R2-1711368%20-%20DRAFT%20LS%20on%20maximum%20DRX%20value%20for%20NR%20in%20Release%2015.doc) DRAFT LS on maximum DRX value for NR in Release 15 Ericsson LS out Rel-15 NR\_newRAT-Core

[R2-1711369](file:///C:\Data\3GPP\Extracts\R2-1711369%20-%20Configuration%20of%20paging%20transmissions%20in%20multi-beam%20operation.docx) Configuration of paging transmissions in multi-beam operation Ericsson discussion Rel-15 NR\_newRAT-Core

[R2-1711386](file:///C:\Data\3GPP\Extracts\R2-1711386%20CN%20Paging%20DRX%20in%20RRC_IDLE.doc) CN paging DRX in RRC\_IDLE LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core [R2-1708456](file:///C:\Data\3GPP\Extracts\R2-1708456%20CN%20Paging%20DRX%20in%20RRC_IDLE.doc)

[R2-1711397](file:///C:\Data\3GPP\Extracts\R2-1711397%20Response%20to%20RAN1%20LS%20on%20paging.doc) Discussion on NR paging occasion (for response to RAN1) LG Electronics Inc. discussion Rel-15 NR\_newRAT-Core

[R2-1711425](file:///C:\Data\3GPP\Extracts\R2-1711425%20(UE%20Assisted%20Paging).docx) UE Assisted Paging Convida Wireless LLC discussion Rel-15 NR\_newRAT-Core

[R2-1711501](file:///C:\Data\3GPP\Extracts\R2-1711501%20Paging%20mechanism%20with%20beam%20sweeping.doc) Paging mechanism with beam sweeping Huawei Technologies France discussion Rel-15 NR\_newRAT-Core [R2-1709554](file:///C:\Data\3GPP\Extracts\R2-1709554%20Paging%20mechanism%20with%20beam%20sweeping.doc)

# 11 Comebacks

This agenda item will be used during the meeting. No documents are supposed to be submitted by delegates.

## 11.1 Breakout sessions

### 11.1.1 Report from Break-Out session

Report from session on Rel-14 and Rel-15 LTE

[R2-1711833](file:///C:\Data\3GPP\Extracts\R2-1711833%20Report%20from%20LTE%20Break-Out%20session.docx) Report from Break-Out Session, Vice-Chair (CMCC)

CBF: Report from LTE Break-Out Session, Vice-Chair (CMCC)

=> Approved

feMBMS :

[R2-1711944](C:\\Data\\3GPP\\RAN2\\Docs\\R2-1711944.zip" \o "C:\Data\3GPP\RAN2\Docs\R2-1711944.zip) Draft reply LS in to RAN1 to indicate our in principle agreed CR. (Offline discussion#100 Qualcomm)

=> Approved in R2-1712058

QMC:

[R2-1711945](file:///C:\Data\3GPP\Extracts\R2-1711945%20Draft%20LS%20on%20the%20progress%20of%20QMC%20in%20LTE.doc) Draft a LS to RAN3, CT1, SA4 and SA5 by including RAN2 progresses (Offline#101, Huawei)**.**

=> Approved in R2-1712035

euCA:

**CB:** => LS is sent to request RAN4 to define measurements requirements if any for the measurement Darft LS in R2-1711946. (Offlien#111,Nokia)

[R2-1711946](file:///C:\Data\3GPP\Extracts\R2-1711946_Draft%20LS%20to%20RAN4%20on%20enhanced%20CA%20utilization.doc) Draft LS to RAN4 on RAN2 agreements for enhanced CA utilization WIDNokia

=> Approved in R2-1712060

AUL:

**CB:** => Draft LS in R2-1711949 to RAN1 to inform our progress. Highlight the agreement 4 which is not aligned with RAN1 agreements. (offline discussion #666, Ericsson)

[R2-1711949](file:///C:\Data\3GPP\Extracts\R2-1711949%20-%20LS%20on%20RAN2%20agreements%20for%20Rel-15%20LAA.doc) LS on RAN2 agreements for Rel-15 LAA RAN1 Ericsson

=> Approved in R2-1712059

### 11.1.2 Report from Break-Out session

Report from session on Rel-13/14 NB-IoT, Rel-13/14 MTC, Rel-15 NB-IoT WIs

[R2-1711834](file:///C:\Data\3GPP\Extracts\R2-1711834%20IoT%20Notes%20Johan%20EOM.doc) Report from Break-Out Session, Session Chair (MediaTek)

CBF: Report from LTE Break-Out Session, Vice-Chair (MediaTek)

=> Regarding the prioritised NB-IOT features chair will coordinate with other WG chairs and the RAN chair to ensure a consistent approach for providing these docs to RAN (as draft CRs,or tech endorsed CRs, or agreed CRs).

=> Approved

### 11.1.3 Report from Break-Out session

Report from session on Rel-14 LTE and NR UP

[R2-1711835](file:///C:\Data\3GPP\Extracts\R2-1711835_NR_UP_LTE_Session%20chair%20notes_%20RAN2-99bis_13-10-17_final.doc) Report from Break-Out Session, Vice-Chair (InterDigital)

CBF: Report from LTE Break-Out Session, Session Chair (InterDigital)

=>Approved

Comebacks:

**For EN-DC the assumption is that the cell index space is shared between LTE and NR. [CB for CP]**

- LG is concerned about coordination with the share index space.

- Samsung think the main issues is that the index needs to be unique across the cell groups. Assume it would just be a hard split between MCG and SCG.

- Ericsson CP think the RRC has assumed that they are independent.

=> To be discussed offline (Offline discussion #50, Vivo)

- Update from offline: Bot possible to conclude at this meeting

=> Postponed to next meeting. Contribution next time should provide details of MAC PHR format and text proposal.

[R2-1711845](file:///C:\Data\3GPP\Extracts\36331_CR3080r1_(Rel-13)_R2-1711845%20capabilities%20for%20tx%20antenna%20selection_v4.doc) UE capabilities for Tx antenna selection Qualcomm Incorporated CR Rel-13 36.331 13.7.0 3080 - F LTE\_CA\_TDD\_FDD-Core

[CB #300]

=> Postponed to next meeting

R2-1711846 UE capabilities for Tx antenna selection Qualcomm Incorporated CR Rel-13 36.306 13.7.0 1510 - F LTE\_CA\_TDD\_FDD-Core

[CB #300]

=> Postponed to next meeting

[R2-1711512](file:///C:\Data\3GPP\Extracts\36331%20CRxxxx_(REL-14)_R2-1711512%20on%20UE%20capability%20retrieval.docx) UE capability, retrieval of fallback combinations Samsung Telecommunications CR Rel-14 36.331 14.4.0 3117 - F LTE\_CA\_enh\_b5C-Core, TEI14

[CB – if there is a possibility for this problem to happen and if a clarification is needed

[CB #302]

=> Agreed in principle

[R2-1711444](file:///C:\Data\3GPP\Extracts\R2-1711444_36331_CR3106_r0(Rel-13)-Maximum%20SC-PTM%20service.doc) Define requirement for reception of number of simultaneous SC-PTM services Qualcomm Incorporated CR Rel-13 36.331 13.7.0 3106 1 F LTE\_SC\_PTM-Core

[CB #301]

=> Agreed in principle

[R2-1711453](file:///C:\Data\3GPP\Extracts\R2-1711444_36331_CR3106_r0(Rel-13)-Maximum%20SC-PTM%20service.doc) Define requirement for reception of number of simultaneous SC-PTM services Qualcomm Incorporated CR Rel-14 36.331 13.7.0 3106 1 F LTE\_SC\_PTM-Core

=> Agreed in principle

[R2-1711849](file:///C:\Data\3GPP\RAN2\Docs\R2-1711849.zip) Clarification on LPP Message size due to limitations at the lower layers Intel Corporation CR R2-1711475 Rel-14 36.305 14.3.0 LCS\_LTE

[CB #303]

=> Postponed to next meeting.

[R2-1711869](file:///C:\Data\3GPP\Extracts\R2-1711869_Draft%20LS%20on%20RA%20preamble%20power%20ramping.doc) Draft LS on RA preamble power ramping counter update Samsung R&D Institute India LS out R2-1711855 Rel-15 NR\_newRAT-Core

[CBF #310]

=> Approved in R2-1712061

[R2-1711872](file:///C:\Data\3GPP\Extracts\R2-1711872%20%5bDraft%5d%20LS%20to%20RAN1%20on%20RAN2%20agreements%20related%20to%20BWP.doc) [Draft] LS to RAN1 on RAN2 agreements related to BWP Huawei LS out

[CB #325]

=> Add 'on top of DCI'

=> Approved in R2-1712046

[R2-1711867](file:///C:\Data\3GPP\Extracts\R2-1711867%20-%20%5bDraft%5d%20LS%20to%20RAN1%20on%20SCell%20activation%20and%20deactivation.doc) Draft LS on RAN2 agreements related to Scell activation/Deactivation Oppo LS out

[CB #321]

=> Approved

[R2-1711868](file:///C:\Data\3GPP\Extracts\R2-1711868.doc) [DRAFT] LS on RAN2 agreements related to PHR Samsung

[CB]

=> Remove agreement 11

=> Approved in R2-1712065

### 11.1.4 Report from Break-Out session

Report from session on Rel-15 MTC

[R2-1711836](file:///C:\Data\3GPP\Extracts\R2-1711836%20-%20Report%20from%20Rel-15%20MTC%20session.doc) Report from Break-Out Session, Session Chair (Ericsson)

CBF: Report from LTE Break-Out Session, Session Chair (Ericsson)

=> Approved

### 11.1.5 Report from Break-Out session

Report from session on Rel-15 Positioning WI

[R2-1711837](file:///C:\Data\3GPP\Extracts\R2-1711837.doc) Report from Break-Out Session, Session Chair (Huawei)

CBF: Report from LTE Break-Out Session, Session Chair (Huawei)

=> Approved

Comeback on Friday

[R2-1711958](file:///C:\Data\3GPP\Extracts\R2-1711958.doc) Draft LS on provisioning of positioning assistance data via LPPa for broadcast Ericsson

(NOTE: The content of CB 501 was changed after the session based on the offline discussion)

=> Approved in R2-1712030

[R2-1711959](file:///C:\Data\3GPP\Extracts\R2-1711959.doc) Draft LS on encoding and encryption of positioning assistance data Ericsson

=> Approved ib R2-1712031

### 11.1.6 Report from Break-Out session

Report from session on Rel-15 V2X WI

[R2-1711838](file:///C:\Data\3GPP\Extracts\R2-1711838.doc) Report from Break-Out Session, Session Chair (Intel)

CBF: Report from LTE Break-Out Session, Session Chair (Intel)

=> Approved

**[CB: 600]** [R2-1711995](file:///C:\Data\3GPP\Extracts\R2-1711995%20LS%20to%20RAN1%20on%20the%20agreements%20on%20carrier%20and%20resource%20selection%20in%20CA.doc) LS to RAN1 on the agreements on carrier and resource selection in CA (LG)

=> Approved in R2-1712032

## 11.2 Main session

This section contains a temporary list of comebacks (press F9 to update while the cursor is inside the list).

[**** => Capture the problem in the specification and that UE implementations are expected to handle it in some way. Wording and spec in which it is captured to be progressed offline. Offline discussion #02 (DOCOMO)](#_Toc495662268)

[**** => Offline discussion whether a UE based solution is also feasible and beneficial (Offline discussion #03, Qualcomm)](#_Toc495662269)

[**** => Revised in R2-1712039](#_Toc495662270)

[**** => Revised in R2-1712040](#_Toc495662271)

[**** => LS to SA2/CT4 to ask if the 5G S-TMSI size will be the same as in EPC and also ask if the S-TMSI space will be shared between 5G and EPC. Draft LS in R2-1712003 (Offline discussion #43, Ericsson). Can include both NR and eLTE WI codes.](#_Toc495662272)

[**** => Revised in R2-1711972](#_Toc495662273)

[**** => Discuss offline whether to add 2C support into the stage 2 description, or to add restriction into the stage 3 that 2C cannot be configured. (Offline discussion #14, ZTE)](#_Toc495662274)

[**** => Offline discussion to see how to conclude on P2 onwards (Offline discussion #17, DOCOMO)](#_Toc495662275)

[**** => Draft LS to SA3 and SA2 to inform them of the concern that has been identified and that it could be addressed by limiting DRB IP to lower rate services. Inform them that the RAN plenary guidance was to complete the hardware impacting parts of L2 by Dec 17. Draft LS in R2-1712013 (Offline discussion #47, Qualcomm)](#_Toc495662276)

[**** => Offline to progress the FFS and to try to conclude between the 2 options. Can consider any RAN1 progress made during this week. (Offline discussion #22, Huawei)](#_Toc495662277)

[**** => Draft LS in R2-1712016 (Offline discussion #48, Intel)](#_Toc495662278)

[**** Come back for outcome of offline session on specification methodology](#_Toc495662279)

[**** => Revised in R2-1711967 (Offline discussion #25). Aim is that the TP will be included into the TS after Friday.](#_Toc495662280)

[**** => TP revised in R2-1711968 (Offline discussion #27). Aim is that the TP will be included into the TS after Friday.](#_Toc495662281)

[**** => Send an LS to SA3 to check whether there is any security concern with proposal 1 and 2 e.g. due to DoS attach (i.e. rejection to INACTIVE by a fake gNB multiple successive times, and/or with long wait time) and replay attack (i.e. UE transmitting the same MAC-I multiple times). Can check is similar question was asked in relation to light connection and if so then reference the previous LS. Draft LS in R2-1712019 (Offline discussion #49, Intel)](#_Toc495662282)

[**** => Offline discussion to progress the FFS on filter coefficients. (Offline discussion #30, MediaTek)](#_Toc495662283)

[**** => Revised in R2-1711971 (Offline discussion #31). Aim is that the TP will be included into the TS after Friday.](#_Toc495662284)

[**** - New documents?](#_Toc495662285)

[**** => Offline to look at text in TP and conclude whether RS type for serving cell measurements should be configurable. Also look at agreement 6 from discussion of R2-1711963 to see if it needs to be reworded.(Offline discussion #39, Ericsson). In R2-1712047](#_Toc495662286)

[**** => TP revised in R2-1711989 (Offline discussion #40)](#_Toc495662287)

[**** => Revised on R2-1712009 (Offline discussion #44)](#_Toc495662288)

[**** => Revised in R2-172010 (Offline discussion #45)](#_Toc495662289)

[**** => Draft LS to RAN1 to inform them of our decision that RAN2 needs 2 bits plus one spare bit. Draft LS in R2-1712011 (Offline discussion #46, Qualcomm)](#_Toc495662290)

[**** => Offline discussion to conclude on when NR serving cell measurements are provided (Offline discussion #35, IDC)](#_Toc495662291)

[**** => Offline discussion to try to progress on the next level of detail on how the coordination works (Offline discussion #33, Qualcomm)](#_Toc495662292)

[**** **CB:** => Draft reply LS in R2-1711944 to RAN1 to indicate our in principle agreed CR. (Offline discussion#100 Qualcomm)](#_Toc495662293)

[**** **CB:** => LS is sent to request RAN4 to define measurements requirements if any for the measurement Darft LS in R2-1711946. (Offlien#111,Nokia)](#_Toc495662294)

[**** **CB:** => Draft LS in R2-1711949 to RAN1 to inform our progress. Highlight the agreement 4 which is not aligned with RAN1 agreements. (offline discussion #666, Ericsson)](#_Toc495662295)

[**** CBF: Report from LTE Break-Out Session, Vice-Chair (MediaTek)](#_Toc495662296)

[**** => To be discussed offline (Offline discussion #50, Vivo)](#_Toc495662297)

[**** CBF: Report from LTE Break-Out Session, Session Chair (Ericsson)](#_Toc495662298)

[**** => Offline discussion to try to progress the DRBs for NR (Offline discussion #38, Samsung)](#_Toc495662299)

[**** => Revised in R2-1711986 (Offline discussion #37)](#_Toc495662300)

[**** => Revised in R2-1711933 (Offline discussion #10, Intel)](#_Toc495662301)

## 12 Outgoing LSs

Draft LSs should be submitted to their corresponding agenda item if there is one. If there is no appropriate agenda item, draft LSs may be submitted to this agenda item.

Reply to SA2 on number of DRBs

[R2-1710653](file:///C:\Data\3GPP\Extracts\R2-1710653-rsp_LS-DRBs-v1.docx) Discussion related to LS on Number of DRBs supported Intel Corporation discussion Rel-15 TEI15

[R2-1710106](file:///C:\Data\3GPP\Extracts\R2-1710106_lte_qos_drb_v04.doc) On extension of the number of dedicated radio bearers for E-UTRAN Samsung discussion Rel-15 TEI15

- Discussed jointly with previous paper.

- Samsung consider that the MAC can just use the reserved values for the new logical channel IDs. Intel explain there are 7 spare values and all would be used up if we added the extra DRBs so then MAC would have to be extended.

- Vodafone think that there are more spare values in the UL. Think the most we could do without impact in NAS is 11. More DRBs would have a price. Samsung agree that a change up to 11 almost comes for free.

- Vodafone think we need to be very careful before we use all the spare values.

- AT+T think that we need to expand beyond 8 to 15.

- T-Mobile support AT+T on the need to expand to 15.

- Qualcomm share the concern about using all the spare values - they are also used for MAC CE, new CCCH type, etc. If we go to 15 we will need to expand the logical channel identities.

- LG think some spare values must be kept for other purposes. Lenovo wonder if the 15 will be the maximum or might increase again in future.

- CMCC is not sure that we really need to many DRBs.

=> Respond that it is feasible to extend to 15 in Rel-15. This would have some implication in RAN2 specs to extend the MAC header to support more logical channel which has an overhead impact. A number lower than [14] might enable more DRBs to be supported without having to extend the MAC header.

=> If extended then the AS capability to support more DRBs will also need to be visible in the CN.

=> Supporting flexible combinations of number of AM and UM bearers is feasible. Increasing it will require capability signalling.

[R2-1710072](file:///C:\Data\3GPP\Extracts\R2-1710072_nr_qos_drb_v04.doc) On the number of DRBs for NR Samsung discussion Rel-15 NR\_newRAT-Core

- Vodafone think we should have the same number on all technologies.

- T-Mobile wonder if 32 is the correct number is we have slicing.

=> Respond that the previous comment on LTE is also applicable for EN-DC

=> Respond that for NR SA, it is too early to conclude the number of DRBs supported.

=> Offline discussion to try to progress the DRBs for NR (Offline discussion #38, Samsung)

[R2-1712033](file:///C:\Data\3GPP\Extracts\R2-1712033_nr_qos_drb_v03.doc) Summary of the offline discussion on the number of DRBs Samsung

=> Indicate to SA2 that the number of DRBs in NR will be in the range 16..32 DRBs, and RAN2 has not concluded on the final number.

=> Ask SA2 whether there are constraints in their specs that may affect the number of DRBs?

[R2-1710654](file:///C:\Data\3GPP\Extracts\R2-1710654-LSrsp-no-DRBs.docx) [Draft] Reply LS on the number of bearers Intel Corporation LS out Rel-15 TEI15

=> Revised in R2-1711986 (Offline discussion #37)

[R2-1711986](file:///C:\Data\3GPP\Extracts\R2-1711986-LSrsp-no-DRBs-v1.docx) [DRAFT] Reply LS on the number of bearers Intel Corporation LS out Rel-15 TEI15 To:SA2 Cc:RAN, CT, SA, SA1, CT1, CT4

=> Change to 32

=> Approved in R2-1712066

Other

[R2-1710639](file:///C:\Data\3GPP\Extracts\R2-1710639-reply-LS-Inactive-DC.doc) [Draft] Reply LS on coexistence between RRC inactive and dual connectivity Intel Corporation LS out Rel-15 NR\_newRAT-Core

- Ericsson ask if " dual connectivity configuration " means that the PDCP termination point and configuration can be kept.

=> Offline discussion to conclude on the wording.

=> Revised in R2-1711933 (Offline discussion #10, Intel)

[R2-1711933](file:///C:\Data\3GPP\Extracts\R2-1711933-reply-LS-Inactive-DC-v2.docx) [DRAFT] Reply LS on coexistence between RRC inactive and dual connectivity Intel Corporation LS out Rel-15 NR\_newRAT-Core To:SA2 Cc:RAN3

=> Approved in R2-1712063

# 13 Any other business

# 14 Closing of the meeting (17:00)