3GPP TSG-RAN WG2 Meeting #111 electronic R2-2xxxxxx

Online, August 17th - 28th, 2020

Source: RAN2 Chairman (Mediatek)

Title: Skeleton Notes

# Email Discussion List, Main Session

Email discussions with Deadline ***Short UE Cap*** are expected to produce endorsed Draft CRs (to be merged w main NR UE caps), with the deadline ***Endorsed Draft CRs ready Aug 21***

* [AT111-e][000] Organizational Main (Chairman)

Scope:

Deadline:

* [AT111-e][001][NR15] NR Stage-2 corrections (ZTE)

Scope: Treat R2-2006870, R2-2007222, R2-2007223 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts.

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, if any, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][002][NR15] NR MAC corrections (Samsung)

Scope: Treat R2-2006680, R2-2006681, R2-2007135, R2-2006657, R2-2007725, R2-2007726, R2-2007727, R2-2007897, R2-2007899, R2-2007861 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][003][NR15] L1 Parameters (vivo)

Scope: Treat R2-2007057, R2-2007058, R2-2007504, R2-2006683, R2-2006995, R2-2006996 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][004][NR15] L2 Parameters and Security (CATT)

Scope: Treat R2-2008038, R2-2008039, R2-2006891, R2-2006892, R2-2007348, R2-2007349, R2-2006993, R2-2006994 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][005][NR15] Misc Configuration (ZTE)

Scope: Treat R2-2008091, R2-2008092, R2-2007264, R2-2007265, R2-2006889, R2-2006890, R2-2007121, R2-2007122, R2-2008086, R2-2008087 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][006][NR15] Measurments and System Information (ZTE)

Scope: Treat R2-2006676, R2-2006677, R2-2008042, R2-2007405-7410, R2-2006878, R2-2007942-7944 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs, and possibly LS out.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][007][NR15] Inter Node and NR Misc (Ericsson)

Scope: Treat R2-2006884, R2-2006885, R2-2007674, R2-2007675, R2-2007643, R2-2007644, R2-2006999, R2-2007000 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][008][NR15] NR UAI (Huawei)

Scope: Treat R2-2007792, R2-2007793, R2-2007794, R2-2007795, R2-2006986, R2-2006987, R2-2006997, R2-2006998 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][009][NR15] LTE SIB extension issue (NTT DOCOMO)

Scope: Treat R2-2008083, R2-2007426, R2-2008107 (proponents to drive)

Part 1: Start after on-line initial discussion, Confirm consequences of the issue, Try to find acceptable work-arounds, put solutions on the table – with initial round of comments to understand which could be acceptable.

Deadline: Aug 20, 0900 UTC.

Part 2: TBD. Urgency might depend on Whether acceptable Workarounds are found or not

Deadline: EOM

* [AT111-e][010][NR15] UE cap Clarifications (Huawei)

Scope: Treat R2-2007209, R2-2007210, R2-2007211, R2-2007798, R2-2007799, R2-2007800, R2-2007796, R2-2007797, R2-2007885, R2-2007887, R2-2007850 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][011][NR15] UE cap Additions (vivo)

Scope: Treat R2-2007303, R2-2007304, R2-2007305, R2-2007306, R2-2007212, R2-2007213, (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][012][NR15] Idle mode (QC)

Scope: Treat R2-2007064, R2-2007097, R2-2007119, R2-2007120, R2-2008040, R2-2008041 (proponents to drive), Treat R2-2007963 (AI 6.1.3), include other corrections to be merged with rapporteur CR (if any)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][013][NR16] RRC Misc I (Ericsson)

Scope: Treat R2-2007641, R2-2007642, R2-2007020, R2-2006915, , R2-2008109 (proponents to drive), include other corrections to be merged with R16 RRC rapporteur CR (if any)

Part 1: Decision whether to make corrections, identify agreeable parts.

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][014][NR16] RRC Misc II (Ericsson)

Scope: Treat R2-2007275, R2-2007276, R2-2007077, R2-2006915, R2-2006934 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts.

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][015][NR16] UE cap Main (Intel, NTT Docomo)

Scope: Treat assigned tdocs, merge endorsed output from other R16 UE caps (306 331) email discussions, take into account updated feature lists from R1 and R4. Produce final mega CRs 38306 38331.

Part 1: W1 Agree/Endorse 331 306 changes based on assigned tdocs.

Deadline for comments: Aug 20, 1000 UTC.

Part 2: W2 Review of updated R1 R4 feature lists. Agree on updates to 306 331 capturing updates from R1 and R4 based on rapporteur proposal, and merged endorsed output of other email discussions, Start TBD (Tuesday Aug 25?).

* [AT111-e][016][NR16] UE cap TRS bandwidth (Nokia)

Scope: Treat R2-2007498, R2-2007499, R2-2008089, R2-2008090 (proponents to drive)

Deadlines: Short NR UE cap

* [AT111-e][017][NR16] UE cap Beam Switch Timing (Lenovo)

Scope: Treat R2-2006880, R2-2006881, R2-2006882, R2-2007505, R2-2007506 (proponents to drive),

Deadlines: Short NR UE cap

* [AT111-e][018][NR16] UE cap MR-DC Power Class (Huawei)

Scope: Treat R2-2007112, R2-2007113, R2-2007114, R2-2008077, R2-2008078 (proponents to drive),

Deadlines: Short NR UE cap

* [AT111-e][019][NR16] UE cap UL TX switching (China Telecom)

Scope: Treat R2-2006985, 7604, 7949, 7085, 8106, 7086, 7950, 7087, 6895, 6896

Deadlines: Short UE Caps

* [AT111-e][020][NR16] UE cap RF FR2 (Nokia)

Scope: Treat R2-2007403, R2-2007082, R2-2007083, R2-2007380, R2-2007381

Deadlines: Short UE Caps

* [AT111-e][021][NR16] UE cap NR-DC (Qualcomm)

Scope: Treat R2-2006558, R2-2007946, R2-2007605,

Deadlines: Short UE cap

* [AT111-e][022][NR16] Early Implementation (CMCC)

Scope: Treat R2-2008102, R2-2008103, R2-2006716, R2-2007231

Expected Outcome: Agreed CR 38331

Deadline: CR Agreed by EOM, Deadline for comments 1 day earlier, or as set by rapporteur

* [AT111-e][023][NR16] NG-ENDC capability (vivo)

Scope: Treat R2-2008080, R2-2008081, R2-2008082

Deadline: Short UE cap

* [AT111-e][024][NR16] MAC Misc Corrections (Samsung)

Scope: Treat R2-2007717, R2-2007061, R2-2007713, include other corrections to be merged with rapporteur CR (if any)

Deadline: EOM

* [AT111-e][025][NR16] 38304 Misc Corrections (Qualcomm)

CANCELED

* [AT111-e][026][IAB] Stage-2 Corrections (Qualcomm)

Scope: Treat R2-2006504, 8363, 6963, 7315, 7374, 7509, 7539, 7545, 7536, 7535, 7965. Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 27 0900 UTC

* [AT111-e][027][IAB] BAP Corrections (Huawei)

Scope: Treat further R2-2007484, 7966, 7316, 7483, 7967, 7317

Determine agreeable parts, Agree CRs

Deadline: Aug 26, Intermediate deadlines by Rapporteur if needed.

* [AT111-e][028][IAB] MAC Corrections (Samsung)

Scope: Treat R2-2007199, 7319, 7318, 7728, 7969, 7320, 7968. Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 25, Intermediate deadlines by Rapporteur if needed.

* [AT111-e][029][IAB] RRC Corrections (Ericsson)

Scope: Treat R2-2007323, 7972, 7976, 7507, 7520, 7522, 7524, 7975, 7324, 7534, 7970, 8088, 7538, 7973, 7162, 7974, 7977, 7978, 7321/7322, 7546, 7979, 7325, and 7982 (if needed)

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 27, Intermediate deadlines by Rapporteur if needed.

* [AT111-e][030][IAB] UE capabilities (Nokia)

Scope: Treat R2-2008105, 6959, 7508 7980, 7981

Deadline: Short UE cap

* [AT111-e][031][IIOT] RRC Corrections (Ericsson)

Scope: Treat R2-2006888, 6710/6711, 6828, 6727, 7142/7151, 7388. Determine agreeable parts in a first phase, PDCP duplication part that overlaps with stage-2 discussion should await conclusions first. Agree CRs in a second phase

Deadline: Aug 26 0900 UTC. Intermediate deadlines by Rapporteur if needed.

* [AT111-e][032][IIOT] MAC support for PDCP duplication (ZTE)

Scope: Multi-entry MAC CE: Use R2-2007132 as baseline, can treat R2-2006698 and 6726 to bring in additional aspects, if any, Treat R2-2007390. Activation Deactivation: Treat R2-2007531,6600 (Take into account on-line discussion).

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 27 0900 UTC, Intermediate deadlines by Rapporteur if needed.

* [AT111-e][033][IIOT] MAC Corrections II (Samsung)

Scope: HARQ PID for SPS: Treat R2-2006712/7527 (related to RRC discussion), and R2-2007136. UE autonoumous retransmission: Treat R2-2007147, 7530, 6863, 7389, 8055

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 27 0900 UTC, Intermediate deadlines by Rapporteur if needed.

* [AT111-e][034][IIOT] EHC Corrections (Samsung)

Scope: Take into account on-line outcome, Treat R2-2008044, 6728, 8030, 8034, 8035

Determine agreeable parts, Agree CRs

Deadline: Aug 27 0900 UTC, Intermediate deadlines by Rapporteur if needed.

* [AT111-e][036][NR-R4] CSIRS L3 and RF FR1 (CATT)

Scope: Treat R2-2007001, R2-2007002, R2-2007065

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 26 0900 UTC, Intermediate deadlines by Rapporteur if needed

* [AT111-e][037][NR-R4] MPE (Interdigital)

Scope: TBD after on-line

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Agreed CRs EOM, Deadline for comments at least 24h before. Intermediate deadlines by Rapporteur if needed.

* [AT111-e][038][TEI16] Full Rate UP IP (Deutsche Telekom)

Scope: Treat R2-2006538, 6715, 6825, 6826, 6907, 6908, 6909, 7586, 7638

Determine agreeable parts in a first phase, Agree CRs and Reply LS (if needed) in a second phase

Deadline: Agreed CRs/LS EOM, Deadline for comments at least 24h before. Intermediate deadlines by Rapporteur if needed.

* [AT111-e][039][TEI16] Secondary DRX corrections (Ericsson)

Scope: Treat R2-2007062, 7370, 7486, 7258, 7890

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Agreed CRs EOM, Deadline for comments at least 24h before. Intermediate deadlines by Rapporteur if needed.

* [AT111-e][040][TEI16] SMTC and NeedforGap Corrections (Nokia)

Scope: Treat R2-2007117, 7118, 7849, 7959

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 27 0900 UTC, Intermediate deadlines by Rapporteur if needed.

* [AT111-e][041][TEI16] Other Corrections (Huawei)

Scope: Treat R2-2007948, 7962, 7945, 8007

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 27 0900 UTC, Intermediate deadlines by Rapporteur if needed.

* [AT111-e][042][NR15] LTE Other (Nokia)

Scope: Treat R2-2006997, R2-2006998, R2-2007350, R2-2007351 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

* [AT111-e][043][IIOT] Stage 2, DC CA duplication clarifications (Nokia)

Scope: take into account online discussion, Treat R2-2006918, 6919, 7133, 7891, 8056, 6637, 7138, 7387, 7149, 7150, Determine agreeable parts. Agree CRs

Deadline: Aug 26 0900 UTC. Intermediate deadlines by Rapporteur if needed.

* [AT111-e][044][IIOT] Intra UE prioritization (Apple)

Scope: Determine agreeable parts (before CRs), take into account on-line outcome. Agree CRs and LS out. Treat R2-2006920, 7127, 7237, 8058, 7106, 7107, 7108

Deadline: Aug 27 0900 UTC, Intermediate deadlines by Rapporteur if needed.

# 1 Opening of the meeting

**This e-Meeting**

- This e-Meeting follows 3GPP principles for e-Meetings.

- RAN2 111 electronic has full decision power, i.e. full decision power to make agreements and approvals according to RAN WG2 terms of reference, without any need to ratify decisions at a later RAN2 or other meeting.

- Descriptions on how this meeting is conducted can be found in tdoc on Guidelines under agenda item 2.4 below

* [000] Chair: No Comments received

## 1.1 Call for IPR

|  |
| --- |
| 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 (https://www.etsi.org/images/files/IPR/etsi-ipr-form.doc) |

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

* [000] Chair: No Comments received

## 1.2 Network usage conditions

## 1.3 Other

|  |
| --- |
| 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.

* [000] Chair: No Comments received

# 2 General

## 2.1 Approval of the agenda

R2-2006500 Agenda for RAN2#111-e Chairman agenda Late

* [000] Approved

## 2.2 Approval of the report of the previous meeting

R2-2006501 RAN2#110bis-e Meeting Report MCC report Late

* [000] Approved

## 2.3 Reporting from other meetings

Brief Reporting from RP 88e:

1) TU’s are used as the nominal planning parameter also for e-Meetings. [RP-201361](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201361.zip) contains the endorsed TU plan for 2020 Q3. Note that the R2 part contains an error, R17 Other TU should be 0.5.

2) Release-16 is functionally frozen and ASN.1 is now considered formally frozen.

RAN2 Chair Comment: Still for Rel-16 UE capabilities, NBC changes can be accepted on consensus, and could be tolerated for other cases if there is consensus and a clear need (i.e. the statements in the R2 report in [RP-200521](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-200521.zip) were not challenged).

4) RP discussion on finalizing the R16 UE capabilities can be found in [RP-201284](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201284.zip) where proposals 2, 3 and 4 are endorsed.

5) RAN2 scope for support of functionality for Rel-16 WI is 100% completed, except RAN2 CRs for a couple of RAN4 led topics.

6) FR2 fallback: This topic will be readdressed at RAN#89 in Sep -20, and not in WGs.

7) Secondary DRX: Tech Endorsed R2 CRs were approved.

## 2.4 Others

R2-2008391 RAN2#111-e Meeting Guidelines ETSI MCC

* [000] Endorsed

**Rapporteur changes**

**Spec former rapporteur proposed new rapporteur**

38.306 Naveen Palle (Intel) Seau Sian Lim (Intel)

36.331 Himke Vandervelde (Samsung) Seungri Jin (Samsung)

* [000] Rapporteur changes above are approved

# 3 Incoming liaisons

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

# 4 EUTRA corrections Rel-15 and earlier

See Appendix A for reference to Work items, work item codes and WIDs.

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

## 4.1 NB-IoT corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session. Common NB-IoT/eMTC parts treated jointly with 4.2. No web conference is planned for this agenda item

R2-2006838 36331\_R15\_Clarification for NPRACH carrier selection ZTE Corporation, Sanechips, MediaTek Inc CR Rel-15 36.331 15.10.0 4354 - F NB\_IOTenh2-Core

R2-2006840 36331\_R16\_Clarification for NPRACH carrier selection ZTE Corporation, Sanechips, MediaTek Inc CR Rel-16 36.331 16.1.1 4356 - A NB\_IOTenh2-Core

R2-2007330 System support for Wake Up Signal Huawei, HiSilicon CR Rel-15 36.300 15.10.0 1264 3 F NB\_IOTenh2-Core, LTE\_eMTC4-Core R2-2005932

R2-2007331 System support for Wake Up Signal Huawei, HiSilicon CR Rel-16 36.300 16.2.0 1265 2 F NB\_IOTenh2-Core, LTE\_eMTC4-Core R2-2005933

R2-2007332 System support for Wake Up Signal Huawei, HiSilicon CR Rel-15 36.304 15.6.0 0795 2 F NB\_IOTenh2-Core, LTE\_eMTC4-Core R2-2005934

R2-2007333 System support for Wake Up Signal Huawei, HiSilicon CR Rel-16 36.304 16.1.0 0796 2 F NB\_IOTenh2-Core, LTE\_eMTC4-Core R2-2005935

R2-2007334 Discussion of WUS last used cell Huawei, HiSilicon discussion Rel-15 NB\_IOTenh2-Core, LTE\_eMTC4-Core

R2-2007566 Way forward on WUS usage upon RRC connection release without S1 setup/release Qualcomm Incorporated discussion Rel-15 NB\_IOTenh2-Core

## 4.2 eMTC corrections Rel-15 and earlier

Documents in this agenda item will be handled in a break out session. Common NB-IoT/eMTC parts treated jointly with 4.1. No web conference is planned for this agenda item

R2-2007327 Discussion of UP EDT for DRB using RLC AM Huawei, HiSilicon discussion Rel-15 NB\_IOTenh2-Core, LTE\_eMTC4-Core

R2-2007328 Clarification to UP-EDT Huawei, HiSilicon CR Rel-15 36.300 15.10.0 1298 - F NB\_IOTenh2-Core, LTE\_eMTC4-Core

R2-2007329 Clarification to UP-EDT Huawei, HiSilicon CR Rel-16 36.300 16.2.0 1299 - A NB\_IOTenh2-Core, LTE\_eMTC4-Core

## 4.3 V2X and Sidelink corrections Rel-15 and earlier

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

R2-2006777 Corrections to data inactivity monitoring considering SL logical channels Samsung Electronics Co., Ltd CR Rel-15 36.321 15.9.0 1487 - F LTE\_eV2X-Core

R2-2006778 Corrections to data inactivity monitoring considering SL logical channels Samsung Electronics Co., Ltd CR Rel-16 36.321 16.1.0 1488 - A LTE\_eV2X-Core

R2-2007898 Sidelink synchronization ID Qualcomm Finland RFFE Oy, Apple, Ericsson, Kyocera, ZTE, CATT, InterDigital, Lenovo, Motorola Mobility draftCR Rel-16 36.331 16.1.1 LTE\_eV2X

## 4.4 Positioning corrections Rel-15 and earlier

Documents in this agenda item will be handled by email. No web conference is planned for this agenda item.

R2-2008051 UE E-CID measurement reporting Nokia, Nokia Shanghai Bell CR Rel-15 36.305 15.5.0 0091 - F LCS\_LTE

## 4.5 Other LTE corrections Rel-15 and earlier

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

Including outcome of [Post110-e][254][LTE Capa] TDD/FDD differentiation or Rel-15 and earlier (Huawei)

Including outcome of [Post110-e][255][LTE CA] Clarification on non-contigous CA capabilities (Nokia)

R2-2007517 Summary on [Post110e-][255][LTE CA] Clarification on non-contiguous CA capabilities (Nokia) Nokia, Nokia Shanghai Bell discussion Rel-12 LTE\_CA-Core Late

R2-2007518 Clarification to Fallback band combination definition Nokia, Nokia Shanghai Bell CR Rel-16 36.306 16.1.0 1782 - F TEI16

R2-2007554 Corrections to the field descriptions for TDD/FDD capability differentiation Huawei, HiSilicon CR Rel-15 36.331 15.10.0 4389 - F TEI15

R2-2007555 Corrections to the field descriptions for TDD/FDD capability differentiation Huawei, HiSilicon CR Rel-16 36.331 16.1.0 4390 - A TEI15

R2-2007556 Report of [Post110-e][254][LTE Capa] TDD/FDD differentiation or Rel-15 and earlier (Huawei) Huawei, HiSilicon discussion Rel-15 TEI15

R2-2007579 Corrections on idle mode measurements Ericsson CR Rel-15 36.300 15.10.0 1305 - F LTE\_euCA-Core

R2-2007580 Corrections on idle mode measurements Ericsson CR Rel-15 38.300 15.10.0 0283 - F LTE\_euCA-Core Withdrawn

R2-2007589 Corrections on idle mode measurements Ericsson Inc. CR Rel-15 36.331 15.10.0 4392 - F LTE\_euCA-Core

R2-2007697 Correction on T312 timer information ZTE Corporation, Sanechips CR Rel-16 36.331 16.1.0 4401 - F HetNet\_eMOB\_LTE-Core

R2-2007719 Correction on PDU generation for UL spatial multiplexing – Option 1 ASUSTeK CR Rel-14 36.321 14.12.0 1497 - F LTE\_LATRED\_L2-Core, TEI14

R2-2007720 Correction on PDU generation for UL spatial multiplexing – Option 2 ASUSTeK CR Rel-14 36.321 14.12.0 1498 - F LTE\_LATRED\_L2-Core, TEI14

R2-2007721 Correction on PDU generation for UL spatial multiplexing – Option 1 ASUSTeK CR Rel-15 36.321 15.9.0 1499 - A LTE\_LATRED\_L2-Core, TEI14

R2-2007722 Correction on PDU generation for UL spatial multiplexing – Option 2 ASUSTeK CR Rel-15 36.321 15.9.0 1500 - A LTE\_LATRED\_L2-Core, TEI14

R2-2007723 Correction on PDU generation for UL spatial multiplexing – Option 1 ASUSTeK CR Rel-16 36.321 16.1.0 1501 - A LTE\_LATRED\_L2-Core, TEI14

R2-2007724 Correction on PDU generation for UL spatial multiplexing – Option 2 ASUSTeK CR Rel-16 36.321 16.1.0 1502 - A LTE\_LATRED\_L2-Core, TEI14

R2-2007843 Minor changes collected by Rapporteur Samsung CR Rel-15 36.331 15.10.0 4413 - F TEI15

R2-2008022 ROHC decompression failure at PDCP re-establishment Samsung discussion Rel-15 TEI15, LTE\_HRLLC-Core

R2-2008023 CR on PDCP re-establishment when t-Reordering is used Samsung CR Rel-15 36.323 15.6.0 0288 - F TEI15, LTE\_HRLLC-Core

R2-2008027 CR on PDCP re-establishment when t-Reordering is used Samsung CR Rel-16 36.323 16.1.0 0289 - F LTE\_HRLLC-Core, TEI16

# 5 Rel-15 WI: New Radio (NR) Access Technology

(NR\_newRAT-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Jun. 19: WID: [RP-191971](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_85\Docs\RP-191971.zip))

Only essential corrections

## 5.1 Organisational

Incoming LSs, etc.

## 5.2 Stage 2 corrections

You should discuss your stage 2 CRs with the specification rapporteurs before submission.

### 5.2.1 TS 3x.300

PWS – Treated on line

R2-2007030 Discussion on regional Public Warning Systems Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

* noted

5 docs moved from 5.4.1.5:

R2-2007253 Clarification for KPAS and EU-alert Ericsson, Nokia discussion Rel-15 NR\_newRAT-Core

* noted

DISCUSSION

- Ericsson think that for CBS only EU-alert and KPAS is mentioned. Ericsson don’t know where this is specifief that more systems use this.

- Chair proposes to start with the stage-2 clarification.

- QC have some sympathy for Huawei proposal and think it becomes problematic to list all systems.

- ZTE think that Huawei CR is a bit too slim and think we should list all regional warning systems.

- Nokia think that the text shall at least be correct, and think the mixing of ETWS and CMAS is not correct as the mechanisms are different.

- Ericsson also think the Huwei text is not correct, and think it is safer to just list KPAS and EU-alert as we know this works.

- LG think that in LTE we specify explicitly, and support Ericsson Nokia CRs. Samsung also support Ericsson Nokia proposal.

- Oppo agrees with the intention of Huawei.

- Huawei think that clarification should be future proof, and we could use “e.g.”. For example CT1 specification is generic and allows operator specific messages that are none of the listed systems.

- QC also think this is not so important and we could also go with Ericsson and Nokia CRs.

- vivo think also that for the future we shouldn’t update further.

- Huawei are fine with the stage-2 CRs from Nokia and Ericsson but think we should not have the stage-3 ones.

- Ericsson think that stage-3 CRs further clarify but could be ok to not have this.

* Will have a stage-2 clarification

R2-2007254 Clarification for KPAS and EU-alert 38.300 Ericsson, Nokia CR Rel-15 38.300 15.10.0 0231 1 F NR\_newRAT-Core R2-2004846

R2-2007255 Clarification for KPAS and EU-alert 38.300 Ericsson, Nokia CR Rel-16 38.300 16.2.0 0232 1 A NR\_newRAT-Core R2-2004847

* both agreed

R2-2007256 Clarification for KPAS and EU-alert 38.331 Ericsson, Nokia CR Rel-15 38.331 15.10.0 1628 2 F NR\_newRAT-Core R2-2006234

R2-2007257 Clarification for KPAS and EU-alert 38.331 Ericsson, Nokia CR Rel-16 38.331 16.1.0 1629 2 A NR\_newRAT-Core R2-2006235

* both not agreed

2 Not Treated:

R2-2007031 Clarification on regional Public Warning Systems Huawei, HiSilicon CR Rel-15 38.300 15.10.0 0266 - F NR\_newRAT-Core

R2-2007032 Clarification on regional Public Warning Systems Huawei, HiSilicon CR Rel-16 38.300 16.2.0 0267 - A NR\_newRAT-Core

* [AT111-e][001][NR15] NR Stage-2 corrections (ZTE)

Scope: Treat R2-2006870, R2-2007222, R2-2007223 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts.

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, if any, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

R2-2008425 Summary of offline 001 - NR Stage 2 corrections ZTE

- [001] Chair: Proposals are agreed. On P2, I suggest that Rapporteurs of 37340 3x300 discuss together. In other TSes I think we try to be careful aboiut this particular language (as there is some significance to it). Should however also be careful about R16-only R15-related language updates.

* [001] Noted

Treated by email

[R2-2006870](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2006870.zip) Clarification on NCGI ZTE corporation, Sanechips, Nokia (Rapporteur) CR Rel-16 38.300 16.2.0 0260 - F NR\_newRAT-Core

- ZTE indicate that a discussion has converged,

* [001] Agreed

Moved from 5.2:

R2-2007222 Correction on Timing advance group related clarification vivo CR Rel-15 38.300 15.10.0 0270 - F NR\_newRAT-Core

R2-2007223 Correction on Timing advance group related clarification vivo CR Rel-16 38.300 16.2.0 0271 - A NR\_newRAT-Core

* [001] Topic is postponed, and assigned to TS rapporteurs. Can consider these CRs postponed (until issue decided by rapporteurs).

### 5.2.2 TS 37.340

## 5.3 Stage 3 user plane corrections

### 5.3.1 MAC

All treated by email, at least initially:

* [AT111-e][002][NR15] NR MAC corrections (Samsung)

Scope: Treat R2-2006680, R2-2006681, R2-2007135, R2-2006657, R2-2007725, R2-2007726, R2-2007727, R2-2007897, R2-2007899, R2-2007861 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

R2-2008448 Report of [AT111-e][002][NR15] NR MAC corrections (Samsung) Samsung

- [002] Aug 25, intermediate: Chair: it seems that all proposals are agreeable except P4’s, which are still discussed.

* [002] noted

CSI-RS

R2-2006680 Correction to SP CSI-RS/CSI-IM Resource Set Activation/Deactivation MAC CE handling Samsung CR Rel-15 38.321 15.9.0 0770 - F NR\_newRAT-Core

R2-2006681 Correction to SP CSI-RS/CSI-IM Resource Set Activation/Deactivation MAC CE handling Samsung CR Rel-16 38.321 16.1.0 0771 - A NR\_newRAT-Core

* [002] Both not pursued

HARQ

R2-2007135 Clarification on HARQ process ID determination for SPS OPPO, Samsung CR Rel-15 38.321 15.9.0 0803 - F NR\_newRAT-Core

* [002] Only NOTE 1 in R2-2007135 is agreed, and 'that takes place' shall be removed from NOTE 1.

[R2-2008485](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008485.zip) Clarification on HARQ process ID determination for SPS OPPO, Samsung CR Rel-15 38.321 15.9.0 0803 1 F NR\_newRAT-Core

* [002] agreed

[R2-2007136](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2007136.zip) Clarification on HARQ process ID determination for SPS OPPO, Samsung CR Rel-16 38.321 16.1.0 0804 - F NR\_newRAT-Core, NR\_IIOT-Core

- [002] Chair: 7136 is a somewhat different CR to 7135, that was rejected in [031] for IIOT. Then the CR was revised to be reused as a cat A mirror below for this. A bit too confusing to follow revisions and decisions, this handling is not recommended

[R2-2008486](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008486.zip) Clarification on HARQ process ID determination for SPS OPPO, Samsung CR Rel-16 38.321 16.1.0 0804 1 A NR\_newRAT-Core

* [002] agreed

UL Grant

R2-2006657 Clarification on operations in a bundle of UL grants Samsung CR Rel-15 38.321 15.9.0 0767 - F NR\_newRAT-Core

* [002] Agreed

R2-2007725 DRX with bundle transmission of configured uplink grant ASUSTeK discussion Rel-16 38.321 NR\_newRAT-Core

* [002] Noted

R2-2007726 Correction on DRX with bundle transmission of configured uplink grant ASUSTeK CR Rel-15 38.321 15.9.0 0834 - F NR\_newRAT-Core

* [002] not pursued

R2-2007727 Correction on DRX with bundle transmission of configured uplink grant ASUSTeK CR Rel-16 38.321 16.1.0 0835 - A NR\_newRAT-Core

* [002] Postponed

R2-2007897 Correction to not (re)starting drx-InactivityTimer when dynamic grant is skipped MediaTek Inc. CR Rel-15 38.321 15.9.0 0848 - F NR\_newRAT-Core

R2-2007899 Correction to not (re)starting drx-InactivityTimer when dynamic grant is skipped MediaTek Inc. CR Rel-16 38.321 16.1.0 0849 - A NR\_newRAT-Core

* [002] Both not pursued

MSG3

R2-2007861 Clarification on collision between uplink grant for MSG3 retransmission and DG Huawei, HiSilicon CR Rel-15 38.321 15.9.0 0843 - A NR\_newRAT-Core

* [002] not pursued

### 5.3.2 RLC

### 5.3.3 PDCP

Minor potentially easy, treat on-line

R2-2007059 38323 CR PDCP entity associated with AM RLC entity LG Electronics Inc., Ericsson CR Rel-15 38.323 15.6.0 0051 - F TEI15

- Nokia think there is a small spelling error above the change that can be fixed as well.

- Huawei want to keep aligned text between LTE and NR. LG was thinking about this, but the style is different to LTE and this change is simpler. Samsung agree with LG.

* Revised in R2-200xxxy (take into account the spelling error), revision is agreed unseen

R2-2007060 38323 CR PDCP entity associated with AM RLC entity LG Electronics Inc., Ericsson CR Rel-16 38.323 16.1.0 0052 - F TEI16

* Revised in R2-200xxxx (take into account the spelling error), revision is agreed unseen

### 5.3.4 SDAP

## 5.4 Stage 3 control plane corrections

### 5.4.1 NR RRC

Including all architecures

#### 5.4.1.1 Connection control

Including L1 Parameters, L2 Parameters, Connection establishment and release, Connection reconfiguration (also reconfig with sync, Handover), Connection resume and release with RRC\_INACTIVE state, Security procedures, re-establishment, RRC processing delay requirements etc.

L1 Parameters

* [AT111-e][003][NR15] L1 Parameters (vivo)

Scope: Treat R2-2007057, R2-2007058, R2-2007504, R2-2006683, R2-2006995, R2-2006996 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

R2-2008596 Summary of offline discussion #003: NR L1 Parameters vivo

DISCUSSION

- [003] INTERMEDIATE Aug 25 Chair understands P1 P2 and P3 are agreeable. On the P4 clarification it seems inconsistent

* [003] Noted, proposals agreed and this is reflected below

R2-2007057 Clarification on the absence of pathlossReferenceRSs Huawei, HiSilicon CR Rel-15 38.331 15.10.0 1773 - F NR\_newRAT-Core

R2-2007058 Clarification on the absence of pathlossReferenceRSs Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1774 - A NR\_newRAT-Core

* [003] Both Merged, The field description of *pathlossReferenceRSs* needs to be updated: change the condition “When the field is absent” to “If the field is not configured”. This change is merged into Rapporteur’s CR for Rel-15/16 specification.

R2-2007504 Correction on aperiodicSRS resource vivo CR Rel-15 38.331 15.10.0 1851 - F NR\_newRAT-Core

R2-2006683 Correction on aperiodicSRS resource vivo CR Rel-16 38.331 16.1.0 1729 - A NR\_newRAT-Core

* [003] Both Partly merged, The reference clause in the field description of *aperiodicSRS-ResourceTriggerList* needs to be updated: change “6.1.1.2” to “6.1”. This change is merged into Rapporteur’s CR for Rel-15/16 specification.
* [003] RAN2 confirms that if the field *slotOffset* in *SRS-ResourceSet* is absent, only the UE supporting *zeroSlotOffsetAperiodicSRS* applies no offset (value 0). Network configures the *slotOffset* for UEs not supporting *zeroSlotOffsetAperiodicSRS*. No TS change is needed for this.

R2-2006995 Correction on the Cross Carrier Scheduling Configuration CATT CR Rel-15 38.331 15.10.0 1763 - F NR\_newRAT-Core

[R2-2008526](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008526.zip) Correction on the Cross Carrier Scheduling Configuration CATT CR Rel-15 38.331 15.10.0 1763 1 F NR\_newRAT-Core

* [003] Agreed

R2-2006996 Correction on the Cross Carrier Scheduling Configuration CATT CR Rel-16 38.331 16.1.0 1764 - F NR\_newRAT-Core

[R2-2008527](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008527.zip) Correction on the Cross Carrier Scheduling Configuration CATT CR Rel-16 38.331 16.1.0 1764 1 F NR\_newRAT-Core

* [003] Agreed

L2 Parameters and Security

* [AT111-e][004][NR15] L2 Parameters and Security (CATT)

Scope: Treat R2-2008038, R2-2008039, R2-2006891, R2-2006892, R2-2007348, R2-2007349, R2-2006993, R2-2006994 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

R2-2008476 Report of ‎[AT111-e][004][NR15] L2 Parameters and Security (CATT)‎ CATT

* [004] noted, Proposals agreed, see below

L2 param

R2-2008038 Reconfiguring RoHC and setting the drb-ContinueROHC simultaneously Qualcomm Incorporated CR Rel-15 38.331 15.10.0 1978 - F NR\_newRAT-Core

R2-2008039 Reconfiguring RoHC and setting the drb-ContinueROHC simultaneously Qualcomm Incorporated CR Rel-16 38.331 16.1.0 1979 - A NR\_newRAT-Core

* [004] Both agreed

R2-2006891 CR to clarify UE behaviour after TAT expiry due to reconfigurationWithSync ZTE Corporation, Sanechips CR Rel-15 38.331 15.10.0 1750 - F NR\_newRAT-Core

R2-2006892 CR to clarify UE behaviour after TAT expiry due to reconfigurationWithSync ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1751 - A NR\_newRAT-Core

* [004] Revised, the contents is agreed with the change added NOTE1 shall refer to 38.321. The revisions are agreed unseen

Security

R2-2007348 Clarification on NR PDCP COUNT wrap around Nokia, Nokia Shanghai Bell CR Rel-15 38.331 15.10.0 1834 - F NR\_newRAT-Core

R2-2007349 Clarification on NR PDCP COUNT wrap around Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1835 - A NR\_newRAT-Core

- Aug 25 intermediate: Rapp: The changes proposed in R2-2007348 and R2-2007349 are agreeable. To discuss and decide further whether these changes are merged with Rapporteur’s CR or not.

R2-2006993 Correction on Presence Condition of securityConfig CATT CR Rel-15 38.331 15.10.0 1761 - F NR\_newRAT-Core

R2-2006994 Correction on Presence Condition of securityConfig CATT CR Rel-16 38.331 16.1.0 1762 - F NR\_newRAT-Core

* [004] both no pursued.

**Misc Configuration**

* [AT111-e][005][NR15] Misc Configuration (ZTE)

Scope: Treat R2-2008091, R2-2008092, R2-2007264, R2-2007265, R2-2006889, R2-2006890, R2-2007121, R2-2007122, R2-2008086, R2-2008087 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

R2-2008423 [AT111-e][005][NR15] Misc Configuration (ZTE) ZTE Corporation

* [005] Noted, proposals agreed, see below

R2-2008091 Clarification on re-establishment procedure (R15) ZTE corporation, Sanechips CR Rel-15 38.331 15.10.0 1987 - F NR\_newRAT-Core Late

R2-2008092 Clarification on re-establishment procedure (R16) ZTE corporation, Sanechips CR Rel-16 38.331 16.1.0 1988 - A NR\_newRAT-Core Late

* [005] Both not pursued

R2-2007264 Incorrect creation of SCG MAC entity Ericsson CR Rel-15 38.331 15.10.0 1814 - F NR\_newRAT-Core

R2-2007265 Incorrect creation of SCG MAC entity Ericsson CR Rel-16 38.331 16.1.0 1815 - A NR\_newRAT-Core

* [005] Both not pursued

R2-2006889 CR on condition of SyncAndCellAdd ZTE Corporation, Sanechips CR Rel-15 38.331 15.10.0 1748 - F NR\_newRAT-Core

R2-2008471 CR on condition of SyncAndCellAdd ZTE Corporation, Sanechips CR Rel-15 38.331 15.10.0 1748 1 F NR\_newRAT-Core

* [005] Agreed

R2-2006890 CR on condition of SyncAndCellAdd ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1749 - A NR\_newRAT-Core

- [005] Intermediate Aug 25, Rap: Update the wording in CRs (R2-2006889/R2-2006890) as proposed by QC (i.e. use “to the same sPCell” instead).

R2-2008472 CR on condition of SyncAndCellAdd ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1749 1 A NR\_newRAT-Core

* [005] Agreed

R2-2007121 Clarification on the UE dedicated configuration of rlf-TimersAndConstants Apple CR Rel-15 38.331 15.10.0 1788 - F NR\_newRAT-Core

R2-2007122 Clarification on the UE dedicated configuration of rlf-TimersAndConstants Apple CR Rel-16 38.331 16.1.0 1789 - A NR\_newRAT-Core

* [005] Both not pursued

R2-2008086 Clarification on the SRB configuration for fullConfig during RRC Resume procedure (R15) ZTE corporation, Sanechips CR Rel-15 38.331 15.10.0 1985 - F NR\_newRAT-Core

R2-2008473 Clarification on the SRB configuration for fullConfig during RRC Resume procedure (R15) ZTE corporation, Sanechips CR Rel-15 38.331 15.10.0 1985 r1 F NR\_newRAT-Core

* [005] Agreed

R2-2008087 Clarification on the SRB configuration for fullConfig during RRC Resume procedure (R16) ZTE corporation, Sanechips CR Rel-16 38.331 16.1.0 1986 - F NR\_newRAT-Core

- [005] Intermediate Aug 25, Rap: Update CRs (R2-2008086/R2-2008087) based on the comments from MediaTek.

R2-2008474 Clarification on the SRB configuration for fullConfig during RRC Resume procedure (R16) ZTE corporation, Sanechips CR Rel-16 38.331 16.1.0 1986 r1 A NR\_newRAT-Core

* [005] Agreed

#### 5.4.1.2 RRM and Measurements and Measurement Coordination

Including late drop

* [AT111-e][006][NR15] Measurments and System Information (ZTE)

Scope: Treat R2-2006676, R2-2006677, R2-2008042, R2-2007405-7410, R2-2006878, R2-2007942-7944 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs, and possibly LS out.

Deadline: Aug 26, 0900 UTC.

R2-2008447 Offline-006[NR15] Measurements and System Information ZTE

R2-2006676 Clarification of measCycleSCell in measObjectNR NTT DOCOMO INC. CR Rel-15 38.331 15.10.0 1727 - F NR\_newRAT-Core

R2-2006677 Clarification of measCycleSCell in measObjectNR NTT DOCOMO INC. CR Rel-16 38.331 16.1.0 1728 - A NR\_newRAT-Core

- [006] Chair: the consequence if not approved seems to be that an IE is sent sometimes also when not needed. There is not much support to have this change.

* [006] Both Not Pursued

#### 5.4.1.3 System information

Channel BW

Moved from 5.4.1.1

R2-2008042 SIB1 to include all supported channel bandwidths by the gNB Qualcomm Incorporated CR Rel-16 38.331 16.1.0 1980 - F NR\_newRAT-Core, TEI16

* [006] Not Pursued

UAC delay tolerant in shared NW

R2-2007405 Clarification on network specific uac-AccessCategory1-SelectionAssistanceInfo ZTE corporation, Sanechips, CMCC discussion Rel-15 NR\_newRAT-Core

Moved from 5.4.1.5

R2-2006878 Network-specific access barring for delay tolerant service Lenovo, Motorola Mobility discussion Rel-15 NR\_newRAT-Core

Moved from 6.1.1

R2-2007942 ASN.1 issue on uac-AccessCategory1-SelectionAssistanceInfo vivo discussion

R2-2007406 draft CR on network specific uac-AccessCategory1-SelectionAssistanceInfo in TS38.331-R15 solution ZTE corporation, Sanechips, CMCC draftCR Rel-15 38.331 15.10.0 NR\_newRAT-Core

R2-2007407 draft CR on network specific uac-AccessCategory1-SelectionAssistanceInfo in TS36.331-R15 solution ZTE corporation, Sanechips, CMCC draftCR Rel-15 36.331 15.10.0 LTE\_5GCN\_connect-Core

R2-2007408 draft CR on network specific uac-AccessCategory1-SelectionAssistanceInfo in TS38.331-R16 solution ZTE corporation, Sanechips, CMCC, Nokia draftCR Rel-16 38.331 16.1.0 NR\_newRAT-Core

R2-2007409 draft CR on network specific uac-AccessCategory1-SelectionAssistanceInfo in TS36.331-R16 solution ZTE corporation, Sanechips, CMCC, Nokia draftCR Rel-16 36.331 16.1.1 LTE\_5GCN\_connect-Core

R2-2007410 [Draft] LS on UAC Access Category 1 selection ZTE corporation, Sanechips LS out Rel-15 NR\_newRAT-Core To:CT1 Cc:SA2

2 Moved from 6.1.1

R2-2007943 38.331 CR for uac-AccessCategory1-SelectionAssistanceInfo vivo CR Rel-16 38.331

R2-2007944 36.331 CR for eab-Param vivo CR Rel-16 36.331 16.1.1 4417 - F LTE\_5GCN\_connect-Core

16.1.0 1947 - F NR\_newRAT-Core

ON-Line discussion Aug 25

- Lenovo are ok with 3.1 but not 3.2. R15 solution is not broken.

- Chairs understanding is that R15 is broken, i.e. barring cannot be independently configured for each PLMN in a shared network scenario. ZTE agrees, and think this configuration should be a per-PLMN solution. Nokia also agrees. It doesn’t work for network sharing scenarios. Chair is not sure this is urgent.

- Ericsson agrees that this not urgent, and think that the case in focus now is not the only weakness with EAB, e.g. currently in procedure text information is indicated to higher layers, which is not expected by higher layers.

- LG does not object have some solution, but think the problem can be softened by network implementation.

- QC think it works but different networks of network sharing is forced to use the same configuration. Nokia agrees that this involves that if one operator has a configuration for AC1, other operators also must have it (i.e. cannot choose to not bar). Huawei think this is not the case, the barring configuration can be set so that in reality it corresponds to no barring.

- Ericsson wonders that if we have a rel-16 solution, what happens to Rel-15. Current solution on the table is that a cell either broadcast R15 or R16 information. This cannot work for R15 UEs. Chair think that such solution can work if there is no R15 UEs that has deployed the feature (which may be the case).

- ZTE think we can have an email discussion.

* Postponed (all the CRs above)

#### 5.4.1.4 Inter-Node RRC messages

* [AT111-e][007][NR15] Inter Node and NR Misc (Ericsson)

Scope: Treat R2-2006884, R2-2006885, R2-2007674, R2-2007675, R2-2007643, R2-2007644, R2-2006999, R2-2007000 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

R2-2008412 Summary of [AT111-e][007][NR15] Inter Node and NR Misc (Ericsson) Ericsson

* [007] Noted

R2-2006884 Clarification on CG-ConfigInfo for NR-DC and NE-DC Google Inc. CR Rel-15 38.331 15.10.0 1745 - F NR\_newRAT-Core

R2-2006885 Clarification on CG-ConfigInfo for NR-DC and NE-DC Google Inc. CR Rel-16 38.331 16.1.0 1746 - A NR\_newRAT-Core

* [007] Intermediate conclusion: Intention is agreed. Final CRs (revisions or merge) treated in [103].

R2-2007674 Clarification on scg-RB-Config Huawei, HiSilicon CR Rel-15 38.331 15.10.0 1877 - F NR\_newRAT-Core

R2-2007675 Clarification on scg-RB-Config Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1878 - A NR\_newRAT-Core

* [007] Both Agreed

#### 5.4.1.5 Other

**NR Misc Corrections**

R2-2007643 Miscellaneous non-controversial corrections Set VII Ericsson CR Rel-15 38.331 15.10.0 1871 - F NR\_newRAT-Core

R2-2007644 Miscellaneous non-controversial corrections Set VII Ericsson CR Rel-16 38.331 16.1.0 1872 - A NR\_newRAT-Core, TEI16

- [007] Intermediate Aug25: Revision is expected, Rapp: The CRs in R2-2007643 and R2-2007644 are considered as baseline to include further misc corrections.

R2-2006999 Corrections Based on the Rule of Field and IE Usage CATT CR Rel-15 38.331 15.10.0 1765 - F NR\_newRAT-Core

R2-2007000 Corrections Based on the Rule of Field and IE Usage CATT CR Rel-16 38.331 16.1.0 1766 - F NR\_newRAT-Core

* [007] Merged (Partly) with Rapporteur CRs (see email discussion outcome)

UE assistance information

* [AT111-e][008][NR15] NR UAI (Huawei)

Scope: Treat R2-2007792, R2-2007793, R2-2007794, R2-2007795, R2-2006986, R2-2006987, R2-2006997, R2-2006998 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

[R2-2008531](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008531.zip) Summary of offline 008 – NR UAI Huawei

* [008] Noted, proposals are agreed, reflected below

R2-2007792 Correction on condition of stopping overheating prohibit timer Huawei, HiSilicon CR Rel-15 38.331 15.10.0 1905 - F NR\_newRAT-Core

* [008] Merged, Contents Agreed, merged into rapporteur CR

R2-2007793 Correction on condition of stopping overheating prohibit timer Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1906 - A NR\_newRAT-Core

* [008] Merged, Contents Agreed, merged into rapporteur CR

R2-2007794 Correction on UE assistance information transmission for handover case Huawei, HiSilicon CR Rel-15 38.331 15.10.0 1907 - F NR\_newRAT-Core

- [008] Intermediate Aug 25: Chair: It seems at least some change can be agreed, so I assume we will have CRs.

R2-2008532 Correction on UE assistance information transmission for handover case Huawei, HiSilicon CR Rel-15 38.331 15.10.0 1907 - F NR\_newRAT-Core

* [008] Agreed

R2-2007795 Correction on UE assistance information transmission for handover case Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1908 - A NR\_newRAT-Core

R2-2008533 Correction on UE assistance information transmission for handover case Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1908 - A NR\_newRAT-Core

* [008] Agreed

Moved from 5.4.1.1

R2-2006986 Further correction on UEAssistanceInformation upon reconfiguration with sync CATT CR Rel-15 38.331 15.10.0 1759 - F NR\_newRAT-Core

R2-2006987 Further correction on UEAssistanceInformation upon reconfiguration with sync CATT CR Rel-16 38.331 16.1.0 1760 - F NR\_newRAT-Core

* [008] both not agreed

### 5.4.2 LTE changes related to NR

LTE Other

* [AT111-e][042][NR15] LTE Other (Nokia)

Scope: Treat R2-2006997, R2-2006998, R2-2007350, R2-2007351, (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

R2-2008408 Summary of [AT111-e][042][NR15] LTE Other (Nokia) Nokia

* [042] Noted, proposals are agreed, see below

R2-2006997 Correction on the Presence Condition for drb-ToAddModList CATT CR Rel-15 36.331 15.10.0 4363 - F NR\_newRAT-Core

- [042] Intermedite Aug 25: Chair: It seems some change is agreeable

[R2-2008488](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008488.zip) Correction on the Presence Condition for drb-ToAddModList CATT CR Rel-15 36.331 15.10.0 4363 1 F NR\_newRAT-Core

* [042] Agreed

R2-2006998 Correction on the Presence Condition for drb-ToAddModList CATT CR Rel-16 36.331 16.1.1 4364 - F NR\_newRAT-Core

[R2-2008489](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008489.zip) Correction on the Presence Condition for drb-ToAddModList CATT CR Rel-16 36.331 16.1.1 4364 - F NR\_newRAT-Core

* [042] Agreed

Moved from 5.4.2

R2-2007350 Clarification about UL 256QAM Nokia, Nokia Shanghai Bell CR Rel-15 36.331 15.10.0 4382 - F NR\_newRAT-Core

- [042] Intermedite Aug 25: Chair: It seems some change is agreeable

[R2-2008410](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008410.zip) Clarification about UL 256QAM Nokia, Nokia Shanghai Bell CR Rel-15 36.331 15.10.0 4382 1 F NR\_newRAT-Core

* [042] Agreed

R2-2007351 Clarification about UL 256QAM Nokia, Nokia Shanghai Bell CR Rel-16 36.331 16.1.0 4383 - A NR\_newRAT-Core

[R2-2008411](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008411.zip) Clarification about UL 256QAM Nokia, Nokia Shanghai Bell CR Rel-16 36.331 16.1.0 4383 1 A NR\_newRAT-Core

* [042] Agreed

LTE SIB Extension

Online first – then email

* [AT111-e][009][NR15] LTE SIB extension issue (NTT DOCOMO)

Scope: Treat R2-2008083, R2-2008367, R2-2008107 (proponents to drive)

Part 1: Start after on-line initial discussion, Confirm severity/consequences of the issue, Try to find acceptable solutions, put solutions on the table, gather initial round of comments to understand which could be acceptable.

Deadline: Aug 20, 0900 UTC.

Part 2: Technically endorsed CRs

Deadline: EOM

R2-2008427 Report of email discussion [AT111-e][009][NR15] LTE SIB extension issue NTT Docomo

DISCUSSION Aug 25

- NTT Docomo think the same issue is present for all SIBs after “…”

- IT is clarified that CMCC has at lest 5M UEs that canont be SW upgraded and that has this issue

- CMCC think P1 is reasonable. Most problematic UEs are IoT UEs, and they have a life time of around 10 years.

- MTK think still this is due to wrong UE impl, but are wonder if we really need to fix this for the other SIBs. MTK understand Options 2 and 3 can work. MTK are NOT ready to accept standards change at this meeting and think it is unfair to penalize UEs with correct implementation.

- QC agrees this is due to wrong UE implementation and UEs should be fixed.

- VDF cannot accept to alter the operation of the network, i.e. it must be possible to have full flexibility for the network, i.e. no restriction of SIB tramissions etc.

- TMO US think some problamtic UEs are old, think we could either a) deny service for the problemaic UEs that cannot be upgraded, or b) have a std solution, unless there is the luxury to be able to serve problematic UEs on separate freq, but that is not common.

- Softbank think O2 O3 are not sufficient. O2 only work for SIB24 and for O3 it is not acceptable from service privisioning point of view. Need a std solution. Telecom Italia support Softbank, and think SIB26a is also needed. KDDI agree with SB and Telecom italia and KDDI has lots of problematic UEs. Also to KDDI the workaround O3 is not acceptable, Turkcell agrees, O3 is not acceptable, and think there is no way to firce the suncrber to upgrade the phones, and think further that VDF are correct that network cannot have restrictions. BT agrees with Softbank, and think we need a standards solution.

- AT&T are still assessing the magnitude of the situation, if it is big AT&T think UEs cannot be replaced and not easy updgraded either. Verizon are also still assessing the issue.

- Docomo have some understanding for vendors perspective, which the correct implementation and think RP should decide.

- Apple agrees w MTK and QC, and think there is no clear understanding on how severe this issue is, and think is it also very early to tech endorse CRs, and also not sure about other SIBs than SIB24, not ready to go woth a solution with Standards Impact.

- Samsung are willing to help resolve this, but think that then Rel-15 UEs (that support NR SA) need to be upgraded over the air. Samsung think that at RP the severity need to be discussed. Chair wonder if such UEs can use workaround O2 (redirection)

- Nokia think a STD solution is very problematic. Ericsson agrees and think we need to know better how serious this issue is, and think that the possibility of workarounds need to be discussed at RP

- Oppo agrees with MTK and other vendors, think it is too early. Oppo think that for Tech Endorsed CRs we should choose in R2 to use either SIB1 or SIB3.

- Huawei think tech endorsed CRs is premature. Think RP shall decide first.

- LG think we should not penalize correct UEs.

- Lenovo wonder if this is a precedent for the future. Chair think not.

- BT think also for next RP may be too short time.

- QC think we need R12 CRs for this, if we go with a STD solution.

- CMCC support to have endorsed CRs for RP.

- Docomo think we need to decide ASAP, most operators have not yet launched NR stand-alone.

DISC FOR the CRs Aug 25

- QC think only SIB1 extension should be considered.

- MTK think we can consider both SIB1 and SIB3. We should not have a solution from Rel-12.

- Docomo think that the order of the SIBs in the scheduling info list can be used for a UE to determine where SIBs are transmitted. IF this is in SIB3 it is complex for the UE to acquire the SIBs.

- Chair think we can discuss by email from which release we would make correction, obviously none of the SIBs have been deployed until now.

- CMCC think that SIB1 is better, but think it is safer to put scheduling info in another SIB than SIB1.

- VDF think we should have the CRs from Rel-12, to be clear and clean.

- VDF think that if there indeed are issues it is urgent. But are not sure about the magnitude of the problem.

- Nokia wonder if the old information need to be dummified. What about other cases with … extensions. Do they also need to be fixed. Chair think there are … extensions that has also worked well (in SIBs).

- LG would prefer to extend SIB1.

- Huawei hesitate to have CRs from Rel-12. Think that Rel-12 UEs need to be upgraded.

- Docomo think that if someone want to use SIB19 etc then old UEs need to be upgraded, but think only NR SA deployment is interesting.

- QC think we shall stay “clean” and fix from Rel-12. QC think SIB1 is better.

- Chair: Think SIB1 is the opinion of most companies.

- Lenovo wonder if the soluton proposed works. Docomo think that the proposed kind of non-critical extension works well as there are other examples.

- Ericsson think that we need to be clear on the coverpage in indicating consequences. This is a non-backwards compatible solution in principle.

* RP need to decide (R2 cannot achieve consensus)
* R2 prepare tech endorsed CRs for a standardized solution

For the CRs to be tech endorsed

* RAN2 to address the SIB scheduling issue, from SIB19 and onwards (defined after the extension marker).
* Introduce an additional scheduling information for SIB19 and onwards in SIB1 (i.e. Solution 1), only in SIB3 if problems are found with SIB1.
* Assume the correction is from R12 (when the first problematic SIB was introduced).

Moved from 6.16

R2-2007426 Discussion on SIB24 issue CMCC discussion Rel-16 TEI16

* revised

R2-2008367 Discussion on SIB24 issue CMCC discussion Rel-16 TEI16

R2-2008083 Problem on SI scheduling via an extended field NTT DOCOMO, INC. discussion Rel-15 36.331 NR\_newRAT-Core Late

R2-2008107 Workaround for LTE SIB24 issue0 MediaTek discussion Late

* 3 docs noted

DISCUSSION Aug 17

- Docomo think this is urgent, so we need a solution ASAP, it is in fact too late already.

- CMCC think > 5M UEs have this issue, so this it important and urgent.

- TMO US also think this is urgent and have UEs in the field that are afflicted, but think we need to be careful, this is not easy.

- Nokia think solutions are varying, and think the TS is ok, and the impact to current UEs are not trivial. We should be careful.

- Samsung think we cannot avoid TS change, and think we need to do this this week. Samsung think that if SIB24 is sent in same SI message as older SIB there are also issues, and we should address this.

- Chair wonder if this affects also the other SIBs indicated after “…”. Docomo think maybe, and we might need to check.

- LG think we need to find a solution with minimum impact, and would prefer minimum impact to standards.

- QC agree with all opinions, an think this indeed may be complex.

- Chair’s understanding is that both workarounds and final solutions are interesting, and that we should attempt to have a solution at this meeting, we can assess the maturity towards the end of the meeting.

- Lenovo think R5 have a new test case to avoid this kind of issues. Docomo think UEs in reality cannot be upgraded so this doesn’t resolve the current issue. CMCC explains that many UEs cannot be upgraded. KDDI agrees.

- TMO has tried workarounds and think they don’t work.

- Ericsson would like to understand how many problem UEs can be upgraded.

- Apple also think we need to be careful, and there are significant drawbacks for correctly implemented UEs.

- DT and Ericsson would like to understand how serious this issue is, and DT are not ok to remove any flexiblility. DT think this is a wrong implementation, and are surprised that we are doing this.

- LG Uplus has this issue and point out that problematic UEs are on all frequencies.

- Intel also think we should be careful, especially since we have non-upgradable UEs.

* Continue by email, solutions with and without TS impact may be discussed. It is also interesting to understand better the magnitude of the problem.
* We can attempt to have a solution at this meeting, need to put solutions on the table and understand the impacts, we can assess the maturity towards the end of the meeting.

DISCUSSION AUG 28

- Docomo confirms 1 week email is needed

- Ericsson are ok to address the scheduling info issue, but don’t want to have restrictions for SIB scheduling into SI messages. Huawei agrees and think we should not dummyfi

- Samsung think we can include more issues.

- Ericsson think we should have one set of CRs. Chair agrees but think we don’t need to capture

- LG think that if we have only one set of CRs then we need to include other issues as well.

* Address the scheduling info issue
* We don’t remove the old configuration (don’t dummify)
* 1 week post email discussion

### 5.4.3 UE capabilities and Capability Coordination

Including Late Drop.

Clarifications

* [AT111-e][010][NR15] UE cap Clarifications (Huawei)

Scope: Treat R2-2007209, R2-2007210, R2-2007211, R2-2007798, R2-2007799, R2-2007800, R2-2007796, R2-2007797, R2-2007885, R2-2007887, R2-2007850 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

R2-2008428 Summary of offline 010 Rel-15 UE cap Clarifications Huawei, HiSilicon

* [010] Noted, agreements are reflected below

R2-2007209 Clarification on the BandCombination ZTE Corporation, Sanechips discussion Rel-15 NR\_newRAT-Core

* [010] Noted
* [010] R2 confirms that the supportedBandListNR should contain all bands that the UE supports, while the supportedBandCombinationList may not contain all supported bands. (already reflected in TS no change needed).

R2-2007210 CR on the BandCombination (R15) ZTE Corporation, Sanechips CR Rel-15 38.331 15.10.0 1799 - F NR\_newRAT-Core

- [010] Intermediate: Rap: It is agreeable that the BandCombinationList and the FreqBandList also include the NR non-CA band combination, and the definition of “non-CA” should be clarified and reflected correctly

* [010] Agreed
* [010] the UE is allowed to include non-CA band combination only when the UE supports different capability from that of superset.

R2-2007211 CR on the BandCombination (R16) ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1800 - A NR\_newRAT-Core

* [010] Agreed

R2-2007798 Discussion on the ambiguity for the capabilities associated with multiple bands/Cells Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

[R2-2008368](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008368.zip) Discussion on the ambiguity for the capabilities associated with multiple bands/Cells Huawei, HiSilicon discussion Rel-15 NR\_newRAT-Core

* [010] Noted
* [010] the UE needs to indicate capabilities (*simultaneousTxSUL-NonSUL, dynamicSwitchSUL*) for both SUL band and the paired NUL band, and the network only enables this configuration for the bands pair where these capabilities are indicated for both SUL and NUL band.
* [010] confirm that the network could only configure PUCCH on the bands where *twoPUCCH-Group* is indicated if two PUCCH groups are configured.
* [010] for interpretation of FGs applicable to cross-carrier operation, RAN2 waits for RAN1 conclusion.

R2-2007799 Corrections on the capabilities associated with multiple bands/Cells Huawei, HiSilicon CR Rel-15 38.306 15.10.0 0388 - F NR\_newRAT-Core

R2-2008369 Corrections on the capabilities associated with multiple bands/Cells Huawei, HiSilicon CR Rel-16 38.306 15.10.0 0388 1 F NR\_newRAT-Core

[R2-2008429](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008429.zip) Corrections on the capabilities associated with multiple bands/Cells Huawei, HiSilicon CR Rel-16 38.306 15.10.0 0388 2 F NR\_newRAT-Core

* [010] Agreed

R2-2007800 Corrections on the capabilities associated with multiple bands/Cells Huawei, HiSilicon CR Rel-16 38.306 16.1.0 0389 - A NR\_newRAT-Core

R2-2008370 Corrections on the capabilities associated with multiple bands/Cells Huawei, HiSilicon CR Rel-16 38.306 16.1.0 0389 1 A NR\_newRAT-Core

R2-2008430 Corrections on the capabilities associated with multiple bands/Cells Huawei, HiSilicon CR Rel-16 38.306 16.1.0 0389 2 A NR\_newRAT-Core

* [010] Agreed

R2-2007796 Clarification on PDSCH rate-matching capabilities Huawei, HiSilicon CR Rel-15 38.306 15.10.0 0386 - F NR\_newRAT-Core

- [010] Rap: almost all companies seem to agree with the intention of the CRs, and some companies raised some suggestions to the detailed changes in the CR. It is proposed to pursue the CR and update is needed to address the comments accordingly.

[R2-2008431](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008431.zip) Clarification on PDSCH rate-matching capabilities Huawei, HiSilicon CR Rel-15 38.306 15.10.0 0386 1 F NR\_newRAT-Core

* [010] Agreed

R2-2007797 Clarification on PDSCH rate-matching capabilities Huawei, HiSilicon CR Rel-16 38.306 16.1.0 0387 - A NR\_newRAT-Core

[R2-2008432](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008432.zip) Clarification on PDSCH rate-matching capabilities Huawei, HiSilicon CR Rel-16 38.306 16.1.0 0387 1 A NR\_newRAT-Core

* [010] Agreed

R2-2007885 Clarification on the simultaneousRxTxInterBandCA capability in NR-DC MediaTek Inc. CR Rel-15 38.306 15.10.0 0395 - F NR\_newRAT-Core

R2-2007887 Clarification on the simultaneousRxTxInterBandCA capability in NR-DC MediaTek Inc. CR Rel-16 38.306 16.1.0 0396 - A NR\_newRAT-Core

- [010] Rap:In the discussion majority of companies prefers to check with RAN4 first before making the change, and several companies seem to have different understanding on how to interpret the current simultaneousRxTxInterBandCA capability. It is therefore proposed to send an LS to confirm the requirement, and the CRs are postponed to next meeting as companies might need more time to think about the interpretation.

* [010] Both Postponed
* [010] Send an LS to RAN4 to confirm the requirement on simultaneousRxTxInterBandCA support for NR-DC case (treat LS in [010])

[R2-2008534](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008534.zip) [Draft] LS on simultaneous Rx/Tx for inter-band NR-DC MediaTek Inc. LS out

* [010] LS is approved in R2-200xxxx

R2-2007850 xDD and FRx differentiation on UE capabilities which are not signalled by ENUMERATED {supported} Samsung discussion Rel-15 NR\_newRAT-Core

- [010] Rap: There is no support on the proposal and companies think there were no such cases existing. Thus the proposal seems not be to pursued

* [010] Noted, not agreed

Additions

* [AT111-e][011][NR15] UE cap Additions (vivo)

Scope: Treat R2-2007303, R2-2007304, R2-2007305, R2-2007306, R2-2007212, R2-2007213, (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

[R2-2008421](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008421.zip) Report of ‎[AT111-e][011][NR15] UE cap Additions (vivo) vivo

* [011] noted, proposals agrees which is reflected below.

Missing Constraints

R2-2007303 Corrections on UE capability constraints vivo CR Rel-15 36.331 15.10.0 4377 - F NR\_newRAT-Core

R2-2007305 Corrections on UE capability constraints vivo CR Rel-16 36.331 16.1.1 4378 - A NR\_newRAT-Core

* [011] Both Not Pursued

R2-2007304 Corrections on UE capability constraints vivo CR Rel-15 38.306 15.10.0 0377 - F NR\_newRAT-Core

[R2-2008522](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008522.zip) Corrections on UE capability constraints vivo CR Rel-15 38.306 15.10.0 0377 1 F NR\_newRAT-Core

* [011] Agreed

R2-2007306 Corrections on UE capability constraints vivo CR Rel-16 38.306 16.1.0 0378 - A NR\_newRAT-Core

R2-2008523 Corrections on UE capability constraints vivo CR Rel-16 38.306 16.1.0 0378 1 A NR\_newRAT-Core

* [011] Agreed

Support for Odd Bandwidths

R2-2007212 CR on support of 35MHz and 45MHz channel bandwidth (R15) ZTE Corporation, Sanechips CR Rel-15 38.306 15.10.0 0374 - F NR\_newRAT-Core

R2-2007213 CR on support of 35MHz and 45MHz channel bandwidth (R16) ZTE Corporation, Sanechips CR Rel-16 38.306 16.1.0 0375 - A NR\_newRAT-Core

- [011] Rap: All companies agree that now it’s too early to deal with the signalling support on 35MHz and 45MHz channel bandwidth, as RAN4 has not started the work yet. The consensus is to wait for the RAN4 feedback before RAN2 makes any decision on these CRs. So the rapporteur suggests postponing the discussion on the CRs R2-2007212/2007213.

* [011] Both postponed, until RAN2 receives LS from RAN4.

Further Enhancements

R2-2007084 Clarification on CGI reporting in EN-DC and NE-DC Apple discussion Rel-15 NR\_newRAT-Core

DISCUSSION on-line

- QC think the current status is a result of conscious decisions. There is no change required. Ericsson agrees, and think introducing a new capability will just cause issues.

- Huawei think for EN-DC the change is nbc.

- Apple think we can now take into account R4 outcomes.

- Apple think tht from test point of view it is preferable to test aligned / non-aliged DRX separately and we should have different capabilities.

- MTK have some sympathy, e.g. for the requirement to have separate testing, and think an additional capability could be considered for R16.

- LG have some sympaty but think there is nothing broken and this is R15 and don’t support.

- Chair: not much support

* Not agreed

### 5.4.4 Idle/inactive mode procedures

This agenda item addresses the idle and inactive behaviour specified in 38.304 or 36.304. Other aspects related to inactive (e.g. state transitions, out of coverage, etc) are covered under RRC agenda items (5.4.1.x)

* [AT111-e][012][NR15] Idle mode (QC)

Scope: Treat R2-2007064, R2-2007097, R2-2007119, R2-2007120, R2-2008040, R2-2008041 (proponents to drive), Treat R2-2007963 (AI 6.1.3), include other corrections to be merged with rapporteur CR (if any)

Part 1: Decision whether to make corrections, identify agreeable parts. Identify Controversial issues for on-line treatment (if any).

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

DISCUSSION

- QC would like to combine email discussions [012] and [025].

* [025] is canceled, and contents is added to this one [012]

R2-200xxxx Report of [AT111-e][012][NR15] Idle mode Qualcomm inc.

Rel-16

Moved here from 6.1.3

R2-2007963 Miscellaneous corrections (Rapporteur) Qualcomm Incorporated CR Rel-16 38.304 16.1.0 0184 - D TEI16

* [012] revised
* [012] Contents is agreed with the following changes: correct typo in WI code (remove dash), remove reference to 22.261.

R2-2007064 Corrections to 36.304 Nokia, Nokia Shanghai Bell CR Rel-16 36.304 16.1.0 0805 - F NR\_IAB\_enh-Core, NB\_IOTenh3-Core, NR\_UE\_pow\_sav-Core

* [012] The first four changes is agreed. WI code TEI16 should be added on the cover page. The fifth change on GWUS can be re-visited if not covered by the outcome of the email discussion 305.

[R2-2008490](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008490.zip) Corrections to 36.304 Nokia, Nokia Shanghai Bell CR Rel-16 36.304 16.1.0 0805 1 F NR\_IAB\_enh-Core, NB\_IOTenh3-Core, NR\_UE\_pow\_sav-Core

* [012] Agreed

R2-2007097 Correction on suitable cell definition Apple CR Rel-16 38.304 16.1.0 0179 - D NR\_newRAT-Core

* [012] Merged w rapporteur CR
* [012] Add the following changes in R2-2007097 to the 38.304 rapporteur CR: In the definition of “suitable cell”, add “for Roaming” to the list of “Forbidden Tracking Areas”. Registration area” changes to “tracking area” in the description of exception case in clause 4.5
* [012] Introduce the following change in 36.304 rapporteur CR: “Registration area” changes to “tracking area” in the description of exception case in clause 4.5

Rel-15

R2-2007119 Srxlev Calculation for IRAT Cell Reselection Apple, Qualcomm Incorporated, Nokia, Nokia Shanghai Bell, ZTE Corporation, Sanechips, CATT CR Rel-15 36.304 15.6.0 0806 - F NR\_newRAT-Core

R2-2007120 Srxlev Calculation for IRAT Cell Reselection Apple, Qualcomm Incorporated, Nokia, Nokia Shanghai Bell, ZTE Corporation, Sanechips, CATT CR Rel-16 36.304 16.1.0 0807 - A NR\_newRAT-Core

- [012] Intermediate,Rap: Agreeable with the following changes, Add the additional text suggested by Huawei, Remove NE-DC and NR-DC from impacted architectures, Change “clarification” to “correction” in the CR title, Correct typo (missing space before bracket) in reference to 38.331, Correct typo in WI code (use “newRAT”)

- [012] Intermediate, Chair: For information, how is this supposed to work? When are these offsets applied?

* [012] both revised

2 Moved From 4.5

R2-2008040 Correction for Qrxlevmin description in SIB24 Qualcomm Incorporated CR Rel-15 36.331 15.10.0 4420 - F LTE\_eMob-Core

R2-2008041 Correction for Qrxlevmin description in SIB24 Qualcomm Incorporated CR Rel-16 36.331 16.1.1 4421 - A LTE\_eMob-Core

- [012] Intermediate, Rap: Contents is Agreeable with the following changes: Use the text “Actual value Qrxlevmin = field value \* 2 [dBm].” for *q-RxLevMin* and similar for *q-RxLevMinSUL,* Change the reference from 36.304 to 38.304, Change WI code to “NR\_newRAT-Core”.

* [012] Both Revised

## 5.5 Positioning corrections

Corrections to both the stage 2 and stage 3 aspects related to positioning. Stage 2 CRs should be discussed with the specification rapporteur before submission.

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

R2-2006665 Correction on 38.305 in Table 4.3-1Supported versions of UE positioning methods CATT CR Rel-15 38.305 15.6.0 0026 - F NR\_newRAT-Core

R2-2006666 Correction on 38.305 in Table 4.3-1Supported versions of UE positioning methods CATT CR Rel-16 38.305 16.1.0 0027 - A NR\_newRAT-Core

R2-2006667 Correction on 36.305 in Table 4.3-1Supported versions of UE positioning methods CATT CR Rel-15 36.305 15.5.0 0089 - F NR\_newRAT-Core

R2-2006668 Correction on 36.305 in Table 4.3-1Supported versions of UE positioning methods CATT CR Rel-16 36.305 16.1.0 0090 - A NR\_newRAT-Core

# 6 Rel-16 NR Work Items

Essential corrections. While high maintenance intensity is expected, Rel-16 corrections are treated separately per WI.

## 6.1 Rel-16 General

### 6.1.1 Cross WI RRC corrections

Early item

R2-2008108 Guidelines for RRC changes at RAN2#111e Ericsson discussion TEI16 Late

- Chair think that NBC changes can be accepted but we should be somewhat restrictive and we should do such change it is resolves a problem. Qc agrees this should be done only when needed – no nice to have. Huawei agrees. ZTE as well.

- Samsung think NBC changes shall be indicated, e.g. cover sheet. Chair: have asked session chairs to track and report. Nokia think we can indicate on the cover sheet. QC think the NBC is just ASN.1 NBC. Ericsson agrees. Intel brings fresh examples from UE caps work. Ericsson think we need to keep it simple.

- LG wonder if this applies also to non-RRC CRs. Chair think we might have some cases of MAC CE changes.

* R2 assumes that for Rel-16 at R2 111-e NBC changes for NR and LTE can be accepted if there is consensus.

General RRC

* [AT111-e][013][NR16] RRC Misc I (Ericsson)

Scope: Treat R2-2007641, R2-2007642, R2-2007020, R2-2006915 R2-2008109 (proponents to drive), include other corrections to be merged with R16 RRC rapporteur CR (if any)

Part 1: Decision whether to make corrections, identify agreeable parts.

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

R2-2008413 Summary of [AT111-e][013][NR16] RRC Misc I Ericsson

DISCUSSION W1:

- Ericsson suggest to discuss extension for ToAddMod list by email to necxt meeting. Intel agrees and this is not critical

- Ericsson think 8109 overlaps with another doc, Chair suggest rapporteur to fix this

- Chair: Make rest of decisions by email.

* Noted

R2-2008426 Summary of [AT111-e][013][NR16] RRC Misc I Ericsson

* [013] Noted, agreements reflected below.

R2-2007641 ASN.1 corrections to maintain backwards compatibility Ericsson, Nokia, Nokia Shanghai Bell, Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1869 - F TEI16

* [013] agreed

R2-2008109 Correction on DLInformationTransferMRDC and RRCReconfigurationComplete Samsung CR Rel-16 38.331 16.1.0 1989 - F LTE\_NR\_DC\_CA\_enh-Core Late

- [013] Intermediate Rapporteur input: According to the companies input, it looks like there is a good consensus on not having the first change but having, instead, the second one. For the third change, this is not nothing essential and it may not be critical to have. However, it is difficult to formulate a clear proposal for this CR and thus we suggest to further discuss it online.

- [013] Chair: Discussion is fluctuating but there is a Draft revision, which is quite different to the orinigal CR with a new Title: Correction on field descrption of mrdc-SecondaryCellGroup in NR-DC. Maybe a new round of comments are needed,

[R2-2008109](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008109.zip) Correction on DLInformationTransferMRDC and RRCReconfigurationComplete Samsung CR Rel-16 38.331 16.1.0 1989 1 F LTE\_NR\_DC\_CA\_enh-Core Late

* [013] agreed

R2-2007642 Remaining ASN.1 review issues Ericsson CR Rel-16 38.331 16.1.0 1870 - F NR\_eMIMO-Core, TEI16

- [013] Intermediate Rapporteur input: According to the replies, it seems that the intention of the CR can be agreed, but a further revision may be needed to ensure that the change it captures correctly the RAN1 understanding. Therefore, we can agree with the intention and work of the exact change during the second week.

- [013] Chair: Will have this CR, convergence on detailed updates by email.

* [013] Revised (details by email)

R2-200xxxx Remaining ASN.1 review issues Ericsson CR Rel-16 38.331 16.1.0 1870 - F NR\_eMIMO-Core, TEI16

R2-2007020 Clarification on the presence of the field *si-RequestConfigSUL* Fujitsu CR Rel-16 38.331 16.1.0 1772 - F NR\_newRAT-Core

- [013] Rapporteur Intermediate input: According to the replies, companies seems to agree to have this editorial change and to include it in the Rapporteur’s CR (also for Rel-15).

- [013] Chairman: This seems to be a clarification, to avoid potential misunderstanding. It is not clear whether such misunderstanding would be likely. If agreed, this is a R15 change. It seems there is support but there is also some reluctance. Some companies don’t want to do this unless a wider consistency check has been done. In general, there is some support, so we can check next meeting.

* [013] Postponed

R2-2006915 Extension scenarios for ToAddMod lists MediaTek Inc. discussion Rel-16 NR\_newRAT-Core

- [013] Rapporteur input: According to the replies, it looks like that the intention of the contribution can be agreed, but more time may be needed to come up with a CR for implementing all the proposals. Therefore, given that this is not critical to agree in this meeting, details can be worked out in an email discussion to the next meeting.

* [013] Principles in this document are agreed
* Discussed by email to next meeting.
* [Post111-e][NR16] Extension scenarios for ToAddMod lists ()

Scope:

Intended outcome:

Deadline:

On demand SI

* [AT111-e][014][NR16] RRC Misc II (Ericsson)

Scope: Treat R2-2007275, R2-2007276, R2-2007077, R2-2006915, R2-2006934 (proponents to drive)

Part 1: Decision whether to make corrections, identify agreeable parts.

Deadline: Aug 20, 0900 UTC.

Part 2: For agreeable parts, continuation to agree CRs.

Deadline: Aug 26, 0900 UTC.

R2-2008414 Summary of [AT111-e][014][NR16] RRC Misc II Ericsson

- Intermediate summary.

* [014] Noted, agreements captured below

R2-2007275 Miscellaneous correction regarding on demand SIB in CONNECTED Ericsson CR Rel-16 38.331 16.1.0 1820 - F 5G\_V2X\_NRSL-Core, NR\_pos-Core

- [014] Rapporteur input: According to thereplies, it looks okay (in principle) to have this CR, but a revision is needed to take into account the input received in this email discussion.

* [014] Revised, the CR is considered as baseline for misc corrections and a revision is provided to address further inputs from companies.

[R2-2008483](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008483.zip) Miscellaneous correction regarding on demand SIB in CONNECTED Ericsson CR Rel-16 38.331 16.1.0 1820 1 F 5G\_V2X\_NRSL-Core, NR\_pos-Core

[R2-2008616](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008616.zip) Miscellaneous correction regarding on demand SIB in CONNECTED Ericsson CR Rel-16 38.331 16.1.0 1820 2 F 5G\_V2X\_NRSL-Core, NR\_pos-Core

* [014] Agreed

R2-2007276 Redundant procedural text of on demand SIB in CONNECTED Ericsson CR Rel-16 38.331 16.1.0 1821 - F 5G\_V2X\_NRSL-Core, NR\_pos-Core

- [014] Rapporteur input: According to the replies from companies, it looks like something is needed to address the issue of the redundant text in the specification. The actual changes in the CR can be discussed during the second week.

- [014] CHAIR: It seems the current TS is not broken, but it also seems there is interest to do some change to reduce the overhead in procedure text. Assume something can be agreed along these lines in the end.

* [014] revised

R2-2008484 Redundant procedural text of on demand SIB in CONNECTED Ericsson CR Rel-16 38.331 16.1.0 1821 1 F 5G\_V2X\_NRSL-Core, NR\_pos-Core

[R2-2008617](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008617.zip) Redundant procedural text of on demand SIB in CONNECTED Ericsson CR Rel-16 38.331 16.1.0 1821 2 F 5G\_V2X\_NRSL-Core, NR\_pos-Core

* [014] Agreed

Move from 6.1.3

R2-2007077 Corrections to on demand SI acquisition in RRC\_CONNECTED Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1780 - F 5G\_V2X\_NRSL-Core, NR\_pos-Core

- [014] Rapporteur input:According to the replies, the intention of the CR can be agreed but whether to have the proposed change it depends from the outcome of R2-2007276.

* [014] Merged in R2-2008483

2 docs Moved here from Pos:

R2-2007076 Corrections to acquisition of posSIB(s) in RRC\_CONNECTED Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1779 - F NR\_pos-Core

- [014] Rapporteur input: According to the replies, the intention of the CR is agreed but whether to have the proposed change it depends from the outcome of R2-2007276.

* [014] Agreed

R2-2006755 Correction on on-demand SI in RRC\_CONNECTED CATT CR Rel-16 38.331 16.1.0 1736 - F NR\_pos-Core

- [014] Rapporteur input: According to the replies, companies are fine to agree on the last change for removing the duplicate stop of T350, but the other change seems to not have much support.

* [014] Merged. The duplicate stop of T350 is agreed and is included in revision of the misc correction CR in R2-2008384.

DCCA and Mobility

R2-2006934 Handling of CPC in fast MCG recovery Intel Corporation CR Rel-16 38.331 16.1.0 1755 - F NR\_Mob\_enh-Core, LTE\_NR\_DC\_CA\_enh-Core

- [013] Rapporteur input: According to the replies, it seems that there is good support for the changes proposed in the CR. Therefore, we suggest:

* [014] revised. The intention of the CR in R2-2006934 is agree and a revision is provided to take into account companies’ inputs.

[R2-2008388](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008388.zip) Handling of CPC in fast MCG recovery Intel Corporation CR Rel-16 38.331 16.1.0 1755 1 F NR\_Mob\_enh-Core, LTE\_NR\_DC\_CA\_enh-Core

R2-2008388

* [014] Agreed

### 6.1.2 Feature Lists and UE capabilities

Includes UE capability updates related to R1 and R4 feature lists. Including outcome of email discussion [Post110-e][082][NR16] UE Capabilities (Intel, NTT Docomo). V2X capabilities are handled separately under the V2X WI. Minimum capabilites for IAB is handled separately under the IAB WI.

* [AT111-e][015][NR16] UE cap Main (Intel, NTT Docomo)

Scope: Treat assigned tdocs, merge endorsed output from other R16 UE caps (306 331) email discussions, take into account updated feature lists from R1 and R4. Produce final mega CRs 38306 38331.

W1 Agree/Endorse 331 306 changes based on assigned tdocs.

Deadline for comments (for the simepl assigned parts, assigned tdcos) Aug 20, 1000 UTC.

Resolution of Complex matters, E.g. RILs from the endorsed CR (from the email discussion before the meting) can continue until the end.

W2 Review of updated R1 R4 feature lists. Agree on updates to 306 331 capturing updates from R1 and R4 based on rapporteur proposal, and merged endorsed output of other email discussions, Start (Tuesday Aug 25, assuming timely delivery from R1 and R4).

Wanted outcome: Agreed CRs 306 331

On-Line 20/8:

- Nothing controversial, continue by email.

- Docomo think there are proposals to change the signalling granularity, but no comments so far.

- Intel think that part 1 is just small things from tdocs assigned, the RILs in the tdoc contain the complex parts.

- Continue by email. Can treat controversial issues on-line (companies are encouraged to discuss by email).

On-Line 24/8

Chair wonder whether there are other issues:

- Intel urges everyone to participate in the resolution of the RILs.

- Huawei wonder how to treat RILs where rapporteur has not yet made any proposals.

- Intel confirm that there are indeed rapporteur proposals for all the RIL, and it is in the draft folder. Huawei think some are missing. Intel think if such cases are found it need to be pointed out.

- Docomo think there is a tdoc, but some issues are very difficult and company opinions may be needed before any proposal is done.

- Chair think rapporteur can set intermediate deadline and point out solution direction.

On-Line 27/8

- Intel has sent out color coded versions of feature lists R1 and R4. There has been no comments so far, but it reflects what will attempt to be implemented.

R2-2008424 Report of email discussion AT111-e][015][NR16] UE cap Main Part1 Intel, NTT Docomo

- CATT wonder what happened with a LTE CR for the SONMDT CRs.

* All 4 proposals are agreed.

R2-2006646 Correction on RLF Report for Inter-RAT MRO NR CATT CR Rel-16 36.306 16.1.0 1778 - F NR\_SON\_MDT-Core

- CATT explains that this CR was left over as its NR counterpart (not exactly identical) was merged into the main discussion.

* CR is agreed

Organisation at R2 111-e for R16 NR UE caps

1. Confirm that NR R16 UE capability CRs will be two mega CRs 38331 38306, including all WIs.

2 The UE capabilities main email discussion / current AI 6.1.2 will take into account updated R1 R4 feature lists, except for WIs for which this is done in separate long discussions / treatment (see below)

4 Separate Short Discussions/Treatment, will not take into account further updated R1 R4 feature list: Endorsed Draft CRs ready Aug 21.

5 Separate Long Discussions/Treatment, shall take into account further updated R1 R4 feature list: Endorsed Draft CRs ready Aug 28.

6 Separate endorsed Draft CRs 38331 38306 are then merged into the mega CRs, in the UE capabilities Main discussion. The merged result is reviewed, but it is not intended to repeat already done discussions.

7 UE capabilities for V2X, NR Mobility Enh, NR positioning, are separate long discussions.

DISCUSSION

- Huawei think Aug 26 is too little time to take into account R1 R4 feature list. Oppo agrees that Aug 26 is too short. Chair agrees, and think 28 might work, or maybe that is also too short.

- Ericsson think that the deadline for the short discussions is too short, it is not easy to do endorsement during this time. Intel think the short ones can be Aug 21, most of the discussions can converge quickly.

- Chair think that if there are further opnions, discussion could continue in [015].

- Chair: Otherwise the plan seems ok

* Plan above is endorsed

DISCUSSION 2

- QC wonder what is the time line.

- Docomo think we should fix old issues before addressing new ones. RIL issues need to be fixed ASAP.

- Chair point out that we nominally have 1 week after the meeting, exceptionally 1.5 week to finish the CRs to RP.

- Intel think we will first review the updated feature list to decide what to implement/not implement. Plan to distribute this today.

R2-2008539 Report of email discussion [AT111-e][015][NR16] UE cap Main - Class 3 issues Intel, NTT Docomo

DISCUSSION

- Intel indicates that “other” RILs in thie doc don’t need discussion but will be impl

* Clarify what the legacy UE behaviour is, if ul-FullPwrMode-r16 is not supported, by referring to the relevant section of RAN1 spec.
* Merge CA-ParametersNR-v16xy in 16.1 version. Not only for this IE, but the other IEs are also updated in 16.1 version.
* On PDCCH blind decoding capabilities, two variants of the number of blind decoding are defined, rather than defining “Rel-15/16” capabilities
* The meaning of “across all serving cells” is clarified for the capability of activeConfiguredGrant and sps in 38.306.

LS in

R2-2006508 LS on updated Rel-16 NR parameter lists (R1-2005051; contact: Qualcomm) RAN1 LS in Rel-16 NR\_unlic-Core, 5G\_V2X\_NRSL-Core, NR\_L1enh\_URLLC-Core, NR\_eMIMO-Core, NR\_UE\_pow\_sav-Core, NR\_pos-Core, NR\_RF\_FR1 To:RAN2, RAN3

- QC think that for the main WIs everything is implemented in the June version.

* Noted, already taken into account

R2-2006510 LS on updated Rel-16 RAN1 UE features lists for NR (R1-2005096; contact: NTT DOCOMO, AT&T) RAN1 LS in Rel-16 NR\_2step\_RACH-Core, NR\_unlic-Core, NR\_IAB-Core, 5G\_V2X\_NRSL-Core, NR\_L1enh\_URLLC-Core, NR\_IIOT-Core, NR\_eMIMO-Core, NR\_UE\_pow\_sav-Core, NR\_pos-Core, NR\_Mob\_enh-Core, LTE\_NR\_DC\_CA\_enh-Core, TEI16, NR\_CLI\_RIM-Core To:RAN2, RAN4

* Noted, already taken into account

R2-2006511 LS on updated Rel-16 RAN1 UE features lists for NR after RAN1#101-e (R1-2005109; contact: NTT DOCOMO, AT&T) RAN1 LS in Rel-16 NR\_2step\_RACH-Core, NR\_unlic-Core, NR\_IAB-Core, 5G\_V2X\_NRSL-Core, NR\_L1enh\_URLLC-Core, NR\_IIOT-Core, NR\_eMIMO-Core, NR\_UE\_pow\_sav-Core, NR\_pos-Core, NR\_Mob\_enh-Core, LTE\_NR\_DC\_CA\_enh-Core, TEI16, NR\_CLI\_RIM-Core To:RAN2, RAN4

* Noted, already taken into account

R2-2006526 LS on introducing UE capability for power class for NR band in MR-DC combination ([RP-201392](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201392.zip); contact: Huawei) RAN LS in Rel-16 TEI16 To:RAN2 Cc:RAN4

* Noted, topic will be treated based on contributions

LS in during meeting

R2-2008441 LS on updated Rel-16 RAN1 UE features lists for NR RAN1 LS in Rel-16

* Noted

On-line 24/8

- Intel wonder about the following: “Regarding FG18-7 in UE features list for MR-DC/CA”. MTK think this is not discussed in the DCCA WI and more time is needed to understand. Huawei agrees more time is needed. Apple agrees. Intel wonder if we should now consider this “FFS” and thus remove this from signalling. Ericsson also need more time, but possibly this need to be removed. Chair think that if this cannot be resolved in time we remove it.

- Intel wonder about the rest of the items, where discussions are still ongoing. R1 has removed the word FFS, but informs in many cases that discussion is still ongoing. Intel suggest to assume “no FFS”. Ericsson think it would be safer to not include these in R2 TS. MTK agrees with Ericsson but think we can dicuss case-by-case.

- Chair: Please pay attention to the LS, decide case-by-case, what to implement.

R2-2008443 LS on Rel-16 RAN4 UE features lists for LTE and NR RAN4 LS in Rel-16

* Noted

On-line 24/8

- Intel think that in the R4 LS there are still FFSes, and the FFS parts will not be implemented.

- MTK wonder how we continue on the DCCA parts. Chair think we already decided to treat it in the main email discussion [015] (assuming this is about R2-2008064), once the R4 LS was received, so now it can be treated.

**General**

R2-2006936 Report of email discussion [Post109bis-e][082] UE Capabilties Intel Corporation, NTT DoCoMo discussion Rel-16 NR\_UE\_pow\_sav, NR\_IAB-Core, NR\_eMIMO-Core, NR\_IIOT-Core, NR\_2step\_RACH-Core, 5G\_V2X\_NRSL-Core, NR\_Mob\_enh-Core, NR\_pos-Core, NR\_unlic-Core, LTE\_NR\_DC\_CA\_enh-Core, NR\_SON\_MDT-Core, NR\_CLI\_RIM, NG\_RAN\_PRN-Core, TEI16, NR\_L1enh\_URLLC-Core

PRESENTATION

- P1 reflected in Draft LS

- P2 forwarded to NR Mobility Session.

- P3 forward to NE Mobility session, except HOIntraFIAB

- P5 forwarded to NR Mobility Session.

- P6.1, 6.2, 6.3 refected in Draft LS

DISCUSSION

P3

- Oppo wonder what the word “consistently” means, the new condition, think this is not needed.

- QC support the proposal, and the consistency is there already in the current agreement. Huawei has the same understanding as QC.

- Oppo wonder if this is a general principle. Intel think yes. Huawei think this is only when diff for both xDD and FRx.

- Huawei think HO capabilities are particularly complex

* P1, P6 are agreed (will reivew the LS next)
* HO-IntraF-IAB-r16 is signalled per Band, with the consistency condition expressed in P3
* P2, 3, 5 will be treated in the NR mobility session.
* Autonomous gaps treated separately

R2-2006937 Rel-16 UE capabilities based on RAN1 and RAN4 feature lists and RAN2 corrections Intel Corporation, NTT DoCoMo CR Rel-16 38.331 16.1.0 1756 - B NR\_UE\_pow\_sav, NR\_IAB-Core, NR\_eMIMO-Core, NR\_IIOT-Core, NR\_2step\_RACH-Core, 5G\_V2X\_NRSL-Core, NR\_Mob\_enh-Core, NR\_pos-Core, NR\_unlic-Core, LTE\_NR\_DC\_CA\_enh-Core, NR\_SON\_MDT-Core, NR\_CLI\_RIM, NG\_RAN\_PRN-Core, TEI16, NR\_L1enh\_URLLC-Core

=> Revised in R2-2008118

R2-2008118 Rel-16 UE capabilities based on RAN1 and RAN4 feature lists and RAN2 corrections Intel Corporation, NTT DoCoMo CR Rel-16 38.331 16.1.0 1756 1 B NR\_UE\_pow\_sav, NR\_IAB-Core, NR\_eMIMO-Core, NR\_IIOT-Core, NR\_2step\_RACH-Core, 5G\_V2X\_NRSL-Core, NR\_Mob\_enh-Core, NR\_pos-Core, NR\_unlic-Core, LTE\_NR\_DC\_CA\_enh-Core, NR\_SON\_MDT-Core, NR\_CLI\_RIM, NG\_RAN\_PRN-Core, TEI16, NR\_L1enh\_URLLC-Core

* Endorsed (as the baseline, monday)

R2-2006938 Rel-16 UE capabilities based on RAN1 and RAN4 feature lists and RAN2 corrections Intel Corporation, NTT DoCoMo CR Rel-16 38.306 16.1.0 0370 - B NR\_UE\_pow\_sav, NR\_IAB-Core, NR\_eMIMO-Core, NR\_IIOT-Core, NR\_2step\_RACH-Core, 5G\_V2X\_NRSL-Core, NR\_Mob\_enh-Core, NR\_pos-Core, NR\_unlic-Core, LTE\_NR\_DC\_CA\_enh-Core, NR\_SON\_MDT-Core, NR\_CLI\_RIM, NG\_RAN\_PRN-Core, TEI16, NR\_L1enh\_URLLC-Core

=> Revised in R2-2008119

R2-2008119 Rel-16 UE capabilities based on RAN1 and RAN4 feature lists and RAN2 corrections Intel Corporation, NTT DoCoMo CR Rel-16 38.306 16.1.0 0370 1 B NR\_UE\_pow\_sav, NR\_IAB-Core, NR\_eMIMO-Core, NR\_IIOT-Core, NR\_2step\_RACH-Core, 5G\_V2X\_NRSL-Core, NR\_Mob\_enh-Core, NR\_pos-Core, NR\_unlic-Core, LTE\_NR\_DC\_CA\_enh-Core, NR\_SON\_MDT-Core, NR\_CLI\_RIM, NG\_RAN\_PRN-Core, TEI16, NR\_L1enh\_URLLC-Core

* Endorsed (as the baseline, monday)

R2-2006940 Reply LS on Rel-16 UE feature lists Intel Corporation LS out Rel-16 NR\_UE\_pow\_sav, NR\_IAB-Core, NR\_eMIMO-Core, NR\_IIOT-Core, NR\_2step\_RACH-Core, 5G\_V2X\_NRSL-Core, NR\_Mob\_enh-Core, NR\_pos-Core, NR\_unlic-Core, LTE\_NR\_DC\_CA\_enh-Core, NR\_SON\_MDT-Core, NR\_CLI\_RIM, NG\_RAN\_PRN-Core, TEI16, NR\_L1enh\_URLLC-Core To:RAN1, RAN4

- Intel informs that R4 will not make decisions on mobility UE cap, they leave it completely to R2. Huawei are not sure, and think an LS doesn’t harm in any case.

* Remove point 2 and the corresponding action from this LS. This will be informed in LS after decisions in NR Mobility session.
* With this change the LS is approved in R2-2008395.

RRM Enhancements

Autonomous gap, Easy Agreement on-line?

R2-2006893 CR to 38.331 on UE autonomous gap related capabilities ZTE Corporation, Sanechips, Ericsson, Nokia, Nokia Shanghai Bell, MediaTek Inc, Qualcomm Incorporated, Intel Corporation CR Rel-16 38.331 16.1.0 1752 - F NR\_RRM\_enh-Core

- ZTE indicate that this CR is NBC.

* Endorsed (to be merged)

R2-2006894 CR to 38.306 on UE autonomous gap related capabilities ZTE Corporation, Sanechips, Ericsson, Nokia, Nokia Shanghai Bell, MediaTek Inc, Qualcomm Incorporated, Intel Corporation CR Rel-16 38.306 16.1.0 0368 - F NR\_RRM\_enh-Core

* Endorsed (to be merged)

TEI16

TRS bandwidth

* [AT111-e][016][NR16] UE cap TRS bandwidth (Nokia)

Scope: Treat R2-2007498, R2-2007499, R2-2008089, R2-2008090 (proponents to drive)

Deadlines: Short NR UE cap

R2-2008406 Summary of [AT111-e][016][NR16] UE cap TRS bandwidth (Nokia) Nokia

* [016] Noted, agreements reflected below

R2-2007498 Capability signalling for limited TRS bandwidth for 10 MHz bandwidth with 15 kHz SCS Nokia, Nokia Shanghai Bell CR Rel-16 38.306 16.1.0 0381 - B TEI16

* [016] not pursued

R2-2007499 Capability signalling for limited TRS bandwidth for 10 MHz bandwidth with 15 kHz SCS Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1848 - B TEI16

* [016] not pursued

4 moved from 6.16

R2-2007803 Support of flexible TRS bandwidth sizes Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1910 - F TEI16 Revised

R2-2008089 Support of new newly defined TRS bandwidth sizes Huawei, HiSilicon, Ericsson, Vodafone CR Rel-16 38.331 16.1.0 1910 1 F TEI16 R2-2007803 Late

R2-2008434 Support of new newly defined TRS bandwidth sizes Huawei, HiSilicon, Ericsson, Vodafone, Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1910 2 F TEI16

* [016] Endorsed (merge)

R2-2007804 Support of flexible TRS bandwidth sizes Huawei, HiSilicon CR Rel-16 38.306 16.1.0 0391 - F TEI16 Revised

R2-2008090 Support of new newly defined TRS bandwidth sizes Huawei, HiSilicon, Ericsson, Vodafone CR Rel-16 38.306 16.1.0 0391 1 F TEI16 R2-2007804 Late

R2-2008435 Support of new newly defined TRS bandwidth sizes Huawei, HiSilicon, Ericsson, Vodafone, Nokia, Nokia Shanghai Bell CR Rel-16 38.306 16.1.0 0391 1 F TEI16

* [016] Endorsed (merge)

Beam Switch Timing

* [AT111-e][017][NR16] UE cap Beam Switch Timing (Lenovo)

Scope: Treat R2-2006880, R2-2006881, R2-2006882, R2-2007505, R2-2007506 (proponents to drive),

Deadlines: Short NR UE cap

R2-2008438 Report from email discussion [AT111-e][017][NR16] UE cap Beam Switch Timin Lenovo

* [017] Noted, agreements captured below

3 Moved from 6.14.2:

R2-2006880 Clarification on the support of beamSwitchTiming values of 224 and 336 Lenovo, Motorola Mobility, Qualcomm Incorporated, Ericsson CR Rel-15 38.306 15.10.0 0366 - F NR\_newRAT-Core

* [017] Not Pursued

R2-2006881 Correction on the support of beamSwitchTiming values of 224 and 336 Lenovo, Motorola Mobility, Qualcomm Incorporated, Ericsson CR Rel-16 38.306 16.1.0 0367 - F NR\_newRAT-Core, TEI16

* [017] Not Pursued

R2-2006882 Correction on the support of beamSwitchTiming values of 224 and 336 Lenovo, Motorola Mobility, Qualcomm Incorporated, Ericsson CR Rel-16 38.331 16.1.0 1744 - F TEI16

* [017] Not Pursued

R2-2007505 Correction on beamSwitchTiming values of 224 and 336 vivo CR Rel-16 38.331 16.1.0 1852 - F TEI16

R2-2007506 Correction on beamSwitchTiming values of 224 and 336 vivo CR Rel-16 38.306 16.1.0 0382 - F TEI16

* Email check and polish 1 week.

On-Line

- Lenovo wonder what to do?

- Ericsson think we could do 1 week email for checking and polishing, and send an LS to check the intention. Vivo think LS is not needed, but are ok to send it, and agree that CRs can be agrees even though we send an LS

* We send an LS, include LS in 1 week email
* [AT111-e][018][NR16] UE cap MR-DC Power Class (Huawei)

Scope: Treat R2-2007112, R2-2007113, R2-2007114, R2-2008077, R2-2008078 (proponents to drive),

Deadlines: Short NR UE cap

R2-2008433 Summary of offline 018 UE cap MR-DC Power Class Huawei

- [018] Intermediate Rap: 10 companies joined the discussion and 7 companies prefer Option 1, 2 companies prefer Option 2 and 1 company proposed Option 3. As even within these 3 companies who are not in favour of Option 1, it is also acknowledged that option 1 can address the case described in the RANP LS. From moderator’s point of view, to introduce a future-proof signalling could be helpful in general, however for this particular case we even don’t know what would be the new cases from RAN4 and it is now difficult to justify whether the RAN2 signalling matches what RAN4 wants appropriately in the future. Thus it is proposed to adopt Option 1.

* [018] Noted, agreements captured below

MR-DC power class LS R2-2006526

R2-2007112 Discussion on UE capability for power class for NR band in MR-DC combination Apple discussion Rel-16 TEI16

* [018] Noted

R2-2007113 UE capability for power class for NR band in MR-DC combination Apple CR Rel-16 38.331 16.1.0 1786 - F TEI16

* [018] Not Pursued

R2-2007114 UE capability for power class for NR band in MR-DC combination Apple CR Rel-16 38.306 16.1.0 0373 - F TEI16

* [018] Not Pursued

4 Moved from 6.15

R2-2007801 Introduction of new PowerClass for NR part in MR-DC Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1909 - F TEI16 Revised

R2-2008077 Introduction of new PowerClass for NR part in MR-DC Huawei, HiSilicon, CMCC CR Rel-16 38.331 16.1.0 1909 1 F TEI16 R2-2007801

* [018] Endorsed (merge)
* [018] Late: the field name powerClassNRPart to be changed to powerClassNR-Part, and following the general guideline on extension of RF-ParametersMRDC (merge)

R2-2007802 Introduction of new PowerClass for NR part in MR-DC Huawei, HiSilicon CR Rel-16 38.306 16.1.0 0390 - F TEI16 Revised

R2-2008078 Introduction of new PowerClass for NR part in MR-DC Huawei, HiSilicon, CMCC CR Rel-16 38.306 16.1.0 0390 1 F TEI16 R2-2007802

* [018] Endorsed (merge)
* [018] Late: the field name powerClassNRPart to be changed to powerClassNR-Part, and following the general guideline on extension of RF-ParametersMRDC (merge)

MDT SON

Moved from 6.10.3 – Treated in UE Cap Main discussion

R2-2006647 Correction on RLF Report for Inter-RAT MRO EUTRA CATT CR Rel-16 38.306 16.1.0 0365 - F NR\_SON\_MDT-Core

* [015] merged (with modifications)

R2-2007781 Correction to 38306 on inter-RAT MRO feature ZTE Corporation, Sanechips CR Rel-16 38.306 16.1.0 0385 - F NR\_SON\_MDT-Core

* [015] merged (with modifications)

RACS

Moved from 6.12 – Treated in UE Cap Main discussion

R2-2007806 CR on UE capability of segmentation for UE capability information Huawei, HiSilicon CR Rel-16 38.306 16.1.0 0392 - F RACS-RAN-Core

* [015] merged (with modifications)

R2-2007807 CR on UE capability of segmentation for UE capability information Huawei, HiSilicon CR Rel-16 36.306 16.1.0 1783 - F RACS-RAN-Core

* [015] merged (with modifications)

2-Step RACH

Moved from 6.11.3 – Treated in UE Cap Main discussion

R2-2006577 Clarification on 2-step RACH capability vivo CR Rel-16 38.306 16.1.0 0364 - F NR\_2step\_RACH-Core

* [015] merged (with modifications)

RF FR1

UL TX Switching, all moved from 6.15

* [AT111-e][019][NR16] UE cap UL TX switching (China Telecom)

Scope: Treat R2-2006985, 7604, 7949, 7085, 8106, 7086, 7950, 7087, 6895, 6896

Deadlines: Short UE Caps

R2-2008415 UL-TX-Switch Capabilities – Alternative to parallel list of BCs Ericsson

DISCUSSION

- TMO US think we cannot use BCS, R4 is in deciding to not use it.

- QC wonder for BC with SUL and ENDC whether the UE will support only the TX-switching BC, how can the UE signal the legacy ones. QC think there will be BC that are only used with TX switching and will not be used without it, so BC in the legacy meaning doesn’t exist then.

- Huawei agree with QC and think the FCS solution doesn’t work for such scenarios. The new BCS avoids interoperability issues.

- Huawei also have lots of technical questions, and think it is risky to do this at such late stage.

- Apple think it is difficult to identify which UE caps that can be impacted by UO TX-switching. IN Ercissson CR only MIMO is added, Apple think SRS port is also needed. Apple think the gNB may be very confused about the legacy UE caps.

- Ericsson think this is reason why the proposal is now to have a separate FSC. Ericsson think that if some BC is only with TX switching, then the legacy list is needed anyway but UL features set to zero. QC think we have now decided that this should not be done, i.e. no superset BC that is not defined in R4. Ericsson think the network will not configure DC in such case,

- China Telecom think we have discussed this issue for 3 meetings now and it is stable, and agree with Huawei that it is very risky to attempt such change now. CATT agrees as well.

- ZTE agree with QC Huawei and Apple. There would still be technical questions.

- Chair: not sufficient support

* Noted

R2-200xxxx Summary of offline 019 UE cap UL TX switching China Telecom

* [019] Confirm that apart from the agreed 1T+2T UE capability there is no need to report 1T+1T UE capability in new BC list specific for inter-band CA/EN-DC option2.

R2-2006985 Discussion on remained issues of UL Tx switching China Telecom discussion

* [019] Noted

R2-2007604 Remaining issues for UL Tx Switching Ericsson discussion

* [019] Noted

R2-2007949 Remaining issues on dynamic UL Tx switching Huawei, HiSilicon, ZTE Corporation, Sanechips discussion Rel-16 NR\_RF\_FR1

* [019] Noted

R2-2007085 Remaining issues on UL switching Apple, OPPO discussion Rel-16 TEI16, NR\_RF\_FR1

* [019] Noted

R2-2008106 Discussion on fallback-BC for UL TX switching OPPO discussion Rel-16 TEI16, NR\_RF\_FR1

* [019] Noted, Proposal partially agreed, reflected in TP from email discussion

R2-2007086 Draft LS on UE capability derivation from 2Tx to 1Tx in UL Tx switching Apple LS out Rel-16 TEI16, NR\_RF\_FR1 To:RAN1, RAN4

* [019] Noted

R2-2007950 CR on clarification of fallback BC and prerequisite of CA case in supportedBandCombinationList-UplinkTxSwitch Huawei, HiSilicon, ZTE Corporation, Sanechips CR Rel-16 38.306 16.1.0 0399 - F NR\_RF\_FR1

R2-2008100 CR on clarification of fallback BC and prerequisite of CA case in supportedBandCombinationList-UplinkTxSwitch Huawei, HiSilicon, ZTE Corporation, Sanechips CR Rel-16 38.306 16.1.0 0399 1 F NR\_RF\_FR1

* [019] Contents Partially agreed, reflected in TP from email discussion

R2-2007087 Fallback band combination exception for UL Tx switching Apple, China Telecom, OPPO CR Rel-16 38.306 16.1.0 0372 - F TEI16, NR\_RF\_FR1

* [019] not Pursued

R2-2006895 CR to 38.306 on introducing power boosting in UL Tx switching CA case ZTE Corporation, Sanechips, China Telecom, Huawei, HiSilicon, OPPO CR Rel-16 38.306 16.1.0 0369 - C NR\_RF\_FR1

* [019] Contents agreed as baseline, minor comments need to be incorporated.

R2-2006896 CR to 38.331 on introducing power boosting in UL Tx switching CA case ZTE Corporation, Sanechips, China Telecom, Huawei, HiSilicon, OPPO CR Rel-16 38.331 16.1.0 1753 - C NR\_RF\_FR1

* [019] Contents agreed as baseline, minor comments need to be incorporated.

RF FR2

* [AT111-e][020][NR16] UE cap RF FR2 (Nokia)

Scope: Treat R2-2007403, R2-2007082, R2-2007083, R2-2007380, R2-2007381

Deadlines: Short UE Caps

R2-2008407 Summary of [AT111-e] [020] [NR16] UE cap RF FR2 (Nokia) Nokia

[R2-2008580](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008580.zip) Summary of [AT111-e] [020] [NR16] UE cap RF FR2 (Nokia) Nokia

* [020] Noted, agreements captured below.

Dl only spectrum, moved from 6.15

R2-2007403 DL-only spectrum Ericsson, Apple discussion Rel-16 NR\_RF\_FR2\_req\_enh-Core

* [020] Noted

R2-2007082 Introduction on frequency separation class for DL-only FR2 spectrum Apple, Ericsson CR Rel-16 38.306 16.1.0 0371 - F TEI16, NR\_RF\_FR2\_req\_enh

- [020] Rep: CR agreeable, but need to incorporate comments from email discussion

* [020] revised

[R2-2008462](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008462.zip) Introduction on frequency separation class for DL-only FR2 spectrum Apple, Ericsson CR Rel-16 38.306 16.1.0 0371 - F TEI16, NR\_RF\_FR2\_req\_enh

* [020] endorsed (for merge)

R2-2007083 Introduction on frequency separation class for DL-only FR2 spectrum Apple, Ericsson CR Rel-16 38.331 16.1.0 1784 - F TEI16, NR\_RF\_FR2\_req\_enh

- [020] Rep: CR agreeable, but need to incorporate comments from email discussion

* [020] revised

[R2-2008463](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008463.zip) Introduction on frequency separation class for DL-only FR2 spectrum Apple, Ericsson CR Rel-16 38.331 16.1.0 1784 - F TEI16, NR\_RF\_FR2\_req\_enh

* [020] endorsed (for merge)

Suspend IBE requirements, moved from 6.15

R2-2007380 Uplink power boosting via suspended IBE requirements Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1840 - B NR\_RF\_FR2\_req\_enh

[R2-2008621](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008621.zip) Uplink power boosting via suspended IBE requirements Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1840 2 B NR\_RF\_FR2\_req\_enh

* [020] endorsed (for merge)

[R2-2007381](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2007381.zip) Uplink power boosting via suspended IBE requirements Nokia, Nokia Shanghai Bell CR Rel-16 38.306 16.1.0 0379 - B NR\_RF\_FR2\_req\_enh

- [020] Chair: the CRs seems agreeable, but it seems also configuration is needed for this feature to work.

[R2-2008622](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008622.zip) Uplink power boosting via suspended IBE requirements Nokia, Nokia Shanghai Bell CR Rel-16 38.306 16.1.0 0379 - B NR\_RF\_FR2\_req\_enh

* [020] endorsed (for merge)

DCCA Enhancements

Early measurements, Wait for R4 LS, treat in UE Cap main discussion

R2-2008064 Discussion on early measurement capabilities MediaTek Inc. discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

* [015] Noted, taken into account.

NR-DC

* [AT111-e][021][NR16] UE cap NR-DC (Qualcomm)

Scope: Treat R2-2006558, R2-2007946, R2-2007605,

Deadlines: TBD

**Last Day**

* [021] RAN2 intends to introduce a releasre-16 UE capability for sync-DC (can be 1 bit, cell grouping or else) in a future meeting. Absence of such UE capability parameter means the UE supports release-15 cell grouping only (i.e. FR1 MCG + FR2 SCG)
* [Post111-e][021][NR16] UE cap NR-DC (Qualcomm)

Scope: CRs to implement: 1-bit async NR-DC UE capability. B) the change that “The UE shall not report this UE capability from this release” in field description of sfn-SyncNRDC”the requirement that “The Rel-16 UE shall support Rel-15 cell grouping (i.e. MCG fully in FR1 and SCG fully in FR2)”LS to RAN1/4: with questions that would help RAN2 to conclude on open issues, i.e. cell grouping signalling for sync DC. Informing RAN2 agreements reached so far.

Wanted outcome: approved LS, agreed CRs

Deadline: Short

R2-2008422 Summary of Offline discussion#021: UE cap NR-DC (Qualcomm) Qualcomm

On-Line W1

P2:

- Nokia think we cannot do anything until R4 has decided. Most companies think we follow R15 principle, cannot do anyting anything else until R4 decides differently.

- Huawei think we will anyway refer to R4 BC list, Huawei think we don’t need to do anything now.

- Intel think we can introduce new signalling for cases that cannot be handled by R15, or have completely new signalling. R4 has defined intra-FR1 and Intra-FR2 cases, but R1 and R4 are still discussing.

- Chair wonder if we can just postpone. Ericsson think we need to postpone anyway.

- QC think the main restriction that is needed is to restrict MCG/SCG roles.

- TMO UE think it is important to have all cases for R16, and the signalling should be flexible enough.

- MTK think asynch is ok with the old principle, and asks whether the issue is for synch only, and which exact proposal this relates to.

- Huawei think the UE is required to support sync NR DC without restriction. Ericsson agrees. QC has concerns about this, and it should be possible to do only R15 NR-DC also for R16 UEs.

- Apple think we need to agree something at this meeting and think it is dangerous to imply capability with absence of signalling. Samsung agrees that we should try to converge this meeting.

- Apple want to first make clear what would be the consequences of using the R15 signalling, and we should ask R4 and R1, and explain improvements

- CATT think we need to better understand for synch case and would be ok to send an LS.

- Intel think that we can also discuss, e.g. whether we need cell grouping for intra-FR1 intra FR2 cases.

* Agree by email the async parts (that seems agreeable), continue discussion on synch case, and clarify consequences of the signalling proposals on the table. Can work on a draft LS to R1 R4, will come back on-line next week to finally decide whether to send it.

R2-2008579 Summary of Offline discussion#021: UE cap NR-DC (Qualcomm) Qualcomm

Late CB DISCUSSION

P2

- Nokia wonder what P2 means. QC think LTE can be the baseline for the cell grouping. Nokia agrees.

- Ericsson are OK but not sure what bullet 2 means, and should not have it until we know. QC think that if so we can keep FFS for now

- Intel think general use cases shall be considered and are not sure the bullet 2 is needed

- Apple think the bullet 2 is useful.

- Huawei think LTE cell grouping is not so good if MCG and SCG is differentiated, and think R15 band ordering shall not be impacted.

- Samsung support LTE signalling and think MCG SCG diff can be separate and can be resolved

- Apple think RP changed the situation.

P3

- ZTE think P3 is already covered by P1.

- MTK are confused about P3 and think there need to be new signalling to make the text work.

- Chair: it seems P3 needs complementary information to be correctly understood, converge by email

P4

- Huawei think we need more info from R4 to finalize the signalling

- Samsung think it is important to have CRs at this meeting, and LS is to inform. Samsung think the worst case is that our signalling is not efficient. Nokia agrees with Samsung.

* For sync NR-DC:

38.306 CR to capture “The UE shall not report this UE capability from this release” in field description of *sfn-SyncNRDC*

Confirm that Rel-16 UE shall support Rel-15 grouping (i.e. MCG fully in FR1 and SCG fully in FR2), for backward compatibility with Rel-15 network. No new signaling is required to be introduced.

* For async NR-DC, introduce 1-bit indication on whether Rel-16 UE supports asynchronous operation and its supported cell grouping for a given band combination,

Absence of cell grouping signaling means the UE only support Rel-15 cell grouping (i.e. MCG fully in FR1 and SCG fully in FR2)

Cell grouping is supported, FFS: signaling detail of cell grouping (LTE cell grouping capability can be considered)

MCG and SCG can be differentiated in cell grouping signalling (provided that we can finally agree on a signalling solution) FFS how to signal

* Assume to send LS, at least for information.

Chairman: Continue by email. We shall/should have CRs for NR DC UE caps (including Async and Synch) this meeting. If we need an additional week, merge with MEGA CR will not be possible, but then we should have individual CRs.

R2-2006558 Introduce capabilities on Async NR-DC and cell-grouping configuration Qualcomm Incorporated discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

* [021] Noted

Moved from 6.8.4

R2-2007605 UE capabilities for NR-DC Ericsson discussion

* [021] Noted

R2-2007946 Correction on non-SFN-sync NR-DC support Huawei, HiSilicon CR Rel-16 38.306 16.1.0 0398 - F LTE\_NR\_DC\_CA\_enh-Core

### 6.1.3 Other

Other issue that do not fit under any other topic.

Early implementation

* [AT111-e][022][NR16] Early Implementation (CMCC)

Scope: Treat R2-2008102, R2-2008103, R2-2006716, R2-2007231

Expected Outcome: Agreed CR 38331

Deadline: CR Agreed by EOM, Deadline for comments 1 day earlier, or as set by rapporteur

[R2-2008627](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008627.zip) [AT111-e][022][NR16] Summary for Early Implementation CMCC

* [022] Considering to apply the existing rule to realize early release UE implementation of R16 enhanced features, adding the candidate features after the approval into the Annex G is regarded as a preferred way. The evaluation of whether a feature is to be early implementable is to be decided on a case-by-case basis, e.g. where there is a strong industry demand.
* [022] it is proposed to introduce the description of the UE requirements regarding how the ASN.1 definitions can be comprehended by the UE in the TS 38.331 as well, which is similar to that in Annex F of TS 36.331.
* [022]it is proposed the clarification on the inconsistent description on the UE requirements on transfer syntax (ASN.1) comprehension between broadcast signalling and dedicated signalling is required.
* [022] it is proposed to capture the feature proposed in [R2-2007960](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2007960.zip), which has already been agreed to allow early implementation in the TS 38.331 according to P1.

[R2-2008628](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008628.zip) CR for Early Implementation in NR CMCC, ZTE, Huawei, CATT, Ericsson, Samsung Electronics Co., Ltd , MediaTek Inc., British Telecom, Lenovo R2 CR Rel-16 38.331 16.1.0 2006 - F TEI16

* [022] revised, Lenovo had comments.

R2-200xxxx CR for Early Implementation in NR CMCC, ZTE, Huawei, CATT, Ericsson, Samsung Electronics Co., Ltd , MediaTek Inc., British Telecom, Lenovo R2 CR Rel-16 38.331 16.1.0 2006 - F TEI16

Move from 6.1.2

R2-2007997 Early Release Support of Features in NR CMCC,ZTE,Huawei,CATT discussion Rel-17 TEI16 Revised

R2-2008084 Early Release Support of Features in NR CMCC,ZTE,Huawei,CATT,Ericsson discussion Rel-17 TEI16 R2-2007997

=> Revised in R2-2008102

R2-2008102 Early Release Support of Features in NR CMCC, ZTE, Huawei, CATT, Ericsson discussion Rel-17 TEI16

R2-2007998 CR for Early Implementation in NR CMCC,ZTE,Huawei,CATT CR Rel-17 38.331 16.1.0 1961 - B TEI16 Revised

R2-2008085 CR for Early Implementation in NR CMCC,ZTE,Huawei,CATT,Ericsson CR Rel-17 38.331 16.1.0 1961 1 B TEI16 R2-2007998

=> Revised in R2-2008103

R2-2008103 CR for Early Implementation in NR CMCC, ZTE, Huawei, CATT, Ericsson CR Rel-17 38.331 16.1.0 1961 2 B TEI16

R2-2006716 Handling of early implementable features in NR Intel Corporation discussion Rel-16 TEI16

2 Moved from 6.16:

R2-2007231 UE requirements on ASN.1 comprehension covering early implementation Samsung Telecommunications CR Rel-16 38.331 16.1.0 1807 - F TEI16

[R2-2007960](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2007960.zip) Introduction of CR containing early implementable feature Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1949 - F TEI16

**NG-ENDC capability**

* [AT111-e][023][NR16] NG-ENDC capability (vivo)

Scope: Treat R2-2008080, R2-2008081, R2-2008082

Deadline: Short UE cap

DISCUSSION

- Vivo want to move this to V2X session.

- Apple think there are more aspects than V2X.

R2-2008080 Clarification on the extended capability of NGEN-DC vivo CR Rel-16 36.306 16.1.0 1784 - F NR\_newRAT-Core

* [023] Not Pursued

R2-2008082 Clarification on the extended capability of NGEN-DC vivo CR Rel-15 38.306 15.10.0 0403 - F NR\_newRAT-Core

[R2-2008602](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008602.zip) Clarification on the extended capability of NGEN-DC vivo CR Rel-15 38.306 15.10.0 0403 2 F NR\_newRAT-Core

* [023] Agreed

[R2-2008081](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008081.zip) Clarification on the extended capability of NGEN-DC vivo CR Rel-16 38.306 16.1.0 0402 - F NR\_newRAT-Core

[R2-2008601](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008601.zip) Clarification on the extended capability of NGEN-DC vivo CR Rel-16 38.306 16.1.0 0402 2 F NR\_newRAT-Core

* [023] Agreed

**MAC**

* [AT111-e][024][NR16] MAC Misc Corrections (Samsung)

Scope: Treat R2-2007717, R2-2007061, R2-2007713, include other corrections to be merged with rapporteur CR (if any)

Deadline: EOM

R2-2008449    Report of [AT111-e][024][NR16] MAC Misc Corrections (Samsung) Samsung          discussion   Rel-16   TEI16, LTE\_NR\_DC\_CA\_enh-Core, NR\_2step\_RACH-Core

* [024] Noted

R2-2006659 Miscellaneous corrections Samsung CR Rel-16 38.321 16.1.0 0769 - F LTE\_NR\_DC\_CA\_enh-Core, NR\_2step\_RACH-Core Revised

R2-2007717 Miscellaneous corrections Samsung CR Rel-16 38.321 16.1.0 0769 1 F TEI16, LTE\_NR\_DC\_CA\_enh-Core, NR\_2step\_RACH-Core R2-2006659

R2-2008450    Miscellaneous corrections Samsung          CR        Rel-16   38.321  16.1.0   0769     2          F   TEI16, LTE\_NR\_DC\_CA\_enh-Core, NR\_2step\_RACH-Core         R2-2007717

* [024] Agreed

R2-2007061 Stopping ongoing Random Access procedure LG Electronics Inc. discussion Rel-16 TEI16

* [024] Postponed

R2-2007713 Alignment of SR clause Ericsson, Samsung CR Rel-16 38.321 16.1.0 0732 2 F NR\_unlic-Core, NR\_eMIMO-Core, NR\_IAB\_enh R2-2005328

* [024] Postponed

## 6.2 Integrated Access and Backhaul

(NR\_IAB-Core; leading WG: RAN2; REL-16; started: Dec 18; target Aug 20; WID: [RP-200840](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-200840.zip); SR: [RP-201234](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201234.zip), R1, R2, R3 core parts are 100% complete).

Email max expectation: 5 mail threads

### 6.2.1 General and Stage 2 Corrections

Incoming LS. 38300 36300 (QC) 37340 (HW)

LS in

R2-2006517 LS on IAB F1-C traffic transfer for NSA IAB (R3-204165; contact: Nokia) RAN3 LS in Rel-16 NR\_IAB-Core To:RAN2

- QC think this is already reflected in the TS

* Noted

R2-2006520 LS on multiple UL BH mapping for F1-C (R3-204345; contact: Huawei) RAN3 LS in Rel-16 NR\_IAB-Core To:RAN2

- Huawei indicate this is ralready implemented

* Noted
* [AT111-e][026][IAB] Stage-2 Corrections (Qualcomm)

Scope: Treat R2-2006504, 8363, 6963, 7315, 7374, 7509, 7539, 7545, 7536, 7535, 7965. Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 27 0900 UTC

[R2-2008545](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008545.zip) for 38.300.

8546 for 37.340.

38300

R2-2006504 LS on IAB updates to 38.300 (R1-2004872; contact: Qualcomm) RAN1 LS in Rel-16 NR\_IAB-Core To:RAN2

- QC indicate that this is already in TS

* Noted

R2-2006963 Correction to 38300 for IAB Qualcomm Incorporated draftCR Rel-16 38.300 16.2.0 NR\_IAB

[R2-2008545](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008545.zip) Correction to 38300 for IAB Qualcomm Incorporated draftCR Rel-16 38.300 16.2.0 NR\_IAB

* [026] Agreed

R2-2008363 Summary of corrections to 38300 for IAB Qualcomm CR Rel-16 38.300 16.2.0 0293 - F NR\_IAB-Core

R2-2007315 Miscellaneous Corrections on IAB in 38.300 ZTE, Sanechips CR Rel-16 38.300 16.2.0 0273 - D NR\_IAB-Core

R2-2007374 CR to 38.300 on BH RLC channel ZTE, Sanechips CR Rel-16 38.300 16.2.0 0275 - F NR\_IAB-Core

R2-2007509 IAB-MT capability signalling clarification Nokia, Nokia Shanghai Bell CR Rel-16 38.300 16.2.0 0279 - F NR\_IAB-Core

R2-2007539 Corrections to capability signaling for IAB-MT Samsung Electronics Romania CR Rel-16 38.300 16.2.0 0281 - F NR\_IAB-Core

R2-2007545 Corrections to BH RLF in IAB Samsung Electronics Romania CR Rel-16 38.300 16.2.0 0282 - F NR\_IAB-Core

R2-2007536 Correction to cell selection for IAB SA Samsung Electronics Romania CR Rel-16 38.300 16.2.0 0280 - F NR\_IAB-Core

36300

R2-2007535 Corrections to cell selection for IAB in NSA Samsung Electronics Romania CR Rel-16 36.300 16.2.0 1303 - F NR\_IAB-Core

On-line:

- QC indicate that we haven’t introduced anything in 36300 for IAB

- Samsung think that this change is valid as SIB indication is there for LTE cell. Huawei agrees, but think this is captured in 304 and 331. Think something can be captured in 37340.

- LG think this is not correct.

- Ericsson think this is indeed correct but unfortunate that this is repeated in different TSes.

- Chair think the CR is formally correct but it isi not nice that we have spread the information in different TSes.

* Include in Email discussion for desicion

37340

R2-2007965 Miscellaneous correction for TS 37.340 for IAB Huawei, HiSilicon CR Rel-16 37.340 16.2.0 0225 - F NR\_IAB-Core

[R2-2008546](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008546.zip) Miscellaneous correction for TS 37.340 for IAB Huawei, HiSilicon CR Rel-16 37.340 16.2.0 0225 - F NR\_IAB-Core

* [026] Agreed

### 6.2.2 BAP Corrections

Treat on-line first

* [AT111-e][027][IAB] BAP Corrections (Huawei)

Scope: Treat further R2-2007484, 7966, 7316, 7483, 7967, 7317

Determine agreeable parts, Agree CRs

Deadline: Aug 26, Intermediate deadlines by Rapporteur if needed.

R2-2008115 Summary of 6.2.2 for BAP corrections Huawei, HiSilicon

DISCUSSION

P1

- ZTE agrees with P1, because in IAB migration packets may be handled wrongly otherwise. Any other way will not work in several scenarios.

- Samsung agrees with P1 and think such functionality (U packets by deafault config) is not needed in R16 but can be considered for R17.

- LG agrees and think we should have a note

P2

- LG think this should be clear in BAP by adding a Note.

- Huawei think this is clear already from normative text. Ericsson agrees, currect text is “non-F1-U packets.

P3

- treat the tdoc 7967 below briefly

P5

- ZTE think R3 has different terminology so we at least need to clarify this. Vivo agrees as well

- Samsung also support the clarification.

- LG think we should remove “destination” from Destination IPv6 prefix.

P6

- Chair think some misc CR will be agreed in the end, details for email discussion.

* F1-U packets is NOT allowed to use the default BAP configuration (no need to clarify further in the TS).
* R2 clarify the “Destination IP address” covers the “Destination IPv4 address”, “Destination IPv6 address” and “Destination IPv6 prefix” in TS 38.340, detailed wording TBD (e.g. inclusion of “destination”)

R2-2008498 Summary of [AT111-e][027][IAB] BAP Corrections Huawei, HiSilicon

* [027] Noted

Default configuration

R2-2007296 Packet handling after receiving default ID configuration in RRC LG Electronics Inc. discussion Rel-16 NR\_IAB-Core

* Noted

R2-2007484 Default configuration usage corrections in BAP Nokia, Nokia Shanghai Bell CR Rel-16 38.340 16.1.0 0005 - F NR\_IAB-Core

* Discuss by email, merge agreeable parts with Rapporteur CR.
* [027] Merge the 2nd change (change “until”) in R2-2007484 into the Rapporteur CR.

Clarifications

R2-2007966 Miscellaneous corrections to 38.340 for IAB Huawei, HiSilicon CR Rel-16 38.340 16.1.0 0006 - F NR\_IAB-Core

R2-2008499 Miscellaneous corrections to 38.340 for IAB Huawei, HiSilicon CR Rel-16 38.340 16.1.0 0006 1 F NR\_IAB-Core

* [027] Agreed

R2-2007316 Corrections on IAB-DU IP address allocation in 38.340 ZTE, Sanechips CR Rel-16 38.340 16.1.0 0002 - F NR\_IAB-Core

R2-2007483 BAP routing configuration clarification Nokia, Nokia Shanghai Bell CR Rel-16 38.340 16.1.0 0004 - F NR\_IAB-Core

* Discuss by email, merge agreeable parts with Rapporteur CR.
* [027] Not Pursued

Flow Control

R2-2007967 Corrections on flow control BAP control PDU Huawei, HiSilicon CR Rel-16 38.340 16.1.0 0007 - F NR\_IAB-Core

- Ericsson think the figure is correct, but are not sure about the note. LG think also this note is not needed.

- CATT think is better to clarify this.

* The figure change is agreed, whether to have the note can continue by email.
* [027] Agreed

R2-2007317 Corrections on IAB flow control in 38.340 ZTE, Sanechips CR Rel-16 38.340 16.1.0 0003 - F NR\_IAB-Core

* Discuss by email, merge agreeable parts with Rapporteur CR.

### 6.2.3 User plane Corrections

38321 (Samsung)

* [AT111-e][028][IAB] MAC Corrections (Samsung)

Scope: Treat R2-2007199, 7319, 7318, 7728, 7969, 7320, 7968. Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 25, Intermediate deadlines by Rapporteur if needed.

R2-2008439 Outstanding issues for IAB MAC Samsung

* [028] RAN2 will NOT introduce the stopping of the RA procedure initiated by the inability to send an SR triggered by a pre-emptive BSR, even if the MAC PDU is sent by means other than the RA procedure and this MAC PDU contains the pre-emptive BSR.
* [028] RAN2 will NOT change the existing triggering condition for the Desired Guard Symbol query.
* [028] All IAB-related MAC changes shall be handled with a single MAC CR, based on the rapporteur CR.

Misc

R2-2007199 IAB MAC - miscellaneous corrections and clarifications Samsung Electronics GmbH CR Rel-16 38.321 16.1.0 0809 - F NR\_IAB-Core

R2-2008502 IAB MAC - miscellaneous corrections and clarifications Samsung Electronics GmbH CR Rel-16 38.321 16.1.0 0809 1 F NR\_IAB-Core

* [028] Agreed

R2-2007319 Miscellaneous Corrections on IAB in 38.321 ZTE, Sanechips CR Rel-16 38.321 16.1.0 0815 - D NR\_IAB-Core

* [028] Merged

R2-2007318 Corrections on pre-BSR in 38.321 ZTE, Sanechips CR Rel-16 38.321 16.1.0 0814 - F NR\_IAB-Core

* [028] Merged

RA cancel at Pre-emptive BSR

R2-2007728 RACH stop for SR triggered by Pre-emptive BSR ASUSTeK discussion Rel-16 38.321 NR\_IAB-Core

R2-2007969 Correction on RA cancellation for Pre-emptive BSR Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0873 - F NR\_IAB-Core

* [028] Both not pursued

Guard Symbols MAC CE

R2-2007320 CR to 38.321 on Guard Symbols MAC CE ZTE, Sanechips CR Rel-16 38.321 16.1.0 0816 - F NR\_IAB-Core

* [028] Merged

R2-2007968 Correction on Guard Symbols MAC CE Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0872 - F NR\_IAB-Core

* [028] Not pursued

### 6.2.4 RRC Corrections

38331 36331 (Ericsson), Treat on-line first

* [AT111-e][029][IAB] RRC Corrections (Ericsson)

Scope: Treat R2-2007323, 7972, 7976, 7507, 7520, 7522, 7524, 7975, 7324, 7534, 7970, 8088, 7538, 7973, 7162, 7974, 7977, 7978, 7321/7322, 7546, 7979, 7325, and 7982 (if needed)

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 27, Intermediate deadlines by Rapporteur if needed.

R2-2008394 Summary of Rel.16 IAB RRC Corrections Ericsson

- Chair: will use the recommendation of which tdocs to treat on-line.

* Noted

R2-2008572 Summary of [AT111-e][029][IAB] RRC Corrections Ericsson

* [029] Correct TS 36.331, so that the BH RLF failure is included in SCGFailureInformationNR, rather than in MCGFailureInformation.
* [029] noted, other proposals are also agreed, which is reflected below

[R2-2008506](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008506.zip) Corrections on the BH RLF failure for IAB to TS 36.331 Huawei, HiSilicon, Ericsson CR Rel-16 36.331 16.1.0 4436 - F NR\_IAB-Core

* [029] Agreed

Rapporteur CRs

[R2-2008573](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008573.zip): 36.331 CR#4439, Miscellaneous IAB Corrections CR Rel-16 36.331 16.1.0 4439 - F NR\_IAB-Core

* [029] Agreed

[R2-2008574](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008574.zip): 38.331 CR#2003, Miscellaneous IAB Corrections CR Rel-16 38.331 16.1.0 2003 - F NR\_IAB-Core

* [029] Agreed

IP address allocation

R2-2007543 Corrections to ip address configuration for IAB Samsung Electronics Romania CR Rel-16 38.331 16.1.0 1859 - F NR\_IAB-Core

- Huawei think delta config can indeed be supported with the old structure, and this is not needed.

- LG support this change, and it follows in general the RRC conventions.

- Ericsson think the change may improves the ASN.1 structure for this, but redundant to have both setup release and addmodrel ..

- Intel think setuprelease if not needed if this is already an addmod list.

* Not pursued

R2-2007323 Corrections on IAB-DU IP address allocation in 38.331 ZTE, Sanechips CR Rel-16 38.331 16.1.0 1832 - F NR\_IAB-Core

* [029] Merged with the rapporteur 38.331 CR

F1-C

R2-2007972 Corrections on F1-C transfer path Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1952 - F NR\_IAB-Core

- [029] Rap: Revise R2-2007972 to keep only second and third change.

* [029] Revised, second and third changes are agreed

[R2-2008503](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008503.zip) Corrections on F1-C transfer path Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1952 - F NR\_IAB-Core

* [029] Agreed

Cell selection / reselection

R2-2007976 Correction on cellReservedForOperatorUse Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1956 - F NR\_IAB-Core

- [029] Rap: Agree to R2-2007976.

* [029] Agreed

R2-2007507 Corrections to iab-support indicator in NSA Samsung Electronics Romania CR Rel-16 36.331 16.1.1 4386 - F NR\_IAB-Core

* [029] Merged with the rapporteur 36.331 CR

R2-2007520 Corrections to iab-support indicator in SA Samsung Electronics Romania CR Rel-16 38.331 16.1.0 1855 - F NR\_IAB-Core

* [029] Merged with the rapporteur 38.331 CR

R2-2007522 Correction to intra-frequency reselection for IAB in NSA Samsung Electronics Romania CR Rel-16 36.331 16.1.1 4387 - F NR\_IAB-Core

* [029] Not Pursued

R2-2007524 Corrections to intra-frequency reselection for IAB in SA Samsung Electronics Romania CR Rel-16 38.331 16.1.0 1856 - F NR\_IAB-Core

* [029] Not Pursued

Misc

R2-2007975 Correction on the value range of BH-LogicalChannelIdentity-Ext Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1955 - F NR\_IAB-Core

INITIAL DISC

- Samsung think the range change is needed, but the description do not need to change/

- Ericsson think the change shall be aligned with the non-extended change.

- Chair Initial conclusion: We need to update the value range, details for email discussion

* [029] Revised, such that the definition of BH-LogicalChannelIdentity-Ext is aligned with the existing definition of BH-LogicalChannelIdentity.

R2-2008504 Correction on the value range of BH-LogicalChannelIdentity-Ext Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1955 1 F NR\_IAB-Core

* [029] Agreed

R2-2007324 Miscellaneous Corrections on IAB in 38.331 ZTE, Sanechips CR Rel-16 38.331 16.1.0 1833 - D NR\_IAB-Core

* [029] Merged with the rapporteur 38.331 CR, except changes in Section 5.7.3b.3

R2-2007534 Editorial corrections in BAP configuration Samsung Electronics Romania CR Rel-16 38.331 16.1.0 1857 - D NR\_IAB-Core

* [029] Merged with the rapporteur 38.331 CR

R2-2007970 Miscellaneous corrections for TS 38.331 for IAB Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1950 - F NR\_IAB-Core

* [029] Merged with the rapporteur 38.331 CR

R2-2008088 Clean-up of misaligned requirements between procedure and field description LG Electronics France discussion NR\_IAB-Core

* [029] Not Pursued

RLF

R2-2007538 Corrections to MCGFailureInformation procedure Samsung Electronics Romania CR Rel-16 38.331 16.1.0 1858 - F NR\_IAB-Core

* [029] Merged with the rapporteur 38.331 CR

R2-2007973 Correction on the bh-rlfRecoveryFailure for IAB-MT Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1953 - F NR\_IAB-Core

* [029] Not pursued

R2-2007971 Correction on BAP operation during RRC re-establishment Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1951 - F NR\_IAB-Core

- Ericsson think BAP operation is not defined in RRC and anyway DRBs are suspended etc, so there should be no need to specify this. It should work like this but no need to specify.

- Nokia wonder if the BAP behaviour could be correct, if the reest is towards same gNB? So sugest to not specify. Vivo agrees.

- ZTE has sympaty for the change for UL. For DL the operation can continue.

- QC wonder what should be suspended? The BH rlc channes? Maybe not BAP completely.

- FW agree w QC.

- CATT agrees with intention but are ok to leave to impl.

- Samsung has same view as majority.

- LG has some sympathy with this, as default RRC config will be applied. But change should be in BAP, not RRC. Huwei want to address another issue, are ok to handle by impl

- QC think we need more discussion.

* Not agreed

R2-2007162 Corrections of RLF cause Signalling procedure vivo CR Rel-16 38.331 16.1.0 1794 - F NR\_IAB-Core

* [029] Revised, to just keep the first change related to RLF cause determination

[R2-2008516](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008516.zip) Corrections of RLF cause Signalling procedure vivo CR Rel-16 38.331 16.1.0 1794 1 F NR\_IAB-Core

* [029] Agreed

Default config

R2-2007974 Corrections on default BH RLC channel Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1954 - F NR\_IAB-Core

- [029] Rap: Agree to R2-2007974.

* [029] agreed

L1 Config

R2-2007977 Correction on SearchSpace configuration for IAB Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1957 - F NR\_IAB-Core

* [029] Contents is partially merged with the rapporteur 38.331 CR, all changes except for the change to monitoringSymbolsWithinSlot
* [029] CR is Revised to just include the second added paragraph related to DCI format 2\_5 on monitoringSymbolsWithinSlot and clarify in the first paragraph that “…. the last two bits within the bit string shall be ignored by the UE or IAB-MT”.

R2-2008505 Correction on SearchSpace configuration for IAB Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1957 1 F NR\_IAB-Core

* [029] Agreed

R2-2007978 Corrections on the IAB-MT TDD resource configuration Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1958 - F NR\_IAB-Core

- [029] Rap: Agree to R2-2007978.

* [029] Agreed

R2-2007321 Support of soft resource availability indication for paired spectrum ZTE, Sanechips discussion Rel-16

* [029] Noted

R2-2007322 CR to 38.331 on support of soft resource availability indication for paired spectrum ZTE, Sanechips CR Rel-16 38.321 16.1.0 0817 - F NR\_IAB-Core

- Ericsson think that the referred table in R1 is agnostic to this aspects. Intel agrees.

- ZTE think anyway that UL and DL can be different for FDD

- Samsung think this is not needed, as for for F1-AP includes the UL and DL/.

- LG has some sympathy with this proposal but think this should be confirmed by R1.

- Huawei think the intention is aligned with R1 agreements but think more time is needed for offline check. For the CR huwei think as it is easy to add in BW compatible way, it should be done.

- vivo agrees this can be checked offline.

- ZTE think this was already captured in R3.

- QC has sympathy for the proposal but think we can check offline.

- Chair: on-line conclusion: Continue by email (companies need time to check).

* [029] Merged with the rapporteur 38.331 CR except changes related to the resourceAvailabilty IE, which are not agreed

36331

R2-2007546 Corrections to ULInformationTransferMRDC Samsung Electronics Romania CR Rel-16 36.331 16.1.1 4388 - F NR\_IAB-Core

* [029] Not agreed (the similar CR below is agreed instead)

R2-2007979 Correction of on the IP address requesting in EN-DC Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4419 - F NR\_IAB-Core

- [029] Rap: Agree to R2-2007979.

* [029] Agreed

R2-2007325 CR to 36.331 on F1-C traffic over LTE ZTE, Sanechips CR Rel-16 36.331 16.1.1 4379 - F NR\_IAB-Core

* [029] Contents is partially merged with the rapporteur 36.331 CR, all changes except changes to F1-C information transfer
* [029] CR is revised to just include “F1-C related information” in Section 5.6.1.1 and 5.6.2, and replace the name of the IE DedicatedInfoF1AP with DedicatedInfoF1c.

[R2-2008521](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008521.zip) CR to 36.331 on F1-C traffic over LTE ZTE, Sanechips CR Rel-16 36.331 16.1.1 4379 1 F NR\_IAB-Core

* [029] Agreed

### 6.2.5 UE capabilities

Including corrections and remaining open issues if any on RAN2 capabilities and minimum capabilities of IAB MT. The adoption of R1 and R4 updated feature lists is handled under 6.1.1

The outcome in [RP-201292](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201292.zip) on IAB MT Capabilities was endorsed at RP88e and shall be taken into account.

38306 38331 (Nok).

* [AT111-e][030][IAB] UE capabilities (Nokia)

Scope: Treat R2-2008105, 6959, 7508 7980, 7981, R2-2008444

Deadline: TBD

1 LS Moved here, was received during meeting:

R2-2008444 LS to RAN2 on IAB-MT feature list RAN4 LS in Rel-16

* Noted, Covered in email disc [030]

- Chairman Comment: As the R4 LS was added to email discussion [030], there is a risk that this email discussion need more time (1 week post) and might not be ready for merge, in that case, separate non merged CRs for RP (TBD)

R2-2007508 Update to IAB-MT capabilities Nokia, Nokia Shanghai Bell CR Rel-16 38.306 16.1.0 0383 - F NR\_IAB-Core

R2-2008461 Update to IAB-MT capabilities Nokia, Nokia Shanghai Bell CR Rel-16 38.306 16.1.0 0383 1 F NR\_IAB-Core

On-line Late CB

- For *eventA-MeasAndReport* Huawei think there should be a separate UE cap (same as other parameters). Huawei wonder then why have a new cap for inter freq handover. Huawei think same could be used for IAB MT. Nokia think that the majority wanted it this way.

- Nokia think we can just reuse the UE capability framework, but acknowledge there might be differences for IAB MT.

- Chair think there should be a principle, we should not just follow the majority for every case. Nokia CATT and Huawei agrees.

* UE cap for IAB MT shall reuse existing parameters as much as possible, with additional description for IAB MT (e.g. that it is optional instead of mandatory).

R2-2008105 Summary of IAB UE capabilities under AI 6.2.5 Nokia (Summary Rapporteur) discussion Rel-16 NR\_IAB-Core

R2-2006959 Remaining details of UE capabilities for IAB AT&T discussion

R2-2007980 Correction on IAB-MT capability for TS 38.331 Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1959 - F NR\_IAB-Core

R2-2007981 Correction on IAB-MT capability for TS 38.306 Huawei, HiSilicon CR Rel-16 38.306 16.1.0 0400 - F NR\_IAB-Core

### 6.2.6 Other Corrections

E.g. 3x.304

R2-2007982 Miscellaneous corrections for TS 38.304 for IAB Huawei, HiSilicon CR Rel-16 38.304 16.1.0 0185 - F NR\_IAB-Core

- Ericsson think the NPN wording need to be enhanced.

- LG think NPN wording is better in 331 and we don’t need it here.

- Chair: Seems agreeable to remove it as proposed, but not clear whether further changes are needed. Can agree this now, or we can allow some more discussion to see if further improvement is needed.

* Contents is agreed, can conside further changes (i.e. a revision) by email (RRC email discussion)
* [029] R2-2007982 is agreed

R2-2007983 Miscellaneous corrections for TS 36.304 for IAB Huawei, HiSilicon CR Rel-16 36.304 16.1.0 0812 - F NR\_IAB-Core

* agreed

## 6.3 NR-based Access to Unlicensed Spectrum

(NR\_unlic-Core; leading WG: RAN1; REL-16; started: Dec 18; Closed June 20; WID: RP-192926; SR; [RP-201141](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201141.zip); R1 and R2 are 100% Complete). Documents in this agenda item will be handled in a break out session.).

Email max expectation: 4 email threads

### 6.3.1 General and Stage 2 Corrections

Including incoming LSs, Wi or TS rapporteur inputs, etc.

R2-2006503 LS to RAN2 on clarification of RVID for the first transmission for CG-PUSCH (R1-2003074; contact: Qualcomm) RAN1 LS in Rel-16 NR\_unlic-Core To:RAN2

R2-2006507 LS to RAN2 on initial BWP for NR-U (R1-2004998; contact: Ericsson) RAN1 LS in Rel-16 NR\_unlic-Core To:RAN4 Cc:RAN2

R2-2007450 Clarification on the CAPC selection for MSG3 and MSGA PUSCH ZTE Corporation, Sanechips CR Rel-16 38.300 16.2.0 0277 - F NR\_unlic-Core

R2-2008028 Miscellaneous corrections for NR-U (Rapporteur) Qualcomm Incorporated CR Rel-16 38.331 16.1.0 1976 - F NR\_unlic-Core Late

### 6.3.2 User plane

R2-2006549 Remaining Issues on Stopping the Ongoing RA Procedure due to a Pending SR in NR-U vivo discussion

R2-2006658 Clarification on operations in a bundle of UL grants Samsung CR Rel-16 38.321 16.1.0 0768 - F NR\_newRAT-Core, NR\_unlic-Core

R2-2007169 Corrections on CG operation for NR-U Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.1.0 0807 - F NR\_unlic-Core

R2-2007188 Correction to LBT SR cancellation Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.1.0 0808 - F NR\_unlic-Core

R2-2007453 Clarifications in MAC for NR-U ZTE Corporation, Sanechips CR Rel-16 38.321 16.1.0 0823 - F NR\_unlic-Core

R2-2007548 Clarification on the transmission of LBT failure MAC CE on SCells Google Inc. CR Rel-16 38.321 16.1.0 0830 - F NR\_unlic-Core

R2-2007729 Further consideration on LBT failure cancellation regarding BWP switching ASUSTeK discussion Rel-16 NR\_unlic-Core

R2-2007817 Correction on 2-stepRA resource selection with semi-static channel access Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0838 - F NR\_unlic-Core

R2-2007818 Correction on prority of SR for consistent LBT failure Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0839 - F NR\_unlic-Core

R2-2007819 Correction on configured grant occasion detemination Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0840 - F NR\_unlic-Core

R2-2007880 Review of CG timers LG Electronics UK discussion Rel-16 NR\_unlic-Core

R2-2007883 NR-U revision LG Electronics UK CR Rel-16 38.321 16.1.0 0846 - F NR\_unlic-Core

R2-2007892 The operation of drx-RetransmissionTimerUL ASUSTeK CR Rel-16 38.321 16.1.0 0847 - F NR\_unlic-Core

### 6.3.3 Control plane

R2-2007066 searchSpaceSwitchingGroup handling Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1776 - F NR\_unlic-Core

R2-2007067 Guardbands corrections Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1777 - F NR\_unlic-Core

R2-2007451 RRC corrections for NR-U ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1843 - F NR\_unlic-Core

R2-2007452 RRC clarficiations for NR-U ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1844 - F NR\_unlic-Core

R2-2007596 Remaining RRC issues Ericsson discussion NR\_unlic-Core

R2-2007730 Corrections on configuredGrantTimer ASUSTeK CR Rel-16 38.331 16.1.0 1889 - F NR\_unlic-Core

R2-2007820 Correction on ServingCellConfig Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1918 - F NR\_unlic-Core

R2-2007821 Correction on ssb-SubcarrierOffset in MIB Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1919 - F NR\_unlic-Core

R2-2007822 Correction on RACH Configuration Huawei, HiSilicon, Ericsson CR Rel-16 38.331 16.1.0 1920 - F NR\_unlic-Core

R2-2007823 Correction on ControlResourceSet Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1921 - F NR\_unlic-Core

R2-2007824 Correction on RSSI and CO measurement Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1922 - F NR\_unlic-Core Withdrawn

R2-2008054 Clarification on pusch-TimeDomainResourceAllocationList Samsung CR Rel-16 38.331 16.1.0 1982 - F NR\_unlic-Core, NR\_L1enh\_URLLC-Core

R2-2008065 Correction to the search space switching timer vivo CR Rel-16 38.331 16.1.0 1983 - F NR\_unlic-Core

## 6.4 NR V2X

(5G\_V2X\_NRSL-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Aug 20; WID: RP-200129; SR: RP-200431). Documents in this agenda item will be handled in a break out session

RP88e: RP Chair minuted summary: Regarding the RAN2 corrections work on V2X, I propose we minute that the items in the Intermediate Summary that were discussed this week in RAN can be discussed in RAN2 further: 1) Cross-RAT configuration, 2) Prioritization between uplink transmissions on Uu and sidelink transmissions on PC5.

Email max expectation: 10 email threads

### 6.4.1 General and Stage 2 corrections

Including incoming LSs, rapporteur inputs, etc.

R2-2007307 Miscellaneous corrections to 38.321 Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.1.0 0813 - D 5G\_V2X\_NRSL-Core

R2-2007868 Stage-2 corrections on 38.300 vivo CR Rel-16 38.300 16.2.0 0288 - F 5G\_V2X\_NRSL-Core

R2-2007920 Correction for NR SL communication Samsung Electronics CR Rel-16 38.300 16.2.0 0290 - F 5G\_V2X\_NRSL-Core

### 6.4.2 Control plane corrections

Including outcome of email discussion [Post110-e][707][V2X] V2X UE capabilities (OPPO). CR rapporteur can provide miscellaneous CRs to collect small changes. Please contact / coordinate with CR rapporteur company for small changes.

R2-2006598 Left issues on cross-RAT control of sidelink (38.331) OPPO, Samsung CR Rel-16 38.331 16.1.0 1758 - B 5G\_V2X\_NRSL-Core

R2-2006599 Left issues on cross-RAT control of sidelink (36.331) OPPO, Samsung CR Rel-16 36.331 16.1.1 4367 - B 5G\_V2X\_NRSL-Core

R2-2006614 Correction on the names of ueAssistanceInformationNR and UEAssistanceInformation CATT CR Rel-16 36.331 16.1.1 4350 - F 5G\_V2X\_NRSL-Core

R2-2006620 Correction to TS 38.304 CATT CR Rel-16 38.304 16.1.0 0175 - F 5G\_V2X\_NRSL-Core

R2-2006621 Correction on the SL QoS in TS 38.331 CATT CR Rel-16 38.331 16.1.0 1721 - F 5G\_V2X\_NRSL-Core

R2-2006622 Discussion on the Value Range of ul-PrioritizationThres and sl-PrioritizationThres CATT discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2006744 Corrections on 38.331 CR for NR V2X cross RAT configuration ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1734 - D 5G\_V2X\_NRSL-Core

R2-2006745 CR on TS 38.331 for miscellaneous issues for NR V2X ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1735 - D 5G\_V2X\_NRSL-Core

R2-2006875 Correction to sidelink communication Google Inc. CR Rel-16 36.331 16.1.1 4360 - F 5G\_V2X\_NRSL-Core

R2-2006876 Correction to NR sidelink related information reporting Google Inc. CR Rel-16 38.331 16.1.0 1743 - F 5G\_V2X\_NRSL-Core

R2-2006914 Need for cross-RAT acknowledgement in V2X reconfigurations MediaTek Inc. discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2007074 Corrections discarding segments of SIB 12 Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1778 - F 5G\_V2X\_NRSL-Core

R2-2007075 Corrections to discarding segments of SIB 28 Samsung Electronics Co., Ltd CR Rel-16 36.331 16.1.1 4368 - F 5G\_V2X\_NRSL-Core

R2-2007079 Corrections to V2X SIB acquisition Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1782 - F 5G\_V2X\_NRSL-Core

R2-2007095 Correction on Stored Sidelink Measurement Configuration Apple CR Rel-16 38.331 16.1.0 1785 - F 5G\_V2X\_NRSL-Core

R2-2007096 Correction on Cross-RAT OtherConfig Apple, InterDigital Inc. CR Rel-16 36.331 16.1.1 4369 - F 5G\_V2X\_NRSL-Core

R2-2007193 Addition of field description for single TX resource pool sidelink mode 1 to 38.331 for V2X Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1795 - A 5G\_V2X\_NRSL-Core

R2-2007198 Correction to TX resource pool sidelink mode 1 and 2 in 38.331 for V2X Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1796 - C 5G\_V2X\_NRSL-Core

R2-2007206 CR on TS 38.331 for remaining RB issues for NR V2X resource pool ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1798 - D 5G\_V2X\_NRSL-Core

R2-2007227 Some remaining aspects regarding V2X IRAT RAT signalling Samsung Telecommunications, OPPO discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2007228 Corrections regarding NR CBR (V2X IRAT) measurements Samsung Telecommunications, OPPO CR Rel-16 36.331 16.1.1 4370 - F 5G\_V2X\_NRSL-Core

R2-2007235 On the number of TX resource pools for sidelink mode 1 Nokia, Nokia Shanghai Bell discussion Rel-16 38.331 5G\_V2X\_NRSL-Core

R2-2007239 Clarification on security for NR SL communication in TS 38.331 Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1808 - F 5G\_V2X\_NRSL-Core

R2-2007242 Correction on cross-RAT V2X functionality in TS 36.331 Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4371 - F 5G\_V2X\_NRSL-Core

R2-2007243 Correction on cross-RAT V2X functionality in TS 38.331 Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1810 - F 5G\_V2X\_NRSL-Core

R2-2007244 CR on security for NR SL communication in TS 38.331 Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1811 - F 5G\_V2X\_NRSL-Core

R2-2007245 CR on SidelinkUEInformationNR reporting in TS 38.331 Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1812 - F 5G\_V2X\_NRSL-Core

R2-2007263 Further RRC Issue on the presence "Cond CBR" sl-MaxTxPower in SL-PSSCH-TxParameters Nokia, Nokia Shanghai Bell discussion 5G\_V2X\_NRSL-Core

R2-2007280 Correction to default value of field sl-X-Overhead Ericsson CR Rel-16 38.331 16.1.0 1824 - F 5G\_V2X\_NRSL-Core

R2-2007281 Correction to sidelink fields in the inter-node RRC messages Ericsson CR Rel-16 38.331 16.1.0 1825 - F 5G\_V2X\_NRSL-Core

R2-2007282 Correction to the setting of empty SL RRC messages Ericsson CR Rel-16 38.331 16.1.0 1826 - F 5G\_V2X\_NRSL-Core

R2-2007283 Correction on LTE V2X configuration in the RRCReconfiguration Ericsson CR Rel-16 38.331 16.1.0 1827 - F 5G\_V2X\_NRSL-Core

R2-2007284 Sending of RRC reconfiguration complete message in SL crossRAT Ericsson CR Rel-16 38.331 16.1.0 1828 - F 5G\_V2X\_NRSL-Core

R2-2007285 Sending of RRC reconfiguration complete message in SL crossRAT Ericsson discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2007286 Sending of RRC reconfiguration complete message in SL crossRAT Ericsson CR Rel-16 36.331 16.1.1 4375 - F 5G\_V2X\_NRSL-Core

R2-2007298 Addition of the missing anchor carrier pre-configuration for NR SL communication in TS 36.331 Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4376 - F 5G\_V2X\_NRSL-Core

R2-2007299 CR on SL power control parameters in TS 38.331 Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1829 - F 5G\_V2X\_NRSL-Core

R2-2007383 Corrections to Sidelink process Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.1.0 0820 - F 5G\_V2X\_NRSL-Core

R2-2007395 Correction to transmission of MasterInformationBlockSidelink Ericsson CR Rel-16 38.331 16.1.0 1842 - F 5G\_V2X\_NRSL-Core

R2-2007731 Clarification on RRC reconfiguration failure for SL DRB addition ASUSTeK CR Rel-16 38.331 16.1.0 1890 - F 5G\_V2X\_NRSL-Core

R2-2007732 Clarification on SL DRB release ASUSTeK CR Rel-16 38.331 16.1.0 1891 - F 5G\_V2X\_NRSL-Core

R2-2007786 Clarification on RRC signaling/procedure for acknowledging cross-RAT SL configuration in current RRC Spec - Inexistence of “Issue 1” discussed by RAN plenary Huawei, CATT, Apple, ZTE Corporation, LG Electronics Inc., Intel Corporation, HiSilicon discussion 5G\_V2X\_NRSL-Core

R2-2007848 Miscellaneous corrections on V2X for TS 38.331 Samsung CR Rel-16 38.331 16.1.0 1928 - F 5G\_V2X\_NRSL-Core

R2-2007852 Miscellaneous corrections on TS 38.331 Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1930 - F 5G\_V2X\_NRSL-Core

R2-2007853 Correction on the periodicity value for configured sidelink type 1 Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1931 - F 5G\_V2X\_NRSL-Core

R2-2007854 Correction on measurement quantity configuration for SL RSRP reporting Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1932 - F 5G\_V2X\_NRSL-Core

R2-2007855 Correction on missing SDAP header configuration in PC5 RRC signaling Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1933 - F 5G\_V2X\_NRSL-Core

R2-2007856 Correction on optionality of ueCapabilityRequestFilterSidelink Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1934 - F 5G\_V2X\_NRSL-Core

R2-2007857 Correction on the procedure for PC5 RRC release Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1935 - F 5G\_V2X\_NRSL-Core

R2-2007866 Sidelink synchronization ID Qualcomm Finland RFFE Oy draftCR Rel-16 38.331 16.1.0 5G\_V2X\_NRSL-Core Withdrawn

R2-2007869 38.331 CR on cross-RAT signalling for NR V2X vivo CR Rel-16 38.331 16.1.0 1938 - F 5G\_V2X\_NRSL-Core

R2-2007870 36.331 CR on cross-RAT signalling for LTE V2X vivo CR Rel-16 36.331 16.1.1 4415 - F 5G\_V2X\_NRSL-Core

R2-2007871 Miscellaneous corrections to 38.331 on SL operation vivo CR Rel-16 38.331 16.1.0 1939 - F 5G\_V2X\_NRSL-Core

R2-2007872 Remaining issue on SL/UL prioritization vivo CR Rel-16 38.331 16.1.0 1940 - F 5G\_V2X\_NRSL-Core

R2-2007876 38.304 Correction on cell (re)selection for sidelink UE vivo CR Rel-16 38.304 16.1.0 0182 - F 5G\_V2X\_NRSL-Core

R2-2007877 36.304 Correction on cell (re)selection for sidelink UE vivo CR Rel-16 36.304 16.1.0 0811 - F 5G\_V2X\_NRSL-Core

R2-2007881 Sidelink priority threshold Qualcomm Finland RFFE Oy draftCR Rel-16 38.331 16.1.0 5G\_V2X\_NRSL-Core

R2-2007886 Sidelink synchronization ID Qualcomm Finland RFFE Oy, Ericsson, Apple, Kyocera, ZTE, CATT, InterDigital, Lenovo, Motorola Mobility draftCR Rel-16 38.331 16.1.0 5G\_V2X\_NRSL-Core Late

R2-2007908 Miscellaneous corrections on TS 36.331 Huawei, Hisilicon CR Rel-16 36.331 16.1.0 4416 - F 5G\_V2X\_NRSL-Core

R2-2007917 Addition of the missing resource pool ID associated with each configured sidelink grant type1 Huawei, Hisilicon CR Rel-16 38.331 16.1.0 1943 - F 5G\_V2X\_NRSL-Core

R2-2007921 Correction for sidelink priority threshold (alternative 1) Samsung Electronics CR Rel-16 38.331 16.1.0 1944 - F 5G\_V2X\_NRSL-Core

R2-2007922 Correction for sidelink priority threshold (alternative 2) Samsung Electronics CR Rel-16 38.331 16.1.0 1945 - F 5G\_V2X\_NRSL-Core

R2-2007923 Correction to SL-ConfigDedicatedNR and SL-ScheduledConfig Samsung Electronics CR Rel-16 38.331 16.1.0 1946 - F 5G\_V2X\_NRSL-Core

R2-2008037 Corrections on synchronisation, timing offset signalling and Uplink/Downlink TDD configuration LG Electronics France CR Rel-16 38.331 16.1.0 1977 - F 5G\_V2X\_NRSL

R2-2008050 Corrections on sidelinkUEInformation transmission and SL mode 1 TX pool configuration LG Electronics France CR Rel-16 38.331 16.1.0 1981 - F 5G\_V2X\_NRSL

### 6.4.3 User plane corrections

CR rapporteur can provide miscellaneous CRs to collect small changes. Please contact / coordinate with CR rapporteur company for small changes.

R2-2006561 Corrections to UE behavior upon SL BWP deactivation vivo CR Rel-16 38.321 16.1.0 0760 - F 5G\_V2X\_NRSL-Core

R2-2006568 Correction on resource re-selection trigger vivo CR Rel-16 38.321 16.1.0 0761 - F 5G\_V2X\_NRSL-Core

R2-2006585 CR for left issues of NR V2X on MAC OPPO CR Rel-16 38.321 16.1.0 0795 - F 5G\_V2X\_NRSL-Core

R2-2006613 Consideration on the Priority of UL MAC CE CATT discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2006615 Correction on the sidelink transmission information CATT CR Rel-16 38.321 16.1.0 0763 - F 5G\_V2X\_NRSL-Core

R2-2006616 Corrections on TS 37.324 CATT CR Rel-16 37.324 16.1.0 0017 - F 5G\_V2X\_NRSL-Core

R2-2006617 Correction on BSR procedure CATT CR Rel-16 38.321 16.1.0 0764 - F 5G\_V2X\_NRSL-Core

R2-2006618 Correction on the SR cancellation condition CATT CR Rel-16 38.321 16.1.0 0765 - F 5G\_V2X\_NRSL-Core

R2-2006619 Correction on the LCP procedure CATT CR Rel-16 38.321 16.1.0 0766 - F 5G\_V2X\_NRSL-Core

R2-2006623 Remaining Issue of the UL/SL Prioritization CATT discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2006704 Corrections to 5G V2X with NR Sidelink LG Electronics France CR Rel-16 38.321 16.1.0 0773 - F 5G\_V2X\_NRSL

R2-2006706 Corrections to 5G V2X with NR Sidelink LG Electronics France CR Rel-16 36.321 16.1.0 1485 - F 5G\_V2X\_NRSL

R2-2006739 Discussion on remaining issues of NR UL-SL prioritisation ZTE Corporation, Sanechips discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2006740 CR on TS 38.321 for UL-SL prioritization issues for NR V2X ZTE Corporation, Sanechips CR Rel-16 38.321 16.1.0 0776 - D 5G\_V2X\_NRSL-Core

R2-2006741 CR on TS 36.321 for UL-SL prioritization issues for NR V2X ZTE Corporation, Sanechips CR Rel-16 36.321 16.1.0 1486 - D 5G\_V2X\_NRSL-Core

R2-2006742 CR on TS 38.321 for issues related to NR V2X LCP ZTE Corporation, Sanechips CR Rel-16 38.321 16.1.0 0777 - D 5G\_V2X\_NRSL-Core

R2-2006743 CR on TS 38.321 for miscellaneous issues for NR V2X resource selection ZTE Corporation, Sanechips CR Rel-16 38.321 16.1.0 0778 - D 5G\_V2X\_NRSL-Core

R2-2006762 Discussion on setting of range parameter in SCI InterDigital, Apple, Ericsson, Qualcomm, Nokia, Mediatek, Fraunhofer HHI, Fraunhofer IIS, Convida Wireless discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2006763 Corrections for setting of range parameter in SCI InterDigital, Apple, Ericsson, Qualcomm, Nokia, Mediatek, Fraunhofer HHI, Fraunhofer IIS, Convida Wireless CR Rel-16 38.321 16.1.0 0779 - F 5G\_V2X\_NRSL-Core

R2-2006764 Correction for Determining Need for Next Transmission for DG with HARQ Disabled InterDigital, Apple CR Rel-16 38.321 16.1.0 0780 - F 5G\_V2X\_NRSL-Core

R2-2006765 Miscellaneous Corrections on HARQ Process Operation InterDigital, Apple CR Rel-16 38.321 16.1.0 0781 - F 5G\_V2X\_NRSL-Core

R2-2006766 Corrections to HARQ-Based RLF at TX UE InterDigital, Apple CR Rel-16 38.321 16.1.0 0782 - F 5G\_V2X\_NRSL-Core

R2-2006768 Discussion on prioritization between UL and SL OPPO discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2006769 Discussion on resource and HARQ process id of configured grant OPPO discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2006776 Corrections to data inactivity monitoring considering SL logical channels Samsung Electronics Co., Ltd CR Rel-16 38.321 16.1.0 0783 - F 5G\_V2X\_NRSL-Core

R2-2006818 Discussion on HARQ related issues ZTE Corporation, Sanechips discussion 5G\_V2X\_NRSL-Core

R2-2006819 CR on TS 38.321 for HARQ issues for NR V2X ZTE Corporation, Sanechips CR Rel-16 38.321 16.1.0 0788 - D 5G\_V2X\_NRSL-Core

R2-2006820 CR on TS 38.321 for remaining HARQ issues for NR V2X ZTE Corporation, Sanechips CR Rel-16 38.321 16.1.0 0789 - D 5G\_V2X\_NRSL-Core

R2-2006823 CR on TS 38.321 for Sidelink grant issues for NR V2X ZTE Corporation, Sanehcips CR Rel-16 38.321 16.1.0 0790 - D 5G\_V2X\_NRSL-Core

R2-2006877 Corrections to SL-BSR truncation Ericsson, Qualcomm Incorporated CR Rel-16 38.321 16.1.0 0792 - F 5G\_V2X\_NRSL-Core

R2-2007021 Discussion on NR-V2X MAC left issues Fujitsu discussion Rel-16 5G\_V2X\_NRSL-Core R2-2004889

R2-2007090 Correction on SL-SCH MAC header Apple, InterDigital Inc. CR Rel-16 38.321 16.1.0 0797 - F 5G\_V2X\_NRSL-Core

R2-2007091 Correction on UL/SL Prioritization procedures Apple, InterDigital Inc. CR Rel-16 38.321 16.1.0 0798 - F 5G\_V2X\_NRSL-Core

R2-2007092 Correction on Sidelink resource selection procedures Apple CR Rel-16 38.321 16.1.0 0799 - F 5G\_V2X\_NRSL-Core

R2-2007093 Correction on Sidelink LCP procedure Apple CR Rel-16 38.321 16.1.0 0800 - F 5G\_V2X\_NRSL-Core

R2-2007094 Correction on Sidelink HARQ Process Apple, InterDigital Inc. CR Rel-16 38.321 16.1.0 0801 - F 5G\_V2X\_NRSL-Core

R2-2007241 Correction on ciphering and integrity functions for NR SL communication in TS 38.323 Huawei, HiSilicon CR Rel-16 38.323 16.1.0 0053 - F 5G\_V2X\_NRSL-Core

R2-2007247 RLF in absence of data Lenovo, Motorola Mobility discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2007287 Prioritization between UL Uu and SL when priorities are not configured Ericsson CR Rel-16 38.321 16.1.0 0811 - F 5G\_V2X\_NRSL-Core

R2-2007288 Prioritization between UL Uu and SL when priorities are not configured Ericsson CR Rel-16 36.321 16.1.0 1493 - F 5G\_V2X\_NRSL-Core

R2-2007289 Prioritization between UL Uu and SL when priorities are not configured Ericsson discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2007297 Corrections to Sidelink HARQ entity Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.1.0 0812 - D 5G\_V2X\_NRSL-Core

R2-2007500 Corrections on LCP procedure for NR V2X Lenovo (Beijing) Ltd discussion Rel-16 5G\_V2X\_NRSL-Core

R2-2007640 Sidelink type 2 groupcast reception upon member ID Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.1.0 0831 - F 5G\_V2X\_NRSL-Core

R2-2007648 Correction to Sidelink mode 2 resource selection for retransmission Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.1.0 0832 - F 5G\_V2X\_NRSL-Core

R2-2007733 Clarification on ciphering for Direct Security Mode Command message ASUSTeK CR Rel-16 38.323 16.1.0 0054 - F 5G\_V2X\_NRSL-Core

R2-2007734 Clarification on PC5 QoS flow remapping ASUSTeK CR Rel-16 37.324 16.1.0 0018 - F 5G\_V2X\_NRSL-Core

R2-2007735 MAC Corrections for NR V2X ASUSTek CR Rel-16 38.321 16.1.0 0836 - F 5G\_V2X\_NRSL-Core

R2-2007787 Clarification on NR UL and SL transmission prioritization with pre-configured priority thresholds - Inexistence of “Issue 2” discussed by RAN plenary Huawei, HiSilicon discussion 5G\_V2X\_NRSL-Core

R2-2007858 Correction on the HARQ-based Sidelink RLF detection Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0842 - F 5G\_V2X\_NRSL-Core

R2-2007873 Support RLC Re-establishment vivo discussion

R2-2007874 Corrections to SL-BSR triggered by retxBSR-Timer expiry vivo CR Rel-16 38.321 16.1.0 0844 - F 5G\_V2X\_NRSL-Core

R2-2007875 Miscellaneous corrections for MAC vivo CR Rel-16 38.321 16.1.0 0845 - F 5G\_V2X\_NRSL-Core

R2-2007878 Corrections to the scope of PDU format for V2X vivo CR Rel-16 38.323 16.1.0 0055 - F 5G\_V2X\_NRSL-Core

R2-2007879 RACH for CSI reporting vivo discussion

R2-2007900 Resource reservation period Qualcomm Finland RFFE Oy draftCR Rel-16 38.321 16.1.0 5G\_V2X\_NRSL-Core

R2-2007907 Miscellaneous corrections to 38.321 for V2X Huawei, Hisilicon CR Rel-16 38.321 16.1.0 0850 - F 5G\_V2X\_NRSL-Core

R2-2007909 Correction on the MAC reset Huawei, Hisilicon CR Rel-16 38.321 16.1.0 0851 - F 5G\_V2X\_NRSL-Core

R2-2007910 Correction on HARQ feedback on PUCCH Huawei, Hisilicon CR Rel-16 38.321 16.1.0 0852 - F 5G\_V2X\_NRSL-Core

R2-2007911 Correction on MAC subheaders for SL-SCH Huawei, Hisilicon CR Rel-16 38.321 16.1.0 0853 - F 5G\_V2X\_NRSL-Core

R2-2007912 Correction on sidelink BSR Huawei, Hisilicon CR Rel-16 38.321 16.1.0 0854 - F 5G\_V2X\_NRSL-Core

R2-2007913 Correction on soft buffer handling for RX UE Huawei, Hisilicon CR Rel-16 38.321 16.1.0 0855 - F 5G\_V2X\_NRSL-Core

R2-2007914 Correction on NR UL and LTE SL prioritization Huawei, Hisilicon CR Rel-16 38.321 16.1.0 0856 - F 5G\_V2X\_NRSL-Core

R2-2007915 Correction on logical channel prioritization Huawei, Hisilicon CR Rel-16 38.321 16.1.0 0857 - F 5G\_V2X\_NRSL-Core

R2-2007916 Correction on resource (re)selection Huawei, Hisilicon CR Rel-16 38.321 16.1.0 0858 - F 5G\_V2X\_NRSL-Core

R2-2007918 Discussion on sidelink grant handling Huawei, Hisilicon discussion

R2-2007919 Discussion on the calculation of SL CG occasion Huawei, Hisilicon discussion

R2-2007924 Correction to C-DRX for NR SL communication Samsung Electronics CR Rel-16 38.321 16.1.0 0859 - F 5G\_V2X\_NRSL-Core

R2-2007925 Correction to Destination Index in SL-BSR MAC CE Samsung Electronics CR Rel-16 38.321 16.1.0 0860 - F 5G\_V2X\_NRSL-Core

R2-2007926 Correction to LCP procedures Samsung Electronics CR Rel-16 38.321 16.1.0 0861 - F 5G\_V2X\_NRSL-Core

R2-2007927 Correction to LTE Uu control for NR SL communication Samsung Electronics CR Rel-16 38.321 16.1.0 0862 - F 5G\_V2X\_NRSL-Core

R2-2007928 Correction to RNTI for V2X SL communication Samsung Electronics CR Rel-16 38.321 16.1.0 0863 - F 5G\_V2X\_NRSL-Core

R2-2007929 Correction to sidelink specific MAC reset Samsung Electronics CR Rel-16 38.321 16.1.0 0864 - F 5G\_V2X\_NRSL-Core

R2-2007930 Correction to MAC subheader for SL-SCH Samsung Electronics CR Rel-16 38.321 16.1.0 0865 - F 5G\_V2X\_NRSL-Core

R2-2007931 Correction to PSFCH reception Samsung Electronics CR Rel-16 38.321 16.1.0 0866 - F 5G\_V2X\_NRSL-Core

R2-2007932 Correction to SL BSR trigger event Samsung Electronics CR Rel-16 38.321 16.1.0 0867 - F 5G\_V2X\_NRSL-Core

R2-2007933 Correction to TX resource pool selection procedures Samsung Electronics CR Rel-16 38.321 16.1.0 0868 - F 5G\_V2X\_NRSL-Core

R2-2007934 Correction to TX resource selection check procedures Samsung Electronics CR Rel-16 38.321 16.1.0 0869 - F 5G\_V2X\_NRSL-Core

R2-2007935 Miscelleneous corrections to NR SL communication Samsung Electronics CR Rel-16 38.321 16.1.0 0870 - F 5G\_V2X\_NRSL-Core

R2-2007964 Discussion on groupcast HARQ feedback without location Huawei, Hisilicon discussion

R2-2008029 CR to 38.321 on SL HARQ ACK transmission LG Electronics France CR Rel-16 38.321 16.1.0 0875 - F 5G\_V2X\_NRSL

### 6.4.4 UE capabilities

Including outcome of email discussion [Post110-e][707][V2X] V2X UE capabilities (OPPO). Please contact / coordinate with CR rapporteur for small changes.

R2-2006584 [Draft] LS on V2X UE capability OPPO LS out Rel-16 5G\_V2X\_NRSL-Core To:RAN1, RAN4 Late

R2-2006586 Summary of [Post110-e][707][V2X] V2X UE capabilities (OPPO) OPPO discussion Rel-16 5G\_V2X\_NRSL-Core Late

R2-2006587 Draft 38.331 CR for V2X UE capability (for RAN2 capability) OPPO draftCR Rel-16 38.331 16.1.0 5G\_V2X\_NRSL-Core Late

R2-2006588 Draft 38.306 CR for V2X UE capability (for RAN2 capability) OPPO draftCR Rel-16 38.306 16.1.0 5G\_V2X\_NRSL-Core Late

R2-2006589 Draft 38.331 CR for V2X UE capability (for RAN1/RAN4 capability) OPPO draftCR Rel-16 38.331 16.1.0 5G\_V2X\_NRSL-Core Late

R2-2006590 Draft 38.306 CR for V2X UE capability (for RAN1/RAN4 capability) OPPO draftCR Rel-16 38.306 16.1.0 5G\_V2X\_NRSL-Core Late

R2-2006591 36.331 CR for V2X UE capability OPPO CR Rel-16 36.331 16.1.0 4349 - B 5G\_V2X\_NRSL-Core Late

R2-2006592 36.306 CR for V2X UE capability OPPO CR Rel-16 36.306 16.1.0 1777 - B 5G\_V2X\_NRSL-Core Late

R2-2007240 Correction on band filtering function in capability exchange in PC5 RRC Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1809 - F 5G\_V2X\_NRSL-Core

R2-2007252 Reducing the signalling of peer UE capability transfer in unicast sidelink Nokia, Nokia Shanghai Bell discussion 5G\_V2X\_NRSL-Core

## 6.5 NR Industrial Internet of Things (IoT)

(NR\_IIOT-Core; leading WG: RAN2; REL-16; started: Mar 19; Completed: Jun 20; WID: RP-200797; SR: RP-200796)

Email max expectation: 5 email threads

### 6.5.1 General and Stage 2 corrections

Incoming LS

R2-2006505 Reply LS on Intra-UE Prioritization R1-2004899; contact: LGE) RAN1 LS in Rel-16 NR\_IIOT-Core To:RAN2

* Noted

R2-2006509 LS on Intra-UE Prioritization for data with different priorities (R1-2005078; contact: vivo) RAN1 LS in Rel-16 NR\_IIOT-Core To:RAN2

- vivo think this is already consistent w R2 TS.

- ZTE wonder if this measn that ongoing transmission cannot be canceled.

- vivo think the cancel can only be done for CG CG.

- Ericsson think it is not clear what the word cancel transmission means (in the conclusion).

- Apple agrees that this is unclear, another Q is whether we can R15 version of grant prioritization? CATT think we have R15 behaviour when both have equal priority, otherwise the respective priority applies.

- Nokia think this is resolved in MAC already, as the MAC text refer to “grants whose PUSCH can be transmitted”. Samsung agres in MAC there is no issue with this. CATT agrees that MAC text is generic enough.

- LG agrees the current text is ok, and the result is that MAC shall not generate overlapping second PDU in many cases. The only case when MAC shall generate such PDU is CG CG collision with second PDU of higher priority than the first. Apple would like to clarify the behaviour to be that MAC never generates an overlapping MAC PDU.

- MTK wonder if for overlapping grants, if MAC generates a PDU but the priority is not according to expected (by L1), will L1 send it or not? (or will L1 wait for the “other” one). Vivo think that once PUSCH PDU is prepared L1 will transmit it (if no collision). Ericsson agrees with this unclarity.

- Oppo wonder whether MAC take into account L1 priority in collision cases CDDG? Samsung think that if same priority then R15 behaviour, and then if LCH based prioritization is configured, then MAC will prioritize acc to Logical channel priority. ZTE think there is a paper on this.

- CATT think the Questions by Oppo and MTK are key, and it is important that L1 follows MAC, but this is already clear in L1 TS. Lenovo agrees that L1 has no issue as long as MAC just generates one PDU. Huawei would like to double-check the L1 behaviour.

- LG think that for CGDG collision there is no case where a second PDU can pre-empt transmission of a first PDU, and a second PDU shall then not be generated.

- ZTE think the current MAC is ok as is. Lenovo agrees.

- Samsung think L1 TS is clear, and L1 will just transmit the PDU it received from MAC.

* Noted

R2-2006518 Response LS on Network Coordination for UL PDCP Duplication (R3-204168; contact: Nokia) RAN3 LS in Rel-16 NR\_IIOT-Core To:RAN2

- Nokia think we cant do anything anyway. We can rely on implementation.

- ZTE think no one want to change anything.

- CATT agrees this was discussed offine and the majority want to keep behaviour.

- Nokia think this will not be re-opened in R17 either, as there is no objective.

- LG think the UE will anyway follow the received MAC CE.

* Noted

DC+CA duplication clarifications

* [AT111-e][043][IIOT] Stage 2, DC CA duplication clarifications (Nokia)

Scope: take into account online discussion, Treat R2-2006918, 6919, 7133, 7891, 8056, 6637, 7138, 7387, 7149, 7150, Determine agreeable parts. Agree CRs

Deadline: Aug 26 0900 UTC. Intermediate deadlines by Rapporteur if needed.

Treat on-line first

R2-2006917 LCH Mapping Restriction issues with DC+CA PDCP Duplication Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_IIOT-Core

DISCUSSION

- Samsung agree with all proposals.

- Ericsson agree with 1 and 2, but for 3, there are more cases to consider.

e.g.) when 3 CA legs are configured, and one is deactived, the restriction should be lifted as well. LG think that in this case the restriction shall not be lifted for the 2 remaining and for the 1 deactived LCH it will not be used so there is no issue. Ericsson think the issue is that there will still be data in the L2 buffers for the deactived LCH, and this will cause issues on activation. Apple think the transmission can continue until buffers are empty. Nokia think after deactivated we can still keep restriction, and likely the data can be transmitted anyway. Mediatek think this is not an issue if the serving cell is still active, but timers can handle corner cases.

- vivo thikn 2 need to be complemented, such that if all CA legs are deactivated, CA duplication is deactivated. Nokia don’t understand the point as duplication no longer exists

- Oppo think one case is missing, if 3 legs are configured to a CG and all are deactivated then, duplication restriction should be lifted. For DC duplication, if a CG has a single logical channel and this leg is deactiveated, then restriction should be kept. Nokia think there is no issue to resolve at all on this. Huawei think that for this second issue, the cell restriction can be configured for different purpose, but think the issue might not be there, but this may be the behaivour already. Nokia agrees, they are served by different MAC entities. MTK think that wil Cell groups with zero legs ther eis no issue, there will be no transmissions.

- LG think this is simple, if there are > 1 LCH active for duplication the restrictions applies, and if =1 then restriction shall be lifted.

- Apple Agrees with LG. Nokia as well. Huawei agrees as well. Mediatek agrees as well. Lenovo agrees as well.

- CATT think that R15 behaivour is different. Nokia think that we just lift restriction in the cell group for which the condition applies, not for other cell groups (which may have CA duplication as well). Nokia think this case didn’t exist in R15. LG agrees, and a restriciton is just for one MAC entity. Intel agrees as well. Huawei also agrees with Nokia, and think the proposals seem consistent with r15. CATT still think there is a difference.

- Intel think that if PDCP duplication is deactived then the remaning data is discarded. LG think that for segments of a PDU for which transmission has started will continue, they are not discarded. Huawei think this data buffering is not an issue.

- vivo still wonder what happens if also the last leg is deactived, shall the cell restriction be restored or not? Based on given comments, Chair think this it not the key point and can be discuss when discussing the CR(s). Huawei agrees this can be discussed. Lenovo thikn current spec is clear, the R15 behaviour when CA duplication is deactivated (altogether).

- Samsung think MAC TS should also be updated. Nokia agrees.

- OPPO think we can have a deactived leg that is used for split bearer transmission. Nokia think that we only apply split bearer operation when the whole duplication is deactivated. Nokia think that for split bearer, the restriction does not apply at all, and Nokia thikn this is the current behavior. ZTE agrees with Nokia, and think R16 the situation is indeed different. We can discuss in detail by email. Chair think indeed if we find problems with this they can be addressed by email. LG think current specification is crystal clear.

- Nokia and Huawei confirms the intention that these proposals only apply when CA duplication is configured.

- Ericsson wonder if a timer can resolve the buffering. MTK think that for SDUs, they are immediately discarded, and for sgements, also for RLC UM there are timers.

* P1, P2, P3 are agreed (can still take into accont additional aspects acc to discussion above by email)
* CR for 38300 (6918 is the baseline), 38321 (6919 is the baseline) by email.

[R2-2008537](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008537.zip) Summary of e-mail discussion: [AT111-e][043][IIOT] Stage 2, DC CA duplication clarifications Nokia

* [043] LCH mapping restriction is not lifted for a LCH in a cell group when the RLC entity for that LCH is deactivated for duplication, but CA duplication in that cell group is still activated.
* [043] LCH mapping restrictions are lifted for LCHs in a cell group, when CA duplication in that cell group is deactivated. The agreements relating to conditions of lifting LCH mapping restriction for CA duplication in a cell group can be revised as:

=> CA-duplication in a cell group can be deemed as deactivated if ~~only~~ at most one logical channel for the DRB remains activated in the cell group, regardless of whether the cell group is associated to the primary RLC or not.

=> For CA-duplication in a cell group, LCH mapping restriction of allowed serving cells is lifted when ~~only~~ at most one logical channel remains active in the cell group for a duplicated DRB, regardless of whether the cell group is associated to the primary RLC or not.

* [043] RAN2 does not specify behaviour of keeping LCH mapping restriction upon deactivation of duplication for LCHs in cell groups wherein CA duplication is not configured.
* [043] Stage-2 specification should be updated to extend the relationship between SCell activation/deactivation and duplication activation/deactivation for cases with more than two RLC entities.
* [043] RLC failure reporting is triggered in case of RLC failure if there are multiple active RLC entities for a DRB with PDCP duplication configured in this cell group. Discuss further about how it should be captured in the specifications.
* [043] The description of primaryPath should be updated to reflect Rel-16. Discuss further about how it should be captured in the specifications.

R2-2006918 Stage-2 CR for clarifications of DC+CA PDCP Duplication Nokia, Nokia Shanghai Bell CR Rel-16 38.300 16.2.0 0263 - F NR\_IIOT-Core

[R2-2008538](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008538.zip) Stage-2 CR for clarifications of DC+CA PDCP Duplication Nokia, Nokia Shanghai Bell CR Rel-16 38.300 16.2.0 0263 1 F NR\_IIOT-Core

* [043] Agreed

R2-2006919 MAC CR for clarifications of DC+CA PDCP Duplication Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.1.0 0793 - F NR\_IIOT-Core

* [043] Merged

3 docs moved from 6.5.4.1:

R2-2007133 Corrections on differentiating CA and DC duplication Ericsson discussion Rel-16 NR\_IIOT-Core

R2-2008056 Cell Restriction Lifting in CA+DC Duplication Samsung discussion Rel-16 NR\_IIOT-Core

R2-2007138 Consideration on LCH mapping restriction when duplication deactivation OPPO discussion Rel-16 NR\_IIOT-Core

R2-2007149 Discussion on CA duplication and DC+CA duplication vivo discussion

* [043] Four docs above Noted

R2-2007891 38300 CR Corrections on Packet Duplication LG Electronics Inc. CR Rel-16 38.300 16.2.0 0289 - F NR\_IIOT-Core

R2-2006637 Clarify Packet Duplication in 38.300 CATT CR Rel-16 38.300 16.2.0 0257 - F NR\_IIOT-Core

R2-2007387 Clarification on definition of DC+CA duplication Huawei, HiSilicon CR Rel-16 38.300 16.2.0 0276 - F NR\_IIOT-Core

R2-2007150 38.300 Clarification on relationship between PDCP duplication and SCell activation/deactivation vivo CR Rel-16 38.300 16.2.0 0269 - F NR\_IIOT-Core

### 6.5.2 RRC Corrections

Can treat by email, however, PDCP duplication should await stage2 first

* [AT111-e][031][IIOT] RRC Corrections (Ericsson)

Scope: Treat R2-2006888, 6710/6711, 6828, 6727, 7142/7151, 7388. Determine agreeable parts in a first phase. Agree CRs in a second phase

Deadline: Aug 26 0900 UTC. Intermediate deadlines by Rapporteur if needed.

R2-2008492 Summary on [AT111e][031][IIOT] RRC Corrections (Ericsson) Ericsson

* Proposal 1 [031] Add the procedure text that if *drb-continueEHC-DL* is included in *pdcp-Config*, then it indicates to the lower layer before PDCP re-establishment. The same change applies for *drb-continueEHC-UL.*
* Proposal 2 [031] Move the field description that ”The NW may release a SPS configuration at any time.” from ToAddModList to ToReleaseList for SPS. The same change applies for configured grant configuration.
* Proposal 3 [031] Clarify in the field description that ”If the field pdsch-AggregationFactor is absent in sps-Config, then UE applies PDSCH aggregation factor of PDSCH-Config.”
* Proposal 5 [031] Clarify, in the field description of pdcp-Duplication, that it is always present when PDCP entity is configured with more than two associated RLC entities for UL transmission.
* Proposal 8 [031] Capture in the field description of ethernetHeaderCompression that ”This field can only be configured for a bi-directional DRB”.
* Proposal 4 [031] Change the unit of the extended SPS periodicity (i.e., RRC field periodicityExt) from slots to milliseconds.
* Proposal 6 [031] Clarify in the field description that network can only configure SPS configuration in one BWP using either sps-Config or sps-ConfigToAddModList. The same restriction applies for configured grant configuration.
* Proposal 7a [031] The field *configuredGrantConfigIndexMAC* is mandatory present if at least one configured grant is configured by *configuredGrantConfigToAddModList-r16* in any BWP of this MAC entity, otherwise it is optionally present, need R.

Miscellaneous RRC (and a related MAC CR)

R2-2006888 Miscellaneous RRC corrections for NR IIoT Ericsson, Samsung CR Rel-16 38.331 16.1.0 1747 - F NR\_IIOT-Core

R2-2008610 Miscellaneous RRC corrections for NR IIoT Ericsson, Samsung CR Rel-16 38.331 16.1.0 1747 1 F NR\_IIOT-Core

* [031] Agreed

R2-2008529 Correction on the calculation of HARQ Process ID for SPS Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0774 1 F NR\_IIOT-Core

* [031] Agreed

SPS CG

R2-2006711 Correction on the unit of extended SPS periodicities Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1732 - F NR\_IIOT-Core

* [031] Merged

R2-2006828 Correction on field description of configuredGrantConfig and SPS-Config Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1740 - F NR\_IIOT-Core

* [031] Merged

EHC

R2-2006727 Correction on field description of ethernetHeaderCompression Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1733 - F NR\_IIOT-Core

* [031] Merged

PDCP duplication

R2-2007142 A clarification of pdcp-Duplication field OPPO CR Rel-16 38.331 16.1.0 1790 - F NR\_IIOT-Core

* [031] Merged

R2-2007151 38.331 Clarification on pdcp-Duplication IE vivo CR Rel-16 38.331 16.1.0 1791 - F NR\_IIOT-Core

* [031] Merged

R2-2007388 Correction on configuration of PDCP duplication Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1841 - F NR\_IIOT-Core

Withdrawn

R2-2006710 Discussion about the misalignment of the unit of SPS periodicities Huawei, HiSilicon discussion Rel-16 NR\_IIOT-Core Withdrawn

### 6.5.3 MAC Corrections

Intra UE prioritisation

Treat on-line first

* [AT111-e][044][IIOT] Intra UE prioritization (Apple)

Scope: Determine agreeable parts (before CRs), take into account on-line outcome. Agree CRs and LS out. Treat R2-2006920, 7127, 7237, 8058, 7106, 7107, 7108

Deadline: Aug 27 0900 UTC, Intermediate deadlines by Rapporteur if needed.

R2-2007131 Corrections for intra-UE prioritization Ericsson discussion Rel-16 NR\_IIOT-Core

DISCUSSION

P1

- CATT think this should never happen. The text we added last meting shold cover this.

- LG support P1 and P3. LG think cancellation is not predictable, and think we need some rule to handle this.

- MTK has some sympathy, and think the current text do not cover this text.

- Apple also support P1 and P3. Apple wonder if MAC always deliver PDU. Samsung think it depends on scenario, for CGCG it is up to UE impl,

- Samsung think for this case, we need to do something in MAC. Support P1

- vivo also support P1, and think this can happen in reality.

- Oppo support P1 but wonder how MAC can know this. Oppo think L1 can signal to MAC.

- Lenovo think p1 is needed. Sony agrees.

- CATT think we should ask R1 if this can happen,

P2

- vivo think the L1 text looks like UE is madated to transmit, but the text is not completely correct. We can send an LS on this point. Huawei think UL skip can be supported in R15 but the L1 behaviour is not specified, we can wait for R1 progress, and another LS can make the discussion complex.

- Samsung think UL skip is implemented in MAC and if the L1 has nothing to send so it works. L1 problems can be resolved in R1 no need for LS. QC think this is not a big issue and R1 can fix this. Ericsson think we should be cautious and ask if this is supported, we don’t need to ask R1 to change anything. Apple also think an LS is not needed.

- Nokia think L1 will process whatever is delivered, but are ok to send an LS. Oppo agrees with Nokia, but also think an LS can be sent, and Oppo think we can ask slightly more. Lenovo also think L1 shall process whatever is gets, but are ok to send an LS.

- Sony understand that for DG, the UE always need to transmit something, and it triggeres retransmissions as well. When there is a collision this might be a new case, and we should send an LS to be clear.

- MTK think everyone agrees on the behaviour, and think it is good to check with R1.

P3

- Oppo support P3.

- QC think this is not in the TP, and the TP is OK.

- Samsung are also ok with the TP, but proposal 3 as is doesn’t need to be agreed.

TP

- Huawei think the first change can be merged with the line before it.

* If the corresponding MAC PDU of a configured uplink grant has been delivered to PHY but cancelled by a high PHY-priority index PUCCH transmission as specified in clause 9 of TS 38.213, this uplink grant is a de-prioritized uplink grant.
* Send an LS to RAN1 to ask if the scenario is supported: In the collision scenario between CG and DG and only one transport block of either grant is delivered to PHY, PHY can transmit on the grant for which a transport block is delivered and skip the transmission on the other grant.
* p3 as reflected in the TP is agreed
* Continue by email [044], LS and CR.

R2-2008057 Issue on independent configuration of intra-UE prioritization Samsung discussion Rel-16 NR\_IIOT-Core

- vivo think we can have network config restrictions so there is no such case.

- LG think this is not needed, MAC will process every grant. Samsung think that L1 assumes one PDU is delivered, if two are delivered L1 will send the last one.

- Nokia have some sympathy but think there is the possibility to choose the grant with higher L1 priority.

- Apple think that we should restrict the configuration, can be ok with a note. Lenovo support to have the note.

- CATT doesn’t support the note, CATT think that if lch-prioritzation is not configured then behaviour should be R15, i.e. expect that CG are non-overlapping. Samsung think this is not acc to previous agreements but think that could resolve, think such restriction would need ot be in Stage-2 etc. Huawei agrees with CATT.

- QC support the note, it seems simpler. MTK agrees.

- ZTE think this is an abnormal case.

- Ericsson think that the network cannot avoid this, it would be too restrictive. The note is needed, and there are already similar note in the LTE TS.

- Chair: Can we agree to the Note? LG: cannot accept the note.

- Chair: it seems there is not completely consistent view on how it works. Only LG think the proposed Note contradicts intended behaviour. However, as it is a note it might not be urgent.

* postponed

R2-2008597 Report of Offline 044: Intra UE Prioritization Apple Inc.

Online late CB:

Apple indicate that P3, 5a, 5b, 9 are controversial and are good to treat on-line

P3

- CATT think the majority want to go for UE implementation, but CATT think that in this version of the TS there is no other choice than the network avoids. UE impl will require TS update. CATT think that might be NBC.

- Huawei also think we should not add new behaviours.

- LG think multiple CG was introduced in R16 and think network cannot completely avoid collisions, and the second bullet is sufficient.

- Ericsson think we have a new case for R16, and we need new behaviour to cover the new case also when neither L1 nor L2 prioritization is configured. Ericsson think these are separate independent capabilities. Samsung agrees with ericsson, and think the multi-CG was introduced to support TSN, and is separate to intra-UE-prioritization.

P5, 5a, 5b

- LG think the situation is changed since 109, and now it seems to not make sense to just use one, and not the other.

- Chair think this may be done later, as configuration restrictions and bundling of UE capabilities can be added later. MTK agrees this is not urgent.

* For the case where both LCH and PHY based prioritization are not configured, it is up to UE implementation on how overlapped configured grants are treated at MAC and delivered to PHY (UE should try to choose one)
* Postpone the discussion on additional conditions for Phy Priority and L2 priority feature (assume this can be added later).

R2-2008058 Priority of Uplink Grant Samsung

Online late CB:

- LG think the current TS is clear, and no majority support. Can be done next meeting. Huawei also think this text is clear, and is used in LTE.

- Samsung think the main unclarity in the current text is about “is multiplexed” and “can be multiplexed”. Samsung think the TP itself can be simplified.

- Chair think that we can indeed do clarifications now, but we can also wait (but not too long).

* Not agreed (for now), clarification can still be considered at next meeting.

R2-2008518 [draft]LS on Intra UE Prioritization Scenario Ericsson LS out

Online late CB:

* LS is approved in R2-2008599

Moved from 6.5.5

R2-2006920 Remaining issues on Intra-UE prioritization Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_IIOT-Core

* [044] Noted

R2-2007127 Handing of inconsistency between PHY-based and LCH-based prioritization configuration China Telecommunications discussion

* [044] Noted

R2-2007137 Consideration on intra-UE prioritization with same PHY priority OPPO discussion Rel-16 NR\_IIOT-Core

* [044] Noted

R2-2008058 Priority of Uplink Grant Samsung discussion Rel-16 NR\_IIOT-Core

* [044] Noted

R2-2007106 Clarifications on intra UE prioritization - capability and configuration Apple discussion Rel-16 38.321 NR\_IIOT-Core

R2-2007107 On conflicting scenarios for LCH and PHY prioritization Apple discussion Rel-16 38.321 NR\_IIOT-Core

R2-2007108 Modifications for LCH and PHY prioritization scenarios Apple CR Rel-16 38.321 16.1.0 0802 - F NR\_IIOT-Core

MAC Support for PDCP Duplication

* [AT111-e][032][IIOT] MAC support for PDCP duplication (ZTE)

Scope: Multi-entry MAC CE: Use R2-2007132 as baseline, can treat R2-2006698 and 6726 to bring in additional aspects, if any, Treat R2-2007390. Activation Deactivation: Treat R2-2007531,6600 (Take into account on-line discussion).

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 27 0900 UTC, Intermediate deadlines by Rapporteur if needed.

R2-2008542 Report of Offline 032: MAC Support For PDCP duplication ZTE, insanechips

* [032] No need to redesign or redefine the RLC activation/deactivation MAC CE when the coordination between SN and MN is not existing in Rel-16.
* [032] Condition of the triggering multiple entry configured grant Confirmation MAC CE is modified to:

“2> if in this MAC entity, at lease one configured uplink grant has been configured by *configuredGrantConfigToAddModList*: ”

(Covered in R2-2008535)

Multiple entry CG MAC CE

R2-2007132 Corrections for Multiple Entry Configured Grant Confirmation MAC CE Ericsson, Samsung discussion Rel-16 NR\_IIOT-Core

* [032] Noted

R2-2006698 Correction of IIoT in 38.321 CATT CR Rel-16 38.321 16.1.0 0772 - F NR\_IIOT-Core

* [032] Not Pursued

R2-2006726 Correction on the term of configuredGrantConfigList Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0775 - F NR\_IIOT-Core

R2-2008535 Correction on the term of configuredGrantConfigList Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0775 1 F NR\_IIOT-Core

* [032] Agreed

[R2-2007390](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2007390.zip) Correction on construction of Multiple Entry Configured Grant Confirmation MAC CE Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0822 - F NR\_IIOT-Core

- Samsung think this could occur in Rel15 as there are other MAC CEs with higher priority.

- ZTE think this text wasn't there before as the MAC CE was very very small in R15.

- Nokia think this is a corner case.

- Chair think this is not really essential so R15 is not a good choice

- Huawei think main purpose is to align with other MAC CEs.

- Chair: there is some objections, so cannot agree, at least not now.

* Not agreed

Activation Deactivation

R2-2007531 Considerations on the Duplicagtion RLC ativation/deactivation MAC CE ZTE Corporation, Sanechips discussion Rel-16 NR\_IIOT-Core

* [032] Noted

R2-2006600 Clarification on Duplication RLC Activation/Deactivation MAC CE vivo CR Rel-16 38.321 16.1.0 0762 - F NR\_IIOT-Core

* [032] not pursued

HARQ PID for SPS

R2-2006712 Correction on the calculation of HARQ Process ID for SPS Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0774 - F NR\_IIOT-Core

* [031] Merged

R2-2007527 CR on 38.321 for SPS resources and HARQ process ID calculation ZTE Corporation, Sanechips CR Rel-16 38.321 16.1.0 0828 - F NR\_IIOT-Core

* [031] Not Pursued
* [AT111-e][033][IIOT] MAC Corrections II (Samsung)

Scope: HARQ PID for SPS: Treat R2-2006712/7527 (related to RRC discussion), and R2-2007136. UE autonoumous retransmission: Treat R2-2007147, 7530, 6863, 7389, 8055

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 27 0900 UTC, Intermediate deadlines by Rapporteur if needed.

[R2-2008397](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008397.zip) Report of Offline 033: IIOT MAC Corrections II Samsung

* [033] “transmission of a MSGA payload” is replaced by “PUSCH duration of a MSGA payload” in 5.4.1 and 5.4.4. TP in R2-2006863, R2-2008055 is a baseline.
* [033] “considered as” is inserted in the description of prioritization of cancelled uplink grant.
* [033] MAC spec does not clarify that *harq-ProcID-Offset2* is configured only for operation in licensed spectrum.
* [033] Condition of autonomous Tx is modified: “de-prioritized” to “not prioritized”.

“3> if the previous configured uplink grant, in the BWP, for this HARQ process was not prioritized de-prioritized; and”

R2-2008055 Miscellaneous corrections for IIOT MAC Samsung CR Rel-16 38.321 16.1.0 0876 - F NR\_IIOT-Core

* [031] Some contents merged to Other MAC CR
* [033] Revised

[R2-2008496](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008496.zip) Miscellaneous corrections for IIOT MAC Samsung CR Rel-16 38.321 16.1.0 0876 1 F NR\_IIOT-Core

* [033] Agreed

UE autonomous retransmissions

R2-2007147 UE autonomous retransmission considering the processing time vivo,Samsung, Lenovo CR Rel-16 38.321 16.1.0 0805 - F NR\_IIOT-Core

* [033] Merged (partly)

R2-2007530 Considieration on the lack of time to process the autonomous transmission ZTE Corporation, Sanechips discussion Rel-16 NR\_IIOT-Core

* [033] Noted

RACH collissions

R2-2006863 CR to PUSCH duration comparision with MSGA transmission Fujitsu CR Rel-16 38.321 16.1.0 0791 - F NR\_IIOT-Core

* [033] Merged (partly)

R2-2007389 Correction on resource overlapping with grants addressed to T-C-RNTI Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0821 - F NR\_IIOT-Core

* [033] Merged (partly)

### 6.5.4 PDCP Corrections

#### 6.5.4.1 Duplication

#### 6.5.4.2 Ethernet Header Compression

Treat on-line first

* [AT111-e][034][IIOT] EHC Corrections (Samsung)

Scope: Take into account on-line outcome, Treat R2-2008044, 6728, 8030, 8034, 8035

Determine agreeable parts, Agree CRs

Deadline: Aug 27 0900 UTC, Intermediate deadlines by Rapporteur if needed.

[R2-2008478](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008478.zip) [AT111-e][034][IIOT] EHC Corrections Samsung

* [034] Noted, proposals are agreed, and reflected below

LTE EHC for Split and LWA DRBs

R2-2008036 LTE EHC configuration for split and LWA DRBs Samsung discussi

- LG support, vivo as well.

* EHC is not supported for split and LWA DRBs.

R2-2008044 CR on LTE EHC configuration Samsung CR Rel-16 36.331 16.1.1 4422 - F NR\_IIOT-Core

- [034] Rap: Agree to R2-2008044 However, this CR needs to be revised to enhance the CR quality based on companies’ comments.

* [034] Revised

[R2-2008480](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008480.zip) CR on LTE EHC configuration Samsung CR Rel-16 36.331 16.1.1 4422 1 F NR\_IIOT-Core

* [034] Agreed

Context overwrite

R2-2006725 Discussion about the decompression failure caused by context overwriting in EHC Huawei, HiSilicon discussion Rel-16 NR\_IIOT-Core

DISCUSSION

- LG think there may be issues with out-of-order delivery so this should be avoided. Vivo agrees. Samsung also agrees.

- MTK are not sure there is a problem, and think out-of-order is important for URLLC. Oppo think there is no issues, and think implementation can avoid this. Nokia also think this is an implementation issue, no change needed. Sony agrees that out-of-order delivery shall be supported. QC agrees 1 is not acceptable.

- Chair: Seems 3 may be the way an implementation could resolve this.

- Chair: no consensus to change anything in the TS.

* Noted

Out-of-order delivery

Moved from 6.5.4:

R2-2006728 Correction on receive opearation when both EHC and out-of-order delivery are configured for a DRB Huawei, HiSilicon CR Rel-16 38.323 16.1.0 0050 - F NR\_IIOT-Core

- [034] Rap: Agree to To the contents of R2-2006728 However, this CR needs to be revised to enhance the CR quality, e.g. word style is not aligned with the current specification).

* [034] revised

[R2-2008479](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008479.zip) Correction on receive opearation when both EHC and out-of-order delivery are configured for a DRB Huawei, HiSilicon CR Rel-16 38.323 16.1.0 0050 1 F NR\_IIOT-Core

- [034] LG Late comment: Regarding NR PDCP CR (R2-2006728), the text should be changed as “after performing header decompression using EHC”.

- [034] LG Late comment: “if configured” should be removed, as the NR PDCP spec. does not specify “if configured” in the procedure text.

- [034] LG Late comment: The terminology “EHC header decompression” is not used in NR PDCP specification.

- [034] Rap: agree w LG

* [034] Further revised

[R2-2008536](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008536.zip) Correction on receive opearation when both EHC and out-of-order delivery are configured for a DRB Huawei, HiSilicon CR Rel-16 38.323 16.1.0 0050 2 F NR\_IIOT-Core

* [034] Agreed

R2-2008030 EHC decompression failure at LTE PDCP re-establishment Samsung discussion NR\_IIOT-Core

* [034] Noted

R2-2008034 CR on LTE PDCP re-establishment when t-Reordering is used Samsung CR Rel-16 36.323 16.1.0 0290 - F NR\_IIOT-Core

- [034] LG Late comment: Regarding LTE PDCP CR (R2- 2008034), “if configured” should be added, i.e. “perform header decompression (if configured) using EHC“.

- [034] Rap: agree w LG

* [034] Revised

[R2-2008541](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008541.zip) CR on LTE PDCP re-establishment when t-Reordering is used Samsung CR Rel-16 36.323 16.1.0 0290 1 F NR\_IIOT-Core

* [034] Agreed

Withdrawn

R2-2008035 LTE EHC configuration for split and LWA DRBs Samsung discussion Withdrawn

### 6.5.5 Other

Not Treated:

R2-2007148 SFN tracking for the reference time vivo CR Rel-16 38.300 16.2.0 0268 - F NR\_IIOT-Core

## 6.6 NR Positioning Support

(NR\_pos-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Jun 20; WID: [RP-200218](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-200218.zip), SR: [RP-201342](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201342.zip)). R2 and R1 parts are 100% complete.

(NR TEI16 Positioning)

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

Email max expectation: 5 email threads

### 6.6.1 General and Stage 2 corrections

Including incoming LSs, Including impact to 36.305 and 38.305. Stage 2 corrections should be discussed with the specification rapporteur before submission.

R2-2006522 Reply LS on Aperiodic SRS (R3-204379; contact: Intel) RAN3 LS in Rel-16 NR\_pos-Core To:RAN2 Cc:RAN1

R2-2006523 LS on mapping of PosSIB(s) to Area(s) (R3-204380; contact: Huawei) RAN3 LS in Rel-16 NR\_pos-Core To:RAN2

R2-2006841 Signalling sequence for UL SRS Configuration Ericsson discussion Rel-16 38.305

R2-2007630 Correction to SUPL support for NR positioning methods Qualcomm Incorporated CR Rel-16 38.305 16.1.0 0028 - F NR\_pos-Core

R2-2007828 DraftCR to Stage-2 for gNB and LMF information transfer Huawei, HiSilicon CR Rel-16 38.305 16.1.0 0029 - F NR\_pos-Core

R2-2007829 Text proposal on stage2 spec for aperiodic SRS Huawei, HiSilicon CR Rel-16 38.305 16.1.0 0030 - F NR\_pos-Core

R2-2007830 TP for POSITIONING INFORMATION REQUEST Huawei, HiSilicon CR Rel-16 38.305 16.1.0 0031 - F NR\_pos-Core

R2-2007831 Miscellaneous correction to stage2 specification Huawei, HiSilicon CR Rel-16 38.305 16.1.0 0032 - F NR\_pos-Core

### 6.6.2 RRC corrections

Including impact to 36.306, 36.331 and 38.331.

R2-2006544 Remaining issues on measurement gap for NR positioning vivo discussion NR\_pos-Core

R2-2006664 Correction on 38.331 to capture agreements of area scope for posSIB validity CATT CR Rel-16 38.331 16.1.0 1726 - F NR\_pos-Core

R2-2006755 Correction on on-demand SI in RRC\_CONNECTED CATT CR Rel-16 38.331 16.1.0 1736 - F NR\_pos-Core

R2-2006844 Addition of extension marker for positioning SI broadcast status Ericsson CR Rel-16 38.331 16.1.0 1741 - F NR\_pos-Core

R2-2006926 Measurement gaps for PRS-based measurements Ericsson CR Rel-16 38.331 16.1.0 1754 - B NR\_pos-Core

R2-2006942 Minor corrections and update for RRC Positioning Ericsson CR Rel-16 38.331 16.1.0 1757 - F NR\_pos-Core

R2-2007076 Corrections to acquisition of posSIB(s) in RRC\_CONNECTED Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1779 - F NR\_pos-Core

R2-2007078 Corrections to handing posSIB-MappingInfo in received SIB1 Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1781 - F NR\_pos-Core

R2-2007547 Corrections to unused field nr-CarrierFreq and misalignment between LPP and RRC Samsung Electronics Romania CR Rel-16 38.331 16.1.0 1860 - F NR\_pos-Core

R2-2007581 Summary of the AI 6.6.2 for positioning RRC correction Huawei, HiSilicon discussion Late

R2-2007832 Introduction of PRS mesurement gap Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1925 - F NR\_pos-Core

R2-2007837 Correction on PRS mesurement gap capability Huawei, HiSilicon CR Rel-16 38.306 16.1.0 0393 - F NR\_pos-Core

### 6.6.3 LPP corrections

Including impacts to UE capabilites

R2-2006543 Correction of DL-PRS-NumSymbols vivo discussion NR\_pos-Core

R2-2006546 Discussion on remaining issues on LPP vivo discussion NR\_pos-Core

R2-2006663 Correction on 37.355 to capture agreements of area scope for posSIB validity CATT CR Rel-16 37.355 16.1.0 0262 - F NR\_pos-Core

R2-2006847 Need of reference TRP in the TRP-LocationInfo IE for UE-based assistance data distribution efficiency Ericsson discussion Rel-16 37.355

R2-2006949 Handling on RAN1 positioning related capabilities Intel Corporation discussion Rel-16 NR\_pos-Core

R2-2006950 Capture RAN1 positioning related capabilities Intel Corporation CR Rel-16 37.355 16.1.0 0263 - F NR\_pos-Core

R2-2007632 Addition of missing SRS for Positioning capabilities Qualcomm Incorporated CR Rel-16 37.355 16.1.0 0264 - F NR\_pos-Core

R2-2007634 Assistance data sharing and priority for measurements Qualcomm Incorporated CR Rel-16 37.355 16.1.0 0265 - F NR\_pos-Core

R2-2007635 Addition of missing padding rule for initial counter c0 Qualcomm Incorporated CR Rel-16 37.355 16.1.0 0266 - F LCS\_LTE\_acc\_enh-Core, NR\_pos-Core

R2-2007833 Correction of the SRS capability in LPP Huawei, HiSilicon CR Rel-16 37.355 16.1.0 0267 - F NR\_pos-Core

R2-2007834 Correction on SignalMeasurementInformation Huawei, HiSilicon CR Rel-16 37.355 16.1.0 0268 - F NR\_pos-Core

R2-2007835 Correction on ProvideAssistantData Huawei, HiSilicon CR Rel-16 37.355 16.1.0 0269 - F NR\_pos-Core

R2-2007836 Correction on PRS configuration Huawei, HiSilicon CR Rel-16 37.355 16.1.0 0270 - F NR\_pos-Core

R2-2007941 Correction to NR-SSB-Config ZTE Corporation, Sanechips CR Rel-16 37.355 16.1.0 0271 - F NR\_pos-Core

### 6.6.4 MAC corrections

R2-2006545 Discussion on SRS for positioning during the DRX inactive period vivo discussion NR\_pos-Core

### 6.6.5 Other

R2-2007559 Introuduction of UE Capabilitues for support of measurement gaps for PRS-based measurements Ericsson CR Rel-16 38.306 16.1.0 0384 - B NR\_pos-Core

## 6.7 NR mobility enhancements

(NR\_Mob\_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; Completed June 20; WID: [RP-192277](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_85\Docs\RP-192277.zip); SR [RP-201273](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201273.zip)). Documents in this agenda item will be handled in a break out session).

Documents under 6.7 will be treated together with documents in 7.4.

Email max expectation: 8 email threads (with 7.4)

### 6.7.1 General and Stage 2 Corrections

Including incoming LSs (if any).

R2-2007016 Minor Correction for CPC configuration related procedure CATT, ZTE Corporation CR Rel-16 37.340 16.2.0 0218 - F NR\_Mob\_enh-Core

R2-2007266 SCG handling at DAPS HO Ericsson, ZTE Corporation (Rapporteur), Sanechips CR Rel-16 37.340 16.2.0 0219 - F NR\_Mob\_enh-Core

R2-2007267 SCG handling at DAPS HO Ericsson CR Rel-16 38.300 16.2.0 0272 - F NR\_Mob\_enh-Core Late

R2-2007359 Various corrections to NR Mobility enhancements description Nokia, Nokia Shanghai Bell CR Rel-16 38.300 16.2.0 0274 - F NR\_Mob\_enh-Core

R2-2007542 Correction for editorial structure of CPC section Samsung Electronics Romania CR Rel-16 37.340 16.2.0 0221 - D NR\_Mob\_enh-Core

R2-2007698 Clarification on SCells and SCG release at DAPS HO ZTE Corporation, Sanechips, Ericsson CR Rel-16 38.300 16.2.0 0287 - F NR\_Mob\_enh-Core

R2-2007699 Clarification on SCells and SCG release at DAPS HO ZTE Corporation, Sanechips, Ericsson CR Rel-16 36.300 16.2.0 1307 - F LTE\_feMob-Core

### 6.7.2 Conditional handover related corrections

This AI jointly addresses corrections to NR and LTE CHO.

R2-2006869 Correction to conditional configurations Google Inc. CR Rel-16 36.331 16.1.1 4359 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007018 Minor Correction for Mobility Further Enhancement CATT CR Rel-16 38.331 16.1.0 1771 - F NR\_Mob\_enh-Core

R2-2007229 Internode signalling upon reconfiguration of source Pcell Samsung Telecommunications discussion Rel-16 NR\_Mob\_enh-Core

R2-2007230 Clarifications regarding CHO Samsung Telecommunications CR Rel-16 38.331 16.1.0 1806 - F NR\_Mob\_enh-Core

R2-2007361 Corrections to Conditional Reconfiguration triggering Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1836 - F NR\_Mob\_enh-Core

R2-2007502 Corrections to number of candidate cell in CHO Samsung Electronics Romania CR Rel-16 38.331 16.1.0 1849 - F NR\_Mob\_enh-Core

R2-2007593 Correction of Need Code for Mobility Enhancements Ericsson CR Rel-16 38.331 16.1.0 1867 - F NR\_Mob\_enh-Core

R2-2007594 Correction of description of CHO events for Mobility Enhancements Ericsson CR Rel-16 38.331 16.1.0 1868 - F NR\_Mob\_enh-Core

R2-2007625 Corrections regarding the use of DAPS terminolgy Samsung Telecommunications CR Rel-16 36.331 16.1.1 4395 - F NR\_Mob\_enh-Core

R2-2007663 Correction to update of CHO configuration Samsung CR Rel-16 36.331 16.1.1 4396 - F LTE\_feMob-Core

R2-2007664 Corrections to Mobility Enahncements Samsung CR Rel-16 38.331 16.1.0 1874 - F NR\_Mob\_enh-Core

R2-2007700 Discussion on the cell selection triggered by CHO failure ZTE Corporation, Sanechips discussion Rel-16 NR\_Mob\_enh-Core

R2-2007701 Clarification on the cell selection triggered by CHO failure (Alt. 1) ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1884 - F NR\_Mob\_enh-Core

R2-2007702 Clarification on the cell selection triggered by CHO failure (Alt. 2) ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1885 - F NR\_Mob\_enh-Core

R2-2007703 Clarification on the cell selection triggered by CHO failure (Alt. 1) ZTE Corporation, Sanechips CR Rel-16 36.331 16.1.0 4402 - F LTE\_feMob-Core

R2-2007704 Clarification on the cell selection triggered by CHO failure (Alt. 2) ZTE Corporation, Sanechips CR Rel-16 36.331 16.1.0 4403 - F LTE\_feMob-Core

R2-2007705 Timer handling upon initiation of RRC re-establishment ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1886 - F NR\_Mob\_enh-Core

R2-2007706 Timer handling upon initiation of RRC re-establishment ZTE Corporation, Sanechips CR Rel-16 36.331 16.1.0 4404 - F LTE\_feMob-Core

R2-2007718 UE assistance information transmission in CHO case SHARP Corporation discussion NR\_Mob\_enh-Core

R2-2007764 Correction on TS 38.331 for CHO Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1898 - F NR\_Mob\_enh-Core

R2-2007765 Correction on TS 36.331 for CHO Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4409 - F LTE\_feMob-Core

R2-2007859 Correction on NR CHO OPPO CR Rel-16 38.331 16.1.0 1936 - F NR\_Mob\_enh-Core

R2-2008011 Discussion on physical cell id for CHO configurations Huawei, HiSilicon discussion Rel-16 NR\_Mob\_enh-Core, LTE\_feMob-Core

### 6.7.3 Conditional PSCell change for intra-SN corrections

Including corrections for CPC.

R2-2007360 Corrections to CPC with and without SRB3 involved Nokia, Nokia Shanghai Bell CR Rel-16 37.340 16.2.0 0220 - F NR\_Mob\_enh-Core

R2-2007592 Correction of field description for Mobility Enhancements Ericsson CR Rel-16 38.331 16.1.0 1866 - F NR\_Mob\_enh-Core

R2-2007595 Correction for Mobility Enhancements Ericsson CR Rel-16 37.340 16.2.0 0223 - F NR\_Mob\_enh-Core Late

R2-2007707 Discussion on the compliance check failure for CPC configuration after PCell change ZTE Corporation, Sanechips discussion Rel-16 NR\_Mob\_enh-Core

R2-2007708 Compliance check failure for CPC configuration ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1887 - F NR\_Mob\_enh-Core

R2-2007709 Compliance check failure for CPC configuration ZTE Corporation, Sanechips CR Rel-16 36.331 16.1.0 4405 - F LTE\_feMob-Core

R2-2007766 Correction on TS 38.331 for CPC Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1899 - F NR\_Mob\_enh-Core

R2-2007767 Correction on TS 36.331 for CPC Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4410 - F NR\_Mob\_enh-Core

### 6.7.4 UE capabilities

Including UE capability aspects of NR mobility WI.

R2-2007454 Discussion on UE capabilities for NR DAPS Huawei, HiSilicon, Vivo, Mediatek Inc. discussion Rel-16 NR\_Mob\_enh-Core

R2-2007455 Discussion on per UE NR mobility capabilities Huawei, HiSilicon discussion Rel-16 NR\_Mob\_enh-Core

R2-2007457 Correction on TS 38.306 for DAPS Huawei, HiSilicon CR Rel-16 38.306 16.1.0 0380 - F NR\_Mob\_enh-Core

R2-2007591 Multi quantity event for CHO Ericsson discussion NR\_Mob\_enh-Core

R2-2007610 UE Capabilities for DAPS Ericsson discussion Rel-16 NR\_Mob\_enh-Core

### 6.7.5 Other

Including DAPS aspects that are NR-specific without equivalent LTE impacts.

R2-2007017 Correction on Source Cell Group and Source SpCell CATT CR Rel-16 38.331 16.1.0 1770 - F NR\_Mob\_enh-Core

R2-2007482 RRC Re-establishment at RLF in target PCell during DAPS HO Ericsson CR Rel-16 38.331 16.1.0 1846 - F NR\_Mob\_enh-Core

R2-2007495 T312 handling during MobilityFromNR Lenovo (Beijing) Ltd CR Rel-16 38.331 16.1.0 1847 - F NR\_Mob\_enh-Core

R2-2007571 RLF in source cell during DAPS handover Ericsson CR Rel-16 38.331 16.1.0 1861 - F NR\_Mob\_enh-Core

R2-2008018 CR on drb-ContinueROHC for DAPS Samsung CR Rel-16 38.331 16.1.0 1974 - F NR\_Mob\_enh-Core

## 6.8 DC and CA enhancements

(LTE\_NR\_DC\_CA\_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; Target Aug 20; WI [RP-200791](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-200791.zip), SR: [RP-201218](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201218.zip)) R1 and R2 parts are 100% complete.

Email max expectation: 4-5 email threads

### 6.8.1 General and Stage 2 Corrections

Including incoming LSs rapporteur inputs, including corrections discussions going beyond a specific TS, cross group discussions.

R2-2006679 Discussion on Scell reactivation in a dormant and non-dormant BWP SHARP Corporation discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2006897 CR to 37.340 on SCG resume procedure ZTE Corporation, Sanechips CR Rel-16 37.340 16.2.0 0217 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007582 Misc corrections for Rel-16 DCCA Ericsson Inc. CR Rel-16 36.300 16.2.0 1306 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007583 Misc corrections for Rel-16 DCCA Ericsson Inc. CR Rel-16 38.300 16.2.0 0284 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007584 Misc corrections for Rel-16 DCCA Ericsson Inc. CR Rel-16 36.331 16.1.1 4391 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007585 Misc corrections for Rel-16 DCCA Ericsson Inc. CR Rel-16 38.331 16.1.0 1865 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007690 Correction on power coordination in NR-DC Huawei, HiSilicon CR Rel-16 37.340 16.2.0 0224 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007691 Correction on UL behaviours in the dormant BWP Huawei, HiSilicon CR Rel-16 38.300 16.2.0 0286 - F LTE\_NR\_DC\_CA\_enh-Core

### 6.8.2 MAC Corrections

R2-2006559 Discussion on how to avoid frequent and redundant PHR triggered by dormant BWP switch Qualcomm Incorporated discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2006560 CR to 38.321 on introducing PHR prohibit timer for PHR triggered by dormant BWP switch Qualcomm Incorporated CR Rel-16 38.321 16.1.0 0759 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2006810 Clarifications on PHR triggers-R15 OPPO CR Rel-15 38.321 15.9.0 0786 - F NR\_newRAT-Core

R2-2006811 Clarifications on PHR triggers-R16 OPPO CR Rel-16 38.321 16.1.0 0787 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2006812 Discussion on frequent PHR trigger due to dormancy transition. OPPO discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2007216 Redundant and frequent PHR reporting in NR vivo discussion Rel-16 38.321 LTE\_NR\_DC\_CA\_enh-Core

R2-2007217 correction on the UE behaviour on dormant state vivo CR Rel-15 36.321 15.9.0 1491 - F LTE\_NR\_DC\_CA\_enh-Core, LTE\_euCA-Core

R2-2007218 correction on the UE behaviour on dormant state vivo CR Rel-16 36.321 16.1.0 1492 - A LTE\_NR\_DC\_CA\_enh-Core, LTE\_euCA-Core

R2-2007219 correction on the UE behaviour on dormant BWP vivo CR Rel-16 38.321 16.1.0 0810 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007905 Discussion on the timing of scellDecativatedTimer for direct scell activation vivo discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2007906 (Draft) LS on the timing of scellDecativatedTimer for direct scell activation vivo LS out Rel-16 LTE\_NR\_DC\_CA\_enh-Core To:RAN WG1 Cc:RAN WG4

R2-2007947 Correction on PHR triggering upon BWP switching from dormant BWP to non-dormant BWP Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0871 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2008014 CR on the terminology of PHR trigger Samsung CR Rel-16 38.321 16.1.0 0874 - F LTE\_NR\_DC\_CA\_enh-Core

### 6.8.3 RRC Corrections

R2-2006780 Corrections to failure type for MCGFailureInformation and SCGFailureInformation Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1737 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007279 Correction to field condition of refFR2ServCellAsyncCA Ericsson CR Rel-16 38.331 16.1.0 1823 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007622 Correction information structure of early measurement results for additional EUTRA frequencies Samsung Telecommunications CR Rel-16 36.331 16.1.1 4394 - F LTE\_NR\_DC\_CA\_enh-Core

#### 6.8.3.1 Fast Scell activation

R2-2006562 CR to 36.306 on UE capability of direct SCell activation Qualcomm Incorporated CR Rel-16 36.306 16.1.0 1776 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2006563 CR to 36.331 on UE capability of direct SCell activation Qualcomm Incorporated CR Rel-16 36.331 16.1.1 4348 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007003 Correction on the Dormant BWP CATT discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2007684 Correction on dormant BWP Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1881 - F LTE\_NR\_DC\_CA\_enh-Core

#### 6.8.3.2 Early measurement reporting

Including outcome of [Post110-e][080][DCCA] Early Measureemnts and Network Sharing (Huawei)

R2-2007004 CR to 38.331 on involving all fields of early measurement report CATT CR Rel-16 38.331 16.1.0 1767 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007005 CR to 36.331 on involving all fields of early measurement report CATT CR Rel-16 36.331 16.1.1 4365 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007205 Correction on idle/inactive measurement after cell (re)selection Google Inc. CR Rel-16 38.331 16.1.0 1797 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007220 Correction on early measurement configuration during inter-RAT cell reselection vivo CR Rel-16 38.331 16.1.0 1802 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007682 Correction on updating the measurement configuration and performing measurement in early measurement Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4397 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007685 Correction on the descriptions of the two idlemodeMeasurementReq fields Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1882 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007688 Summary of [Post110-e][080][DCCA] Early Measurements and Network Sharing Huawei discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core Late

R2-2008008 Corrections to the UE behavior upon reception of RRCSetup while T331 is running Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1970 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2008009 Corrections on the behaviours with cell (re-)selection while T331 is running Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1971 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2008010 Corrections on the UE behavior upon PLMN reselection while T331 is running Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1972 - F LTE\_NR\_DC\_CA\_enh-Core

#### 6.8.3.3 Other

Including NR-NR DC, MCG SCell and SCG configuration with RRC resume, Fast MCG link recovery, and RRC corrections that doesn’t fit under the other headings.

R2-2006813 Correction on sk-Counter-R15 OPPO CR Rel-15 38.331 15.10.0 1738 - F NR\_newRAT-Core

R2-2006814 Correction on sk-Counter-R16 OPPO CR Rel-16 38.331 16.1.0 1739 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2006815 Clarifications on concept of suspend XCG transmission OPPO discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2006886 Add tdm-PatternConfig-r16 in the inter-node message Google Inc. CR Rel-16 36.331 16.1.1 4361 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007006 Correction on the Configuration of sCellState for 38.331 CATT CR Rel-16 38.331 16.1.0 1768 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007007 Correction on the Configuration of sCellState for 36.331 CATT CR Rel-16 36.331 16.1.1 4366 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007008 Correction on the Field Description for Field Using SetupRelease Structure CATT CR Rel-16 38.331 16.1.0 1769 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007221 Adding enableDefaultBeamForCSS for cross-carrier scheduling with different SCS vivo CR Rel-16 38.331 16.1.0 1803 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007277 Remaining issues on Toffset for NR-DC power control Ericsson CR Rel-16 38.331 16.1.0 1822 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007278 Remaining issues on Toffset for NR-DC power control Ericsson CR Rel-16 38.306 16.1.0 0376 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007578 Missing fields for Toffset coordination in INM Ericsson CR Rel-16 38.331 16.1.0 1864 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007680 Correction on HARQ ACK spatial bundling configurations for secondary PUCCH group Huawei, HiSilicon discussion Rel-16 LTE\_NR\_DC\_CA\_enh-Core

R2-2007681 Correction on storing SCG configuration in UE INACTIVE AS context Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1879 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007683 Correction on SCG RLF detection while MCG is suspended Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1880 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007686 Miscellaneous corrections for fast MCG link recovery Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4398 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007687 Miscellaneous corrections for fast MCG link recovery Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1883 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2007882 Clarification on CA slot offset configuration MediaTek Inc. CR Rel-16 38.331 16.1.0 1941 - F LTE\_NR\_DC\_CA\_enh-Core

### 6.8.4 Other

## 6.9 UE Power Saving in NR

(NR\_UE\_pow\_sav-Core; leading WG: RAN1; REL-16; started: Mar 19; Completed Jun 20; WID: RP-200494; SR: [RP-200913](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-200913.zip)).

Email max expectation: 3-4 email threads

### 6.9.1 General and Stage 2 corrections

Including incoming LSs, rapporteur inputs, etc

### 6.9.2 User plane Corrections

R2-2006684 Prioritization between DCP and RAR vivo discussion Rel-16 38.321 NR\_UE\_pow\_sav-Core

R2-2006989 Correction on prioritization between DCP and RAR to C-RNTI CATT CR Rel-16 38.321 16.1.0 0794 - F NR\_UE\_pow\_sav-Core

R2-2007259 RAR prioritization over DCP Ericsson, Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_UE\_pow\_sav-Core

R2-2007369 Remaining issues of DCP overlapping with RAR OPPO discussion Rel-16 NR\_UE\_pow\_sav-Core

R2-2007391 Prioritization between DCP and RAR addressed to C-RNTI Samsung discussion NR\_UE\_pow\_sav-Core

R2-2007528 CR on 38.321 for CSI and SRS in the case that DCP is configured ZTE Corporation, Sanechips CR Rel-16 38.321 16.1.0 0829 - F NR\_UE\_pow\_sav-Core

R2-2007529 Considerations on the CSI and SRS in the case that DCP is configured ZTE Corporation, Sanechips discussion Rel-16 NR\_UE\_pow\_sav-Core

### 6.9.3 Control plane Corrections

R2-2006685 Discussion on how to restructure the RRM relaxation vivo, Samsung, LG Electronics Inc., MediaTek Inc., Panasonic discussion Rel-16 NR\_UE\_pow\_sav-Core

R2-2006686 RRM relaxation for high priority frequency vivo, Samsung, ZTE, Intel, Panasonic discussion Rel-16 NR\_UE\_pow\_sav-Core

R2-2006687 [Draft] LS to RAN4 on RRM measurement relaxation in power saving vivo LS out Rel-16 NR\_UE\_pow\_sav-Core To:RAN4

R2-2006688 Value range for UAI in power saving vivo discussion Rel-16 NR\_UE\_pow\_sav-Core

R2-2006988 Inter-node exchange of UAI for SCG during handover CATT discussion Rel-16 NR\_UE\_pow\_sav-Core

R2-2007063 Correction to UE behavior for RRM measurement relaxation Samsung Electronics CR Rel-16 38.304 16.1.0 0178 - F NR\_UE\_pow\_sav-Core

R2-2007232 Repetition of SCG related (power saving) assistance upon synchronous reconfiguration/ handover Samsung Telecommunications discussion Rel-16 NR\_UE\_pow\_sav-Core

R2-2007367 RRM relaxation for higher priority frequency OPPO CR Rel-16 38.304 16.1.0 0180 - F NR\_UE\_pow\_sav-Core

R2-2007368 CR for UE assistance information for releasePreference OPPO CR Rel-16 38.331 16.1.0 1837 - F NR\_UE\_pow\_sav-Core

R2-2007576 Misc. corrections CR for 38.331 for Power Savings MediaTek Inc. CR Rel-16 38.331 16.1.0 1862 - D NR\_UE\_pow\_sav-Core

R2-2007808 Correction for UAI transmission in NR-DC case Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1912 - F NR\_UE\_pow\_sav-Core

R2-2007809 Correction on condition of prohibit timer for power saving Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1913 - F NR\_UE\_pow\_sav-Core

R2-2007810 Correction on field description of preferredDRX-LongCycle Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1914 - F NR\_UE\_pow\_sav-Core

R2-2007811 Correction on field description of maxMIMO-Layers Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1915 - F NR\_UE\_pow\_sav-Core

R2-2007812 Correction on other configuration release for SCG (38.331) Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1916 - F NR\_UE\_pow\_sav-Core

R2-2007813 Correction on other configuration release for SCG (36.331) Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4412 - F NR\_UE\_pow\_sav-Core

R2-2007814 Corrections on clarificaiton of the cell group specific UE assistance information Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1917 - F NR\_UE\_pow\_sav-Core

R2-2007815 Discussion on preferredDRX-ShortCycleTimer Huawei, HiSilicon discussion Rel-16 NR\_UE\_pow\_sav-Core

R2-2007904 Add UE assistance information in CG-ConfigInfo Google Inc. CR Rel-16 38.331 16.1.0 1942 - F NR\_UE\_pow\_sav-Core

## 6.10 SON/MDT support for NR

(NR\_SON\_MDT-Core; leading WG: RAN3; REL-16; started: Jun 19; Completed June 20; WID: [RP-191776](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_85\Docs\RP-191776.zip); SR [RP-200773](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-200773.zip)). Documents in this agenda item will be handled in a break out session

Email max expectation: 4-5 email threads

### 6.10.1 General and stage 2 corrections

Including incoming LSs, TS 37.320 corrections

R2-2006515 limitation of Propagation of immediate MDT configuration in case of Xn inter-RAT HO (R3-204115; contact: LGE) RAN3 LS in Rel-16 NR\_SON\_MDT-Core To:SA5 Cc:RAN2

R2-2006521 LS on propagation of user consent related information during Xn inter-PLMN handover (R3-204378; contact: Nokia) RAN3 LS in Rel-16 NR\_SON\_MDT-Core To:SA3 Cc:RAN2, SA5

R2-2006535 Reply LS to LS on removal of Management Based MDT Allowed IE for NR (S5-203410; contact: Ericsson) SA5 LS in Rel-16 5GMDT To:RAN3 Cc:RAN2

R2-2006816 Drafting Rules for subclause 15 on SON Nokia (Rapporteur) CR Rel-16 38.300 16.2.0 0258 - F NR\_SON\_MDT-Core

R2-2007371 Correction on Accessibility measurements Samsung CR Rel-16 37.320 16.1.0 0086 - F NR\_SON\_MDT-Core

R2-2007427 Summary for 6.10.1 General and stage-2 corrections CMCC discussion Rel-16 NR\_SON\_MDT-Core Late

R2-2007512 Impact of SNPN on PLMN check for MDT Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_SON\_MDT-Core

R2-2007671 Corrections in TS 37.320 Ericsson discussion

R2-2007750 Corrections on MDT stage-2 descriptions Huawei, HiSilicon CR Rel-16 37.320 16.1.0 0087 - F NR\_SON\_MDT-Core

R2-2007780 Mislleneous corrections to 37320 ZTE Corporation, Sanechips CR Rel-16 37.320 16.1.0 0088 - F NR\_SON\_MDT-Core

R2-2007860 Corrections for TS37.320 CATT CR Rel-16 37.320 16.1.0 0089 - F NR\_SON\_MDT-Core

### 6.10.2 TS 38.314 corrections

R2-2007422 Discussion on introduction of per PLMN L2M CMCC discussion Rel-16 NR\_SON\_MDT-Core

R2-2007423 Introduction of per PLMN L2M CMCC CR Rel-16 38.314 16.0.0 0001 - B NR\_SON\_MDT-Core

R2-2007424 Typo correction for Packet Error Rate CMCC CR Rel-16 38.314 16.0.0 0002 - D NR\_SON\_MDT-Core

R2-2007425 Summary for 6.10.2 TS 38.314 corrections CMCC discussion Rel-16 NR\_SON\_MDT-Core Late

R2-2007513 Unclarity on L2 measurements applicability to IAB Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_SON\_MDT-Core

R2-2007514 Delay measurement for IAB Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_SON\_MDT-Core

R2-2007669 On M4 measurement related clarification Ericsson discussion

R2-2007670 On EUTRA related L2 measurements for EN-DC Ericsson discussion

R2-2007751 Discussion on average Uu delay measurement for L2M Huawei, HiSilicon discussion Rel-16 NR\_SON\_MDT-Core

R2-2007752 Discussion on D1 measurement for L2M Huawei, HiSilicon discussion Rel-16 NR\_SON\_MDT-Core

### 6.10.3 RRC corrections

R2-2006644 Correction about Including Re-connection Cell ID in RLF Report CATT CR Rel-16 36.331 16.1.1 4351 - F NR\_SON\_MDT-Core

R2-2006645 Correction about Including Re-connection Cell ID in RLF Report CATT CR Rel-16 38.331 16.1.0 1723 - F NR\_SON\_MDT-Core

R2-2006648 Clarification on RLF Report for Inter-RAT MRO CATT CR Rel-16 36.331 16.1.1 4352 - F NR\_SON\_MDT-Core

R2-2006649 Clarifications for MeasResult2NR and MeasResult2EUTRA Relevant IEs CATT CR Rel-16 38.331 16.1.0 1724 - F NR\_SON\_MDT-Core

R2-2006650 Add TA Information in CEF Report when T319 Expire CATT CR Rel-16 38.331 16.1.0 1725 - F NR\_SON\_MDT-Core

R2-2007214 Correction on cross-RAT RLF report Google Inc. CR Rel-16 38.331 16.1.0 1801 - F NR\_SON\_MDT-Core

R2-2007224 Clarification on MDT regarding reporting of WLAN and BT information Samsung Telecommunications CR Rel-16 38.331 16.1.0 1804 - F NR\_SON\_MDT-Core

R2-2007225 Clarification on MDT regarding area configuration and target frequencies Samsung Telecommunications CR Rel-16 38.331 16.1.0 1805 - F NR\_SON\_MDT-Core

R2-2007226 Specification of target frequencies for measurement logging Samsung Telecommunications discussion Rel-16 NR\_SON\_MDT-Core

R2-2007372 Corrections on ConnEstFailReport Samsung CR Rel-16 38.331 16.1.0 1838 - F NR\_SON\_MDT-Core

R2-2007373 Correction on RA-Report Samsung CR Rel-16 38.331 16.1.0 1839 - F NR\_SON\_MDT-Core

R2-2007382 Logging PLMN Info in VarConnEstFailReport Samsung discussion NR\_SON\_MDT-Core

R2-2007384 Moving IE InterFreqTargetList out of IE AreaConfiguration Samsung discussion NR\_SON\_MDT-Core

R2-2007385 Avoiding Duplication of Location Info upon SCG Failure Samsung discussion NR\_SON\_MDT-Core

R2-2007386 How to Determine Whether a Cell is Part of the Area Indicated by AreaConfiguration Samsung discussion NR\_SON\_MDT-Core

R2-2007510 Correction on RA-Report release Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1853 - F NR\_SON\_MDT-Core

R2-2007511 Correction to RLF cause determination for backhaul failure Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1854 - F NR\_SON\_MDT-Core

R2-2007657 On the need of SCell indication in the RA-report Ericsson discussion

R2-2007668 On the inclusion of reconnectCellId Ericsson discussion

R2-2007753 Discussion on user consent Huawei, HiSilicon discussion Rel-16 NR\_SON\_MDT-Core

R2-2007754 Editorial corrections on MDT and SON in NR Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1892 - D NR\_SON\_MDT-Core

R2-2007755 Correction on MDT and SON configurations for MR-DC Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1893 - F NR\_SON\_MDT-Core

R2-2007756 Correction on logged MDT Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1894 - F NR\_SON\_MDT-Core

R2-2007757 Correction on the release of obtainCommonLocation Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1895 - F NR\_SON\_MDT-Core

R2-2007758 Correction on Inter-RAT SON for 38.331 Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1896 - F NR\_SON\_MDT-Core

R2-2007759 Correction on Inter-RAT SON for 36.331 Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4408 - F NR\_SON\_MDT-Core

R2-2007760 Correction on clearing VarRLF-Report regarding T316 Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1897 - F NR\_SON\_MDT-Core

R2-2007761 Summary on 6.10.3 RRC Corrections Huawei discussion Rel-16 NR\_SON\_MDT-Core Late

R2-2007776 Correction on GNSS location information reporting in MDT ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1900 - F NR\_SON\_MDT-Core

R2-2007777 Correction to 38331 on logged MDT ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1901 - F NR\_SON\_MDT-Core

R2-2007778 Correction to 38331 on RA report ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1902 - F NR\_SON\_MDT-Core

R2-2007779 Inclusion of UL carrier indication in CEF report ZTE Corporation, Sanechips CR Rel-16 38.331 16.1.0 1903 - B NR\_SON\_MDT-Core

R2-2007954 Correction to RLF content setting in VarRLF-Report Quectel draftCR Rel-16 38.331 16.1.0 D NR\_SON\_MDT-Core

R2-2008000 Correction on the field description of CGI-InfoEUTRALogging Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1962 - F NR\_SON\_MDT-Core

R2-2008001 Correction to measResultNeighCells for logged measurements Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1963 - F NR\_SON\_MDT-Core

R2-2008002 Correction to the upper limit of PLMN identities in VarRLF-Report Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1964 - F NR\_SON\_MDT-Core

R2-2008003 Corrections to measResultLastServCell for RLF and HO failure Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1965 - F NR\_SON\_MDT-Core

R2-2008004 Corrections to mobility history information Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1966 - F NR\_SON\_MDT-Core

R2-2008005 Miscellaneous corrections related to connection establishment/resume failure information Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1967 - F NR\_SON\_MDT-Core

R2-2008006 Miscellaneous corrections related to logged measurements Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1968 - F NR\_SON\_MDT-Core

## 6.11 2-step RACH for NR

(NR\_2step\_RACH-Core; leading WG: RAN1; REL-16; started: Dec 18; Completed: June 20; WID: RP-200085; SR: [RP-200622](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-200622.zip)).

Email max expectation: 3 email threads

### 6.11.1 General and Stage 2 Corrections

R2-2006817 Missing RACH Figure Nokia (Rapporteur), Nokia Shanghai Bell, OPPO, ZTE CR Rel-16 38.300 16.2.0 0259 - F NR\_2step\_RACH-Core

### 6.11.2 User plane corrections

R2-2006548 Remaining Issues on Fallback Reception in the 2-step CFRA vivo discussion

R2-2007825 Correction to description of MAC subheader for msgB Huawei, HiSilicon CR Rel-16 38.321 16.1.0 0841 - F NR\_2step\_RACH-Core

### 6.11.3 Control plane corrections

R2-2006708 Correction to msgB-ResponseWindow vivo CR Rel-16 38.331 16.1.0 1730 - F NR\_2step\_RACH-Core

R2-2006709 Correction to msgA-TransMax vivo CR Rel-16 38.331 16.1.0 1731 - F NR\_2step\_RACH-Core

R2-2007022 The remaining issue on RO configuration of 2-step CFRA Fujitsu discussion Rel-16 NR\_2step\_RACH-Core

R2-2007826 Correction on RACH-ConfigCommonTwoStepRA Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1923 - F NR\_2step\_RACH-Core

R2-2007827 Correction on msgA-PUSCH-Config Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1924 - F NR\_2step\_RACH-Core

R2-2008012 Further discussion on 2-step RA configurations LG Electronics discussion NR\_2step\_RACH-Core

## 6.12 NR Other Control Plane WIs

(SRVCC\_NR\_to\_UMTS-Core; leading WG: RAN2; REL-16; started: Dec 18; Completed; Mar 20; WID: [RP-190713](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_83\Docs\RP-190713.zip))

(RACS-RAN-Core, leading WG: RAN2; REL-16; started: Mar 19; completed: Jun 20; WID: [RP-191088](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_84\Docs\RP-191088.zip))

(NG\_RAN\_PRN-Core; leading WG: RAN3; REL-16; started: Mar 19; completed: June 20; WID: RP-200122)

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

Email max expectation: 3 email threads

R2-2006516 LS reply on RACS multiple radio capability formats (R3-204147; contact: Huawei) RAN3 LS in Rel-16 RACS-RAN-Core To:SA2 Cc:RAN2, CT4, CT3

R2-2006633 Correction on First NPN-Identity Usage for SIB Validity CATT CR Rel-16 38.331 16.1.0 1722 - F NG\_RAN\_PRN-Core

R2-2006634 Correction on Naming of the List of Forbidden Tracking Areas CATT CR Rel-16 38.304 16.1.0 0176 - F NG\_RAN\_PRN-Core

R2-2006852 Cell selection and reselection corrections for NPNs Nokia, Nokia Shanghai Bell CR Rel-16 38.304 16.1.0 0177 - F NG\_RAN\_PRN-Core, NR\_unlic-Core

R2-2006853 Corrections for PNI-NPN related parameter selection Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1742 - F NG\_RAN\_PRN-Core

R2-2006879 Correction to the support of NR-DC for PNI-NPN Lenovo, Motorola Mobility CR Rel-16 38.300 16.2.0 0261 - F NG\_RAN\_PRN-Core

R2-2007404 Limited services and SNPN Access Mode Ericsson discussion Rel-16 NG\_RAN\_PRN-Core

R2-2007411 ims-EmergencySupport interpretation and clarification for SNPN Ericsson discussion Rel-16 NG\_RAN\_PRN-Core

R2-2007805 Correction on the UE Capability presence upon SN addition and SN change Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1911 - F RACS-RAN-Core

R2-2007841 Correction to 38.304 on any cell seletion in NPN Huawei, HiSilicon CR Rel-16 38.304 16.1.0 0181 - F NG\_RAN\_PRN-Core

R2-2007842 Correction to 38.331 on SIB validity and emergency services for NPN Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1926 - F NG\_RAN\_PRN-Core

R2-2007902 38.304 Correction on UE behavior when the best cell is not suitable vivo CR Rel-16 38.304 16.1.0 0183 - F NG\_RAN\_PRN-Core

R2-2008016 Corrections to IntraFreqCAG-CellPerPLMN and InterFreqCAG-CellList in SIB3 and SIB4 Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1973 - D NG\_RAN\_PRN-Core

## 6.13 NR eMIMO

(NR\_eMIMO-Core, leading WG: RAN1; REL-16; started: Jun 18; target; Aug 20; WID: RP-200474; R2 part completed)

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

Email max expectation: 2 email threads

### 6.13.1 User plane corrections

R2-2006779 Corrections to description of Candidate RS ID in BFR MAC CE Samsung Electronics Co., Ltd CR Rel-16 38.321 16.1.0 0784 - F NR\_eMIMO-Core

R2-2006797 Clarification on the BFR MAC CE report vivo CR Rel-16 38.321 16.1.0 0785 - F NR\_eMIMO-Core

R2-2007485 Correction on the BFR cancellation Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.1.0 0824 - F NR\_eMIMO-Core

R2-2007525 CR on 38.321 for BFR MAC CE design ZTE Corporation, Sanechips CR Rel-16 38.321 16.1.0 0826 - F NR\_eMIMO-Core

R2-2007526 CR on 38.321 for BFR procedue ZTE Corporation, Sanechips CR Rel-16 38.321 16.1.0 0827 - F NR\_eMIMO-Core

R2-2007544 Correction on the definition of Ci field in BFR MAC CE Qualcomm Incorporated draftCR Rel-16 38.321 16.1.0 F NR\_eMIMO-Core Withdrawn

R2-2007575 On serving cell set based SRS spatial relation indication MAC CE Ericsson discussion Rel-16 NR\_eMIMO-Core

R2-2007736 BFR Cancellation regarding MAC reset ASUSTek CR Rel-16 38.321 16.1.0 0837 - F NR\_eMIMO-Core

R2-2007895 Correction on AP and SP SRS MAC-CE Asia Pacific Telecom co. Ltd discussion NR\_eMIMO-Core

R2-2008053 Correction on the definition of Ci field in BFR MAC CE Qualcomm Incorporated draftCR Rel-16 38.321 16.1.0 F NR\_eMIMO-Core

### 6.13.2 Control plane corrections

R2-2007161 Correction on number of CORESETs per BWP OPPO CR Rel-16 38.331 16.1.0 1793 - F NR\_eMIMO-Core

R2-2007577 Miscellaneous eMIMO corrections Ericsson CR Rel-16 38.331 16.1.0 1863 - F NR\_eMIMO-Core

## 6.14 NR Other R1 WIs

(NR\_CLI\_RIM; leading WG: RAN1; REL-16; started: Dec 18; Completed: Jun 20; WID: [RP-191997](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_85\Docs\RP-191997.zip);)

(NR\_L1enh\_URLLC-Core, leading WG: RAN1; REL-16; Completed: June 20; WID: [RP-191584](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_84\Docs\RP-191584.zip))

(R1 Led NR TEI16, Other R1 led items)

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

Email max expectation: 5 email threads

R2-2006524 Response LS on Exchange of information related to SRS-RSRP measurement resource configuration for UE-CLI R3-204399; contact: ZTE) RAN3 LS in Rel-16 NR\_CLI\_RIM To:RAN2, RAN1 Cc:RAN4

R2-2006898 Discussion on RAN3 LS about SRS exchange ZTE Corporation, Sanechips discussion Rel-16 NR\_CLI\_RIM-Core

R2-2006899 Draft reply LS on exchange of information related to SRS-RSRP measurement resource configuration for UE-CLI ZTE Corporation LS out Rel-16 NR\_CLI\_RIM-Core To:RAN3 Cc:RAN1, RAN4

R2-2007621 Correction regarding placement of cell specific SSB QCL information in CLI MO Samsung Telecommunications CR Rel-16 36.331 16.1.1 4393 - F NR\_CLI\_RIM

R2-2007851 Draft LS on Update frequency of SRS-RSRP configuration for CLI Samsung LS out Rel-16 NR\_CLI\_RIM To:RAN WG3 Cc:RAN WG1, RAN WG4

### 6.14.1 User plane corrections

### 6.14.2 Control plane corrections

R2-2007080 PUCCH configuration with subslotLengthForPUCCH-r16 CATT CR Rel-16 38.331 16.1.0 1783 - F NR\_L1enh\_URLLC-Core

R2-2007355 Exchange of SRS Information across GNB for UE CLI Nokia, Nokia Shanghai Bell discussion Rel-16

R2-2007356 [Draft] Reply LS to the LS on Exchange of information related to SRS-RSRP measurement resource configuration for UE-CLI Nokia, Nokia Shanghai Bell LS out Rel-16 NR\_CLI\_RIM To:RAN3 Cc:RAN4

R2-2007862 Converting suffix ForDCI-Formatx-y for shorter RRC parameter names Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1937 - F NR\_L1enh\_URLLC-Core

R2-2007989 CR on CLI configuration LG Electronics Inc. CR Rel-16 38.331 16.1.0 1960 - F NR\_CLI\_RIM

## 6.15 NR Other R4 WIs

(NR\_HST, NR\_RRM\_enh-Core, NR\_RF\_FR1, NR\_RF\_FR2\_req\_enh, NR\_n66\_BW, LTE\_NR\_B41\_Bn41\_PC29dBm-Core, NR\_CSIRS\_L3meas, R4 Led NR TEI16, other R4 led items)

Email max expectation: 6 email threads

* [AT111-e][036][NR-R4] CSIRS L3 and RF FR1 (CATT)

Scope: Treat R2-2007001, R2-2007002, R2-2007065

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 26 0900 UTC, Intermediate deadlines by Rapporteur if needed.

NR CSIRS L3

R2-2007001 Correction on CSI-RS based intra-frequency and inter-frequency measurement definition CATT, ZTE Corporation, Sanechips, Huawei, HiSilicon CR Rel-15 38.300 15.10.0 0264 - F NR\_CSIRS\_L3meas

* [036] Agreed

R2-2007002 Correction on CSI-RS based intra-frequency and inter-frequency measurement definition CATT, ZTE Corporation, Sanechips, Huawei, HiSilicon CR Rel-16 38.300 16.2.0 0265 - F NR\_CSIRS\_L3meas

* [036] Agreed

RF FR1

R2-2007065 NR CA additional spectrum emission requirements Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1775 - B NR\_RF\_FR1-Core

* [036] not Pursued

RF FR2

* [AT111-e][037][NR-R4] MPE (Interdigital)

Scope: TBD after on-line

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Agreed CRs EOM, Deadline for comments at least 24h before. Intermediate deadlines by Rapporteur if needed.

MPE – Early Item – Online first

Chair:

a) New MAC CE

b) Reuse/ extend PHR MAC CE

Breif discussion

- Nokia think this is a new feature and this is the main argument for a New MAC CE. Nokia further think PHR information can be useful and this is the main argument for PHR reuse.

- Nokia think that a new MAC CE will be easier and the new procedures will in any case not have bad impact to existing PHR procedure.

- OPPO have no strong opinion, but think it need to be confirmed exactly what need to be reported, how power backoff is related, and whether V-bit is needed.

- vivo think that extending PHR will anyway mean an additional format and think a new MAC CE would make better sense.

- Ericsson think that there is a relation between Pbit and MPE indication, and think there are some triggers that are common.

- Apple think b) is better and have the same understanding as Ericsson.

- QC also want to support option b) and agree with Apple and Ericsson tht there are PHR information that is useful.

- Nokia think R4 has agrees that Pbit by itself doesn’t help, and think an LS doesn’t help.

- Nokia further think it is not clear that there are any common triggers at all between PHR and MPE.

- Intel somewhat prefers a). Intel think that if R4 agrees > 2bits then intel for sure prefers a). Intel think that it is beneficial to have different design, to get MPE indication as soon as possible.

- Intel think R4 are considering also 4bits.

- Chair: it is clear that reusing PHR has the more support in R2 and this will be considered when we resume the discussion. Think we may wait until R4 decide value range.

- Nokia think we can decide now and try to progress.

- LG think R2 can decide this based on the work effort in specifying a completely new MAC CE.

* R2 assumes to reuse / extend PHR MAC CE, and continue the MPE work accordingly (main remaining FFS is the required number of bits).

BREIF DISCUSSION Come back

- IDT explain that the discussion has progressed somewhat, think htat is can be useful to discuss if to have a separate prohibit timer for MPE. A majority of companies have indicted interest to have this separate.

- Apple think that at last discussion we didn’t have the decision to reuse PHR. Now a single prohibit timer could be ok. Ericsson agrees that a new discussion is needed.

- IDT think even R4 is making assumptions on prohibit timer. MPE reporting shold be faster than PHR

- LG think that if we want a new timer, then there isn’t that much gain in reusing PHR.

- Nokia think that an LS can be received tomorrow.

- Chair: this seems still controversial, so to optimize the discussion we wait for the LS.

R2-2008571 LS on MPE enhancements RAN4 LSin

* Noted

R2-2008511 Addition of MPE reporting to TS 38.331 CR

DISCUSSION Late CB

Prohibit timer

- Ericsson think R4 didn't say there need to be a separate timer

- LG think the PHR timer can be reused.

- Nokia and Samsung think it is clear that the prohibit timer shall be for MPE only.

- Chair think that if we have a common timer, the timer need to be set to MIN (req for PHR, req for MPE). Nokia still think common timer doesn’t work.

- Nokia proposes the compromise that it is configurable whether prohibit timer is independent or common. Ericsson don’t like that. Nokia think that in this case everyone gets what they want.

- Not possible to decide by show of hands (tie). Chair proposes to go the way the WI rapporteur proposes.

Other

- Nokia think the relative threshold is missing in the CR

- Ericsson think this need discussion, how it can work, and it may impact MAC. Think it should be relative to what is reported.

- Chair expect that this discussion will need 1 week extension, so no need to set target to converge tomorrow.

MAC CR

- QC wonder if it is intended that the PMPR value shall always be reported also at normal PHR, the value 0 cannot be reported from the flist of values in the LS.

- IDT were also surprised that value 0 was not included.

- Ericsson think that P bit could be used, but even better if value zero could be assumed. QC think the value range was very contentious. IDT thin kwe can try to resolve

- Chair: please check, no LS to R4, we try to fix it, maybe use the Pbit?

* We use Indep prohibit timer instance (for MPE and PHR)
* The UE cap is already in the mega CR, if we cannot converge on MAC and RRC CRs, also the UE cap should be removed for now (to stick to normal practice)
* Include MAC and RRC CR in the email discussion.

R2-2007650 Summary of MPE mitigation in FR2 InterDigital discussion Rel-16 NR\_RF\_FR2\_req\_enh

R2-2007649 L2/3 aspects of MPE mitigation InterDigital discussion Rel-16 NR\_RF\_FR2\_req\_enh

R2-2008093 Discussion on MPE enhancements Ericsson discussion Rel-16 NR\_RF\_FR2\_req\_enh R2-2004932 Late

R2-2007375 UE FR2 MPE enhancements and solutions Nokia, Nokia Shanghai Bell discussion Rel-16 NR\_RF\_FR2\_req\_enh R2-2004906

R2-2006808 Discussion on UE FR2 P-MPR reporting OPPO discussion Rel-16 NR\_RF\_FR2\_req\_enh

R2-2006809 Draft Response LS on UE FR2 P-MPR reporting OPPO LS out Rel-16 NR\_RF\_FR2\_req\_enh To:RAN4

R2-2007123 P-MPR Reporting Apple discussion Rel-16 NR\_RF\_FR2\_req\_enh

R2-2007152 Discussion on the MPE enhancements vivo discussion

R2-2007153 Draft CR on supporting the MPE enhancements vivo CR Rel-16 38.321 16.1.0 0806 - B NR\_RF\_FR2\_req\_enh

R2-2007154 Draft CR on supporting the MPE enhancements vivo CR Rel-16 38.331 16.1.0 1792 - B NR\_RF\_FR2\_req\_enh

R2-2007376 Introduction of MPE reporting for FR2 Nokia, Nokia Shanghai Bell CR Rel-16 38.331 16.1.0 1515 2 B NR\_RF\_FR2\_req\_enh R2-2004907

R2-2007377 Introduction of MPE reporting for FR2 Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.1.0 0707 2 B NR\_RF\_FR2\_req\_enh R2-2004908

R2-2007378 Introduction of MPE reporting for FR2 Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.1.0 0819 - B NR\_RF\_FR2\_req\_enh

R2-2007379 Introduction of MPE reporting for FR2 Nokia, Nokia Shanghai Bell CR Rel-16 38.300 16.2.0 0210 2 B NR\_RF\_FR2\_req\_enh R2-2004910

R2-2007533 Enhancement on FR2 MPE Mitigation ZTE Corporation, Sanechips discussion Rel-16 NR\_RF\_FR2\_req\_enh

R2-2007651 Addition of MPE reporting to TS 38.321 InterDigital CR Rel-16 38.321 16.1.0 0833 - B NR\_RF\_FR2\_req\_enh

R2-2007652 Addition of MPE reporting to TS 38.331 InterDigital CR Rel-16 38.331 16.1.0 1873 - B NR\_RF\_FR2\_req\_enh

R2-2008094 Implementing MPE enhancements Ericsson CR Rel-16 38.321 16.1.0 0748 1 B NR\_RF\_FR2\_req\_enh R2-2004936 Late

R2-2008095 Implementing MPE enhancements Ericsson CR Rel-16 38.331 16.1.0 1640 1 B NR\_RF\_FR2\_req\_enh R2-2004938 Late

R2-2008096 Implementing MPE enhancements Ericsson CR Rel-16 38.306 16.1.0 0322 1 B NR\_RF\_FR2\_req\_enh R2-2004939 Late

## 6.16 NR Other

(R2 led NR TEI16, LSs from CT/SA requesting RAN2 action).

Email max expectation: 2 email threads

LS in

Proposed Noted, R2 is CCed. If needed, can be discussed in [000].

R2-2006502 Reply LS on support of eCall over NR (C1-203221; contact: Qualcomm) CT1 LS in Rel-16 TEI16 To:SA Cc:SA2, SA5, RAN2, RAN5, SA1, SA4, RAN, CT, CT6

R2-2006533 Reply LS to Reply LS on support for eCall over NR (S5-203369; contact: Nokia) SA5 LS in Rel-16 EIEI, 5GS\_Ph1 To:SA Cc:SA2, RAN2, CT1, RAN5, SA1, SA4, RAN, CT

R2-2006539 LS on 3GPP NR Rel-16 URLLC and IIoT performance evaluation (WI042\_2020\_06\_29\_5G\_ACIA\_LS\_WI042\_to\_3GPP-RAN1; contact: Bosch, Ericsson, ZVEI) 5G-ACIA LS in Rel-16 To:RAN, RAN1 Cc:SA1. RAN2

* 3 LSes Noted without presentation

Mandatory Full Rate UP IP

* [AT111-e][038][TEI16] Full Rate UP IP (Deutsche Telekom)

Scope: Treat R2-2006538, 6715, 6825, 6826, 6907, 6908, 6909, 7586, 7638

Determine agreeable parts in a first phase, Agree CRs and Reply LS (if needed) in a second phase

Deadline: Agreed CRs/LS EOM, Deadline for comments at least 24h before. Intermediate deadlines by Rapporteur if needed.

UE CAPABILITY:

- Two proposals on the table: A) hard code the mandatory aspect to be tied to RRC Rel16 indication and ignore any other signalling (NAS). B) Assume that we continue to use the NAS signalling, assume CT1 will make neccesary updates.

- Chair: There are diverging views, and for this particular case maybe both optnions will work. There was also a comment that hard coding will have additional impacts in the network signalling. We need to do more work in Rel-17, comments that hard-coding will not work then. If we are not sure, following the existing principle is the safest route.

- Chair proposal: We continue to use the NAS signalling, CT1 will make neccesary updates if any are needed.

CR

- It seems there is consensus that 38.300 needs a CR, but there are detailed comments on the text. There has also not been any objection to having a CR for 37.340, but there are detailed comments on the text (at least “simultaneous”). There may also be further detailed comments that has not sufaced yet bec of focusing on the big picture.

- Initial CRs are not agreeable as is.

- Chair: suggest anyway to start with the multi-co-sign CRs as a baseline.

LS

- Chair comment: There are several flavour LSes, but as it is not clear that we need multiple LS’es I’d suggest that we merge all necessary information into a single LS.

**DESCISIONS**

* [038] Will have CRs at this meeting, to implement the request to have mandatory full rate user plane integrity protection.
* [038] Include NR SA and NR DC, and MCG bearers for NE-DC
* [038] Assume that we continue to use the NAS signalling for signalling of this UE capability. Assume CT1 will make neccesary updates if any are needed.
* [038] Will send reply LS. Include in the LS also any information useful for CT1 TS update, if any.

R2-2006538 LS on mandatory support of full rate user plane integrity protection for 5G (SP-200617; contact: DT) SA LS in Rel-16 To:CT1, SA2, SA3, RAN2, RAN3 Cc:RAN, CT

* [038] Noted

R2-2006715 Mandatory Integrity protection at full user data rate Intel Corporation, Deutsche Telekom discussion Rel-16 TEI16

* [038] Noted

R2-2006907 Mandatory support of UPIP at full data rate for NR Qualcomm Incorporated discussion

* [038] Noted

R2-2006825 Mandatory support of full rate user plane integrity protection Deutsche Telekom, Telecom Italia, BMWi, Siemens, NCSC, Vodafone, Broadcom, Bell Mobility, AT&T, ORANGE, BT, KPN, Erillisverkot, Telstra, Swift Navigation, BOSCH, SEQUANS, FirstNet, Intel Corporation, Huawei, HiSilicon, Telefonica, Ericsson CR Rel-16 38.300 16.2.0 0285 - F TEI16

* [038] Revised

R2-2008513 Mandatory support of full rate user plane integrity protection Deutsche Telekom, Telecom Italia, BMWi, Siemens, NCSC, Vodafone, Broadcom, Bell Mobility, AT&T, ORANGE, BT, KPN, Erillisverkot, Telstra, Swift Navigation, BOSCH, SEQUANS, FirstNet, Intel Corporation, Huawei, HiSilicon, Telefonica, Ericsson CR Rel-16 38.300 16.2.0 0285 1 F TEI16

* [038] Agreed

R2-2006826 Mandatory support of full rate user plane integrity protection in NR-DC Deutsche Telekom, Telecom Italia, BMWi, Siemens, NCSC, Vodafone, Broadcom, Bell Mobility, AT&T, ORANGE, BT, KPN, Erillisverkot, Telstra, Swift Navigation, BOSCH, SEQUANS, FirstNet, T-Mobile USA, Intel Corporation, Huawei, HiSilicon, Telefonica, Ericsson CR Rel-16 37.340 16.2.0 0222 - F TEI16

* [038] Revised

[R2-2008639](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008639.zip) Mandatory support of full rate user plane integrity protection in NR-DC Deutsche Telekom, Telecom Italia, BMWi, Siemens, NCSC, Vodafone, Broadcom, Bell Mobility, AT&T, ORANGE, BT, KPN, Erillisverkot, Telstra, Swift Navigation, BOSCH, SEQUANS, FirstNet, T-Mobile USA, Intel Corporation, Huawei, HiSilicon, Telefonica, Ericsson CR Rel-16 37.340 16.2.0 0222 1 F TEI16

* [038] Agreed

R2-2007586 [draft] Response LS to TSG SA on mandatory support of full rate user plane integrity protection for 5G Deutsche Telekom LS out Rel-16 To:TSG SA, TSG RAN, TSG CT, SA WG3 Cc:CT WG1, SA WG2, RAN WG2, RAN WG3

* [038] Revised

[R2-2008640](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008640.zip) [draft] Response LS to TSG SA on mandatory support of full rate user plane integrity protection for 5G Deutsche Telekom LS out Rel-16 To:TSG SA, TSG RAN, TSG CT, SA WG3 Cc:CT WG1, SA WG2, RAN WG2, RAN WG3

* [038] Approved. Final version in R2-2008643

R2-2007638 [draft] LS on mandatory support of full rate user plane integrity protection for 5G Intel Corporation LS out Rel-16 TEI16 To:CT1 Cc:SA3, RAN3, SA2

* [038] Noted

R2-2006909 Draft Reply LS on mandatory support of full rate UPIP for 5G Qualcomm Incorporated LS out To:TSG SA

* [038] Noted

R2-2006908 Mandatory support of User Plane Integrity Protection at full data rate Qualcomm Incorporated CR Rel-16 38.300 16.2.0 0262 - C TEI16

* [038] Not pursued

TEI16 Ongoing Disc and Corrections

Secondary DRX

* [AT111-e][039][TEI16] Secondary DRX corrections (Ericsson)

Scope: Treat R2-2007062, 7370, 7486, 7258, 7890

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Agreed CRs EOM, Deadline for comments at least 24h before. Intermediate deadlines by Rapporteur if needed.

R2-2007890 (Re)start condition of drx-shortCycleTimer for secondary DRX MediaTek Inc. discussion Rel-16

* [039] Noted

R2-2007062 38321 CR Corrections on Secondary DRX LG Electronics Inc. CR Rel-16 38.321 16.1.0 0796 - F TEI16

* [039] Merged

R2-2007370 CR for secondary DRX group OPPO CR Rel-16 38.321 16.1.0 0818 - F TEI16

* [039] Merged

R2-2007486 Miscellaneous corrections for multiple DRX groups Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.1.0 0825 - F TEI16

* [039] Merged

R2-2007258 Correction to secondaryDRX-Group capability Ericsson CR Rel-16 38.331 16.1.0 1813 - F NR\_newRAT-Core

[R2-2008611](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008611.zip) Correction to secondaryDRX-Group capability Ericsson CR Rel-16 38.331 16.1.0 1813 1 F NR\_newRAT-Core

* [039] Endorsed (for merge)

[R2-2008612](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008612.zip) Corrections to secondary DRX Ericsson, LG, OPPO, Nokia, Nokia Shanghai Bell CR Rel-16 38.321 16.1.0 0886 - F TEI16

* [039] Agreed
* [AT111-e][040][TEI16] SMTC and NeedforGap Corrections (Nokia)

Scope: Treat R2-2007117, 7118, 7849, 7959

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 27 0900 UTC, Intermediate deadlines by Rapporteur if needed.

[R2-2008416](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008416.zip) [AT111-e][040][TEI16] SMTC and NeedforGap Corrections (Nokia) Nokia

* [040] noted, proposals agreed which is reflected below.

SMTC Configuration for PSCell Addition and SN Change in NR-DC

R2-2007117 SMTC Configuration for PSCell Addition and SN Change in NR-DC Apple, MediaTek Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, ZTE Corporation, Sanechips, CATT discussion Rel-16 NR\_newRAT-Core

* [040] Noted, Agree Option 1 for SMTC configuration in R16 for PSCell Addition and SN Change in NR-DC. (i.e. add the nfew parameter for SMTC configuration under RRCReconfiguration for PSCell addition and SN change)

R2-2007118 SMTC Configuration for PSCell Addition and SN Change in NR-DC Apple, MediaTek Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, ZTE Corporation, Sanechips, CATT CR Rel-16 38.331 16.1.0 1787 - F NR\_newRAT-Core

* [040] Revised, CR R2-2007118 can be further discussed and revised by considering Intel’s suggestions.

[R2-2008477](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008477.zip) SMTC Configuration for PSCell Addition and SN Change in NR-DC Apple, MediaTek Inc., Nokia, Nokia Shanghai Bell, Qualcomm Incorporated, ZTE Corporation, Sanechips, CATT CR Rel-16 38.331 16.1.0 1787 1 F NR\_newRAT-Core

* [040] Agreed

NeedForGap

R2-2007849 Correction to gapIndication considering interFrequencyConfig-NoGap Samsung CR Rel-16 38.331 16.1.0 1929 - F TEI16

* [040] not Pursued

R2-2007959 CR to 36.300 on support of NeedForGap capability Nokia, Nokia Shanghai Bell CR Rel-16 36.300 16.2.0 1311 - F NR\_newRAT-Core

* [040], Revised, CR R2-2007959 can be revised based on wording change feedback and agreed

[R2-2008620](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008620.zip) CR to 36.300 on support of NeedForGap capability Nokia, Nokia Shanghai Bell CR Rel-16 36.300 16.2.0 1311 1 F NR\_newRAT-Core

* [040] Agreed
* [AT111-e][041][TEI16] Other Corrections (Huawei)

Scope: Treat R2-2007948, 7962, 7945, 8007

Determine agreeable parts in a first phase, Agree CRs in a second phase

Deadline: Aug 27 0900 UTC, Intermediate deadlines by Rapporteur if needed.

HO NR to EN-DC

R2-2007948 Correction on HO from NR to EN-DC Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1948 - F TEI16

R2-2008509 Correction on HO from NR to EN-DC Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1948 1 F TEI16

* [041] Agreed

[R2-2008509](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008509.zip) Correction on HO from NR to EN-DC Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1948 1 F TEI16

* [041] Agreed

EN-DC Cell reselection

R2-2007962 Correction to RRC connection release procedure without security for EN-DC cell reselection Samsung Electronics Co., Ltd CR Rel-16 36.331 16.1.1 4418 - F TEI16

R2-2008524 Correction to RRC connection release procedure without security for EN-DC cell reselection Samsung Electronics Co., Ltd CR Rel-16 36.331 16.1.1 4418 1 F TEI16

* [041] Agreed

NR\_newRAT-Core

R2-2007945 FR2 inter-RAT measurement gap requirement indication Nokia, Nokia Shanghai Bell CR Rel-16 38.306 16.1.0 0397 - F NR\_newRAT-Core

* [041] Not Pursued
* [041] RAN2 assume for a R16 UE if it indicates *independentGapConfig* as supported, the UE shall also set *interRAT-NeedForGapsNR* of all FR2 bands to FALSE if *InterRAT-BandListNR* is present.

R2-2008007 CR on UE behavior with E-UTRA cell selection upon mobility from NR failure for enhanced EPS voice fallback Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1969 - F TEI16

[R2-2008525](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2008525.zip) CR on UE behavior with E-UTRA cell selection upon mobility from NR failure for enhanced EPS voice fallback Samsung Electronics Co., Ltd CR Rel-16 38.331 16.1.0 1969 1 F TEI16

* [041] Agreed

TEI16 New Proposals

R2-2007549 On combined RRC procedures Nokia, Nokia Shanghai Bell, Ericsson discussion Rel-16 TEI16 R2-2004949

R2-2007557 RRC processing delays for combined procedures Nokia, Nokia Shanghai Bell, Ericsson CR Rel-16 38.331 16.1.0 1288 5 F TEI16 R2-2004950

R2-2007234 Discussion on UE behaviours for access barring alleviation Google Inc. discussion 38.331 TEI16

R2-2008067 Issue on ping pong state transition for sidelink UE Xiaomi communications, China Mobile, Apple, Huawei discussion

R2-2008068 Introduction of Sidelink Data Inactivity monitoring Xiaomi communications, China Mobile, Apple, Huawei CR Rel-16 38.331 16.1.0 1984 - B 5G\_V2X\_NRSL-Core

R2-2008069 Introduction of Sidelink Data Inactivity monitoring Xiaomi communications, China Mobile, Apple, Huawei CR Rel-16 38.321 16.1.0 0877 - B 5G\_V2X\_NRSL-Core

R2-2008070 Introduction of Sidelink Data Inactivity monitoring Xiaomi communications, China Mobile, Apple, Huawei CR Rel-16 38.306 16.1.0 0401 - B 5G\_V2X\_NRSL-Core

Late

# 7 Rel-16 EUTRA Work Items

Essential corrections

## 7.1 EUTRA Rel-16 General

### 7.1.1 Cross WI RRC corrections

R2-2007737 Correction on RRC re-establishment procedure ASUSTeK CR Rel-16 36.331 16.1.1 4407 - F TEI16

### 7.1.2 Feature Lists and UE capabilities

R2-2006512 LS on further updated Rel-16 RAN1 UE features list for LTE (R1-2005118; contact: NTT DOCOMO, AT&T) RAN1 LS in Rel-16 LTE\_eMTC5-Core, NB\_IOTenh3-Core, LTE\_DL\_MIMO\_EE-Core, LTE\_terr\_bcast-Core, 5G\_V2X\_NRSL-Core, TEI16 To:RAN2 Cc:RAN4

R2-2006525 LS on Rel-16 RAN4 UE features lists for LTE and NR (R4-2009173; contact: NTT DOCOMO) RAN4 LS in Rel-16 To:RAN2 Cc:RAN1

### 7.1.3 Other

Other issue that do not fit under any other topic.

R2-2007655 Editorial changes Ericsson CR Rel-16 36.321 16.1.0 1495 - F LTE\_eMTC5-Core, NB\_IOTenh3-Core, 5G\_V2X\_NRSL-Core

## 7.2 Additional MTC enhancements for LTE

(LTE\_eMTC5-Core; LTE\_eMTC5-Core; leading WG: RAN1; REL-16; started: Jun 18; Completed: June 20; WID: RP192875;)

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

Some sub-items in 7.2 and 7.3 may be treated jointly.

Email max expectation: 5-6 email threads

### 7.2.1 General and Stage 2 corrections

Including incoming LSs

R2-2006506 LS on RAN1 clarification on MWUS frequency allocation (R1-2004952; contact: Ericsson) RAN1 LS in Rel-16 LTE\_eMTC5-Core To:RAN2

### 7.2.2 Mobile-terminated MT early data transmission EDT corrections

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

### 7.2.3 Scheduling multiple DL/UL transport blocks corrections

Scheduling multiple DL/UL transport blocks for MTC and NB-IoT is treated jointly under this AI.

### 7.2.4 Coexistence with NR corrections

Coexistence with NR for MTC and NB-IoT is treated jointly under this AI.

R2-2006858 Clarification on subframe level resource reservation for eMTC ZTE Corporation, Sanechips CR Rel-16 36.331 16.1.1 4358 - F LTE\_eMTC5-Core

### 7.2.5 Connection to 5GC corrections

Connection to 5GC for MTC and NB-IoT is treated jointly under this AI.

R2-2006859 Measurement requirement for eMTC UE in RRC\_INACTIVE state ZTE Corporation, Sanechips discussion LTE\_eMTC5-Core

R2-2006860 Draft LS to RAN4 on measurement requirement for eMTC UE in RRC\_INACTIVE state ZTE Corporation, Sanechips LS out LTE\_eMTC5-Core To:RAN4

R2-2007341 Corrections to connection to 5GC for eMTC Huawei, HiSilicon CR Rel-16 36.331 16.1.0 4381 - F LTE\_eMTC5-Core

### 7.2.6 Other MTC specific corrections

Including corrections related to Quality report in Msg3, MPDCCH performance improvement using CRS, Improvements for non-BL UEs, Stand-alone deployment, Mobility enhancements.

R2-2006792 Early UE capability retrieval enhancements for eMTC connecetd to 5GC Qualcomm Inc, Sierra Wireless, Thales, Telus, ZTE Corporation, TurkCell discussion Rel-16 LTE\_eMTC5-Core R2-2004841

R2-2007695 RRC CR for early UE capability retrieval for eMTC connected to 5GC Qualcomm Inc,Sierra Wireless, Thales, Telus, ZTE Corporation,TurkCell CR Rel-16 36.331 16.1.1 4400 - F LTE\_eMTC5-Core

R2-2007894 [Draft] Reply LS on early UE capability retrieval for eMTC Qualcomm Inc LS out Rel-16 LTE\_eMTC5-Core To:SA2 Cc:CT1, RAN3

### 7.2.7 MTC UE capabilities corrections

R2-2007340 Addition of missing capabilities for eMTC R16 Huawei, HiSilicon CR Rel-16 36.306 16.1.0 1780 - F LTE\_eMTC5-Core

## 7.3 Additional enhancements for NB-IoT

(NB\_IOTenh3-Core; leading WG: RAN1; REL-16; started: Jun 18; Completed: June 20; WID: RP-200293)

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

Some sub-items in 7.2 and 7.3 may be treated jointly.

Email max expectation: 5-6 email threads

### 7.3.1 General and Stage 2 Corrections

Including incoming LSs etc

R2-2006519 Reply LS on assistance indication for WUS (R3-204175; contact: Qualcomm) RAN3 LS in Rel-15 NB\_IOTenh3-Core, LTE\_eMTC5-Core To:SA2, RAN2 Cc:CT1

R2-2007337 Miscellaneous corrections for Rel-16 NB-IoT Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4380 - F NB\_IOTenh3-Core, LTE\_eMTC5-Core

R2-2007338 Miscellaneous corrections to NB-IoT and eMTC Rel-16 enhancements Huawei, HiSilicon CR Rel-16 36.300 16.2.0 1300 - F NB\_IOTenh3-Core, LTE\_eMTC5-Core

### 7.3.2 UE-group wake-up signal (WUS) Corrections

UE group wake Up signal for MTC and NB-IoT is treated jointly under this Agenda Item.

R2-2007336 Corrections to GWUS Huawei, HiSilicon CR Rel-16 36.304 16.1.0 0809 - F NB\_IOTenh3-Core, LTE\_eMTC5-Core

R2-2007567 Group WUS corrections Qualcomm Incorporated CR Rel-16 36.304 16.1.0 0810 - F NB\_IOTenh3-Core, LTE\_eMTC5-Core

R2-2007568 WUS corrections Qualcomm Incorporated CR Rel-16 36.300 16.2.0 1304 - F LTE\_eMTC5-Core

### 7.3.3 Transmission in preconfigured resources corrections

Transmission in preconfigured resources for MTC and NB-IoT is treated jointly under this Agenda Item.

R2-2006842 Starting legacy TA timer for PUR fallback ZTE Corporation, Sanechips discussion NB\_IOTenh3-Core

R2-2006846 HARQ feedback for PUR response ZTE Corporation, Sanechips discussion NB\_IOTenh3-Core

R2-2006848 Correction on discarding PUR-RNTI ZTE Corporation, Sanechips CR Rel-16 36.321 16.1.0 1489 - F NB\_IOTenh3-Core

R2-2006849 Other corrections on 36321 for PUR ZTE Corporation, Sanechips CR Rel-16 36.321 16.1.0 1490 - F NB\_IOTenh3-Core

R2-2006980 Addition of PUR RNTI in E-UTRA related UE identities Qualcomm Inc CR Rel-16 36.300 16.2.0 1297 - F LTE\_eMTC5-Core, NB\_IOTenh3-Core

R2-2007339 Discussion on carrier configuration for PUR Huawei, HiSilicon discussion Rel-16 NB\_IOTenh3-Core

R2-2007365 Correction to discard of PUR-RNTI Ericsson CR Rel-16 36.321 16.1.0 1494 - F LTE\_eMTC5-Core, NB\_IOTenh3-Core

R2-2007398 TA validation check for HARQ feeback to PUR response LG Electronics UK discussion Rel-16

R2-2007738 Impact on D-PUR TA timer due to reconfiguration of PUR periodicity and offset ASUSTeK discussion Rel-16 NB\_IOTenh3-Core

R2-2007739 HARQ feedback in RRC\_IDLE ASUSTeK discussion Rel-16 36.321 NB\_IOTenh3-Core

R2-2007901 CR for starting legacy TA timer for PUR fallback ZTE Corporation, Sanechips CR Rel-16 36.300 16.2.0 1310 - F NB\_IOTenh3-Core

R2-2007987 CR for HARQ feedback for PUR response ZTE Corporation, Sanechips CR Rel-16 36.321 16.1.0 1503 - F NB\_IOTenh3-Core

### 7.3.4 Other NB-IoT Specific corrections

NB-IoT specific topics

R2-2006839 Correction on initiation of RRCConnectionReestablishmentRequest Ericsson, ETRI CR Rel-16 36.331 16.1.1 4355 - F NB\_IOTenh3-Core

R2-2006850 Correction on schedulingRequestConfig release ZTE Corporation, Sanechips CR Rel-16 36.331 16.1.1 4357 - F NB\_IOTenh3-Core

R2-2006851 Minor corrections on 36304 for NB-IoT ZTE Corporation, Sanechips CR Rel-16 36.304 16.1.0 0804 - F NB\_IOTenh3-Core

R2-2007335 Correction to NB-IoT supported functionality in idle mode Huawei, HiSilicon CR Rel-16 36.304 16.1.0 0808 - F NB\_IOTenh3-Core

### 7.3.5 NB-IoT UE capabilities corrections

## 7.4 Even further mobility enhancement in E-UTRAN

(LTE\_feMob-Core; leading WG: RAN2; REL-16; started: Jun 18; Completed: June 20; WID: [RP-190921](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_84\Docs\RP-190921.zip))

Documents under 7.4 will be treated together with documents in 6.7

### 7.4.1 General and Stage 2 Corrections

Including incoming LSs (if any)

### 7.4.2 DAPS handover Corrections

This AI jointly addresses corrections to NR and LTE DAPS.

Including corrections to control and user plane for DAPS HO.

R2-2006682 Corretion on the RLF for LTE DAPS vivo CR Rel-15 36.331 15.10.0 4353 - F LTE\_feMob-Core

R2-2006791 PHR reporting format for DAPS Handover Qualcomm Inc, Huawei, HiSilicon discussion Rel-16 NR\_Mob\_enh-Core, LTE\_feMob-Core

R2-2006798 Clarification on single entry PHR for DAPS vivo discussion Rel-16 NR\_Mob\_enh-Core

R2-2006935 Support of DAPS handover without key change Intel Corporation discussion Rel-16 NR\_Mob\_enh-Core

R2-2007194 Handling of expiry of dataInactivityTimer for DAPS NEC discussion Rel-16 LTE\_feMob-Core

R2-2007268 Correction to RLC entities creation for DAPS Ericsson CR Rel-16 38.331 16.1.0 1816 - F NR\_Mob\_enh-Core

R2-2007269 Correction to RLC entities creation for DAPS Ericsson CR Rel-16 36.331 16.1.1 4372 - F NR\_Mob\_enh-Core

R2-2007270 Time misalignment in DAPS DRB configuration (Alt.1) Ericsson CR Rel-16 38.331 16.1.0 1817 - F NR\_Mob\_enh-Core

R2-2007271 Time misalignment in DAPS DRB configuration (Alt.2) Ericsson CR Rel-16 38.331 16.1.0 1818 - F NR\_Mob\_enh-Core

R2-2007272 Time misalignment in DAPS DRB configuration (Alt.1) Ericsson CR Rel-16 36.331 16.1.1 4373 - F NR\_Mob\_enh-Core, LTE\_feMob-Core

R2-2007273 Time misalignment in DAPS DRB configuration (Alt.2) Ericsson CR Rel-16 36.331 16.1.1 4374 - F NR\_Mob\_enh-Core, LTE\_feMob-Core

R2-2007274 Clarification of the T304 informative table for DAPS HO Ericsson CR Rel-16 38.331 16.1.0 1819 - F NR\_Mob\_enh-Core

R2-2007308 Discussion on source release indication Huawei, HiSilicon discussion Rel-16 LTE\_feMob-Core

R2-2007309 Discussion on releasing SCells Huawei, HiSilicon discussion Rel-16 LTE\_feMob-Core

R2-2007310 Correction on TS38.331 for RLF handling in DAPS Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1830 - F LTE\_feMob-Core

R2-2007311 Correction on TS38.331 for RRC connection re-establishment in DAPS Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1831 - F LTE\_feMob-Core

R2-2007358 Clarification on no DAPS HO in MR-DC Nokia, Nokia Shanghai Bell CR Rel-16 36.300 16.2.0 1301 - F LTE\_feMob-Core

R2-2007456 Clarification on TS38.331 for DAPS Huawei, HiSilicon CR Rel-16 38.331 16.1.0 1845 - F NR\_Mob\_enh-Core

R2-2007481 Incorrect restriction for RLC UM radio bearers Ericsson CR Rel-16 36.331 16.1.1 4385 - F LTE\_feMob-Core

R2-2007496 DAPS handover corrections Ericsson CR Rel-16 36.300 16.2.0 1302 - F LTE\_feMob-Core

R2-2007497 DAPS handover corrections Ericsson CR Rel-16 38.300 16.2.0 0278 - F NR\_Mob\_enh-Core

R2-2007503 Corretion on the RLF for NR DAPS vivo CR Rel-16 38.331 16.1.0 1850 - F NR\_Mob\_enh-Core

R2-2007523 PHR for DAPS Ericsson discussion Rel-16 LTE\_feMob-Core

R2-2007665 Corrections to T304 expiry during DAPS Samsung CR Rel-16 38.331 16.1.0 1875 - F NR\_Mob\_enh-Core

R2-2007666 Aligning terminologies for handling of L2 entities in DAPS Samsung CR Rel-16 38.331 16.1.0 1876 - F NR\_Mob\_enh-Core

R2-2007692 MAC CR for PHR reporting format for LTE DAPS handover Qualcomm Inc, Huawei, HiSilicon CR Rel-16 36.321 16.1.0 1496 - F LTE\_feMob-Core

R2-2007693 RRC CR for PHR reporting for LTE DAPS handover Qualcomm Inc, Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4399 - F LTE\_feMob-Core

R2-2007710 No support of DAPS HO for a CHO candidate cell ZTE Corporation, Sanechips, Ericsson CR Rel-16 38.331 16.1.0 1888 - F NR\_Mob\_enh-Core

R2-2007711 No support of DAPS HO for a CHO candidate cell ZTE Corporation, Sanechips, Ericsson CR Rel-16 36.331 16.1.0 4406 - F LTE\_feMob-Core

R2-2007788 Correction for SRB handling of DAPS HOF (36.331) SHARP Corporation CR Rel-16 36.331 16.1.1 4411 - F LTE\_feMob-Core

R2-2007789 Correction for SRB handling of DAPS HOF (38.331) SHARP Corporation CR Rel-16 38.331 16.1.0 1904 - F LTE\_feMob-Core

R2-2007790 Potential security issue on DAPS handover SHARP Corporation discussion Rel-16 LTE\_feMob-Core

R2-2007791 [Draft] LS to SA3 on security handling for DAPS handover SHARP Corporation LS out Rel-16 LTE\_feMob-Core To:SA3

R2-2007893 Correction for PDCP status report LG Electronics Inc. CR Rel-16 36.323 16.1.0 0287 - F LTE\_feMob-Core

R2-2007903 Clarification on the UEAssistanceInformation for DAPS vivo discussion Rel-16 NR\_Mob\_enh-Core

R2-2008072 Correction on TS36.331 for RLF handling in DAPS Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4423 - F LTE\_feMob-Core

R2-2008073 Correction on TS36.331 for RRC connection re-establishment in DAPS Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4424 - F LTE\_feMob-Core

R2-2008074 Correction on TS36.300 for uplink data switching in DAPS Huawei, HiSilicon CR Rel-16 36.300 16.2.0 1312 - F LTE\_feMob-Core

R2-2008075 Correction on TS38.300 for source fallback in DAPS Huawei, HiSilicon CR Rel-16 38.300 16.2.0 0291 - F NR\_Mob\_enh-Core

R2-2008076 Correction on TS38.300 for uplink data switching in DAPS Huawei, HiSilicon CR Rel-16 38.300 16.2.0 0292 - F NR\_Mob\_enh-Core

### 7.4.3 UE capability corrections

Including UE capability aspects of LTE mobility WI.

R2-2006932 Correction on LTE MOB capability Intel Corporation, China Telecom, Samsung CR Rel-16 36.331 16.1.1 4362 - F LTE\_feMob-Core

R2-2006933 Correction on LTE MOB capability Intel Corporation, China Telecom, Samsung CR Rel-16 36.306 16.1.0 1779 - F LTE\_feMob-Core

R2-2007458 Correction on TS 36.331 for DAPS UE capabilities Huawei, HiSilicon CR Rel-16 36.331 16.1.1 4384 - F LTE\_feMob-Core

R2-2007459 Correction on TS 36.306 for DAPS Huawei, HiSilicon CR Rel-16 36.306 16.1.0 1781 - F LTE\_feMob-Core

### 7.4.4 Other corrections

Only corrections not fitting other agenda items.

Including CHO aspects that are LTE-specific without equivalent NR impacts.

R2-2007762 Correction on CHO for LTE-5GC Huawei, HiSilicon CR Rel-16 36.300 16.2.0 1308 - F LTE\_feMob-Core

R2-2007763 Correction on TS 36.300 for CHO Huawei, HiSilicon CR Rel-16 36.300 16.2.0 1309 - F LTE\_feMob-Core

## 7.5 LTE Other WIs

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

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

R2-2007844 Minor changes collected by Rapporteur Samsung CR Rel-16 36.331 16.1.1 4414 - F LTE\_high\_speed\_enh2-Core, TEI16

## 7.6 LTE Positioning

(NavIC, LTE TEI16 Positioning)

# 8 Rel-17 NR Work Items

## 8.1 NR Multicast

(NR\_MBS-Core; leading WG: RAN2; REL-17; WID: [RP-201038](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201038.zip))

Time budget: 2 TU

Tdoc Limitation: 4 tdocs

Email max expectation: 4 threads

Focus for this meeting: a) get a common understanding of the WID, b) review architecture assumptions (functional split), c) confirm WG work splits, Clarify expectations on other groups, if any. d) get technical proposals on the table for questions and scrutiny with focus on Connected mode UEs, and also to what extent solutions are expected to be reused between Idle / Inactive vs Connected mode UEs.

### 8.1.1 Organizational, Requirements, Scope and Architecture

Including stage 2 proposals

Organizational

R2-2007024 Rel-17 NR MBS workplan Huawei, CMCC, HiSilicon discussion Rel-17 NR\_MBS-Core

* Note

General

R2-2007412 Initial considerations of NR Multicast CMCC discussion Rel-17 NR\_MBS-Core

P1

- vivo think RP has discussed Inter-RAT MBMS service. We might need to support such service continuity.

- MTK think NR SA is priority, maybe not sure there is time to go through other case.

- LG think we have many objectives and prefer to focus in NR SA

- Oppo think it is too early to exclude MR-DC.

- QC think NR SA is the baseline but think scenarios where NR is the anchor can be considered. And think the IRAT service continuity need to be addressed by SA2.

- Huawei think NR SA, NR DC, NE DC can be considered.

P3

- Huawei think R3 has alredy started a terminology discussion, and companies should input to that one.

P5

- CMCC think the WID says “unified solution” so we should clarify.

- QC think Multicast and Broadcast are different things and with Multicast the UEs are in Connected and that are for differnet services. QC are not sure about how Idle shall work.

- LG support to have commonality. Intel think we should have maximum commonality. Apple think we should try to make the solution same for Idle and Connected.

- Chair think that Ilde and Connected mode delivery can have different characteristics.

- MTK think P5 is a good proposal.

- vivo think we should priority conn. Think it is difficult to have commonality.

- Huawei think Connected and Idle will support diffierent set of services and operator deployment may be differnet dep on service.

- Samsung think this is too early.

- ZTE agrees that Mcast abd Bcast is different, and for Bcast a unified solution should be done.

- NEC think it is clear that different services will require RRC connected, so we should assume to have Ericsson agrees to prioritize connected. Ericsson think MBS is Idle is not required

- Nokia think this is clear in the WID, we shold have commonality.

- BT think that if Connected and Idle become very different it shold be possible to deply only Connected or Only Idle.

- Chair: Many companies think that Idle and Connected solutions may have significant differences. FFS what it means in the end.

* Focus initially on NR SA, TBD to what extent other scenarios NR DC, NE DC can be supported.
* Confirm Will support PTM transmission in a cell.

R2-2006593 Discussion on Requirement and Architecture of MBS CATT discussion Rel-17 NR\_MBS-Core

DISCUSSION

P2

- QC wonder it is to clarify Unicast PDU session. CATT think that PDU session MBS session etc need to be clarified.

- CATT think we will need to know how these are related. CATT and QC think there is always a PDU session and MBS session 1-to-1 mapped for eash UE receiving multicast, and there may be an impact to mobility.

- MTK think we don’t need to send an LS. Apple agrees. CMCC think this is under discussion in SA2.

P3

- Chair wonder If we need to take this into account now.

- Oppo think this is unclear.

- Huawei think the transmission area is SFN transmission area, or Service Area, and Huawei think this is up to network.

- Nokia think this should be for R3 and SA2, not a focus for R2.

- LG think that SFN standardization is ruled out.

- QC think transmission area is SFN and will be an areas served by a single DU.

- vivo think this is the area where MBS service is available for Idle UEs.

P4/5

- Huawei think that was R2 can do is to minimize interruption, data loss etc. Huawei think we need to support V2X so the requirements are very high.

- Lenovo think lossless shall be supported, as the target verticals need this.

- MTK think these requirements map to QoS and we don’t need to clarify those. Futurewei agrees.

- CATT think whether we need to use RLC-AM depends on the requirements.

- CMCC think the requirements are diverse.

- ZTE think lossless mobility is not needed. ZTE think that overdesign shold be avoided.

- Ericsson think that in the end we need to understand this, and think that in connected mode we can have much higher requirements than for Idle.

* Noted

R2-2006983 Scope and solution approach for NR MBS Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core

DISCUSSION

- QC think multicast can be delivered in Connected, FFS if it can be delivered in Idle

- Vivo think we could support to distribute and optimize also the individual traffic delivery. Nokia think this is not the intention os SA2. LG thkn PTM and PTP is for shared delivery

- Apple think that some NAS provedure is needed to receive the service.

- Chair proposes to confirm: We will, for multicast services introduce support for PTP and PTM transmission of shared traffic delivered by 5GC, at least for connected mode.

- Huawei think we should add connected mode, Oppo agreed

- ZTE think we need to include broadcast. Nokia think not, and think this has been decided in SA2. QC also think it is clear that Bcast will not be included (key issue 5)

- Futurewei would like to prioritize a common solution, supporting both Idle and Connected.

* Confirm that We will, for multicast services introduce support for PTP and PTM transmission of shared traffic delivered by 5GC, at least for connected mode (this is not intended to exclude other cases)

R2-2007124 RAN2 Study on the NR MBMS Apple discussion Rel-17 NR\_MBS-Core

R2-2006793 NR Multicast Radio Bearer Architecture aspects Qualcomm Inc discussion Rel-17 NR\_MBS-Core

R2-2006804 General considerations for MBS in RRC\_CONNECTED OPPO discussion Rel-17 NR\_MBS-Core

R2-2006952 Consideration of L2 protocol impact by MBS Intel Corporation discussion Rel-17 NR\_MBS-Core

R2-2007025 Stage 2 aspects for NR MBS Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

R2-2007639 Overview of NR MBS work item Ericsson discussion Rel-17 NR\_MBS-Core

R2-2007993 Consideration on BWP and beam in NR multicast LG Electronics Inc. discussion

R2-2007033 Overview of NR MBS vivo discussion

R2-2006574 Overview on NR MBS Architecture MediaTek Inc. discussion Rel-17 NR\_MBS-Core

R2-2007177 NR multicast architecture and SC-PTM Sony discussion Rel-17 NR\_MBS-Core

R2-2007442 Scope and Architecture analysis of NR MBS ZTE, Sanechips discussion Rel-17

R2-2007550 Discuss NR MBS architecture and protocol stack Futurewei discussion Rel-17 NR\_MBS-Core

R2-2007636 General framework for MBS Intel Corporation discussion Rel-17 NR\_MBS-Core

R2-2007672 On Stage-2 aspects and overview of NR MBS Samsung discussion NR\_MBS-Core

R2-2007774 Initial consideration of NR MBS Kyocera discussion Rel-17 NR\_MBS

R2-2008031 Discussion on user-plane structure for NR multicast LG Electronics Inc. discussion Rel-17 NR\_MBS-Core

### 8.1.2 Connected mode UEs

#### 8.1.2.1 Dynamic PTM PTP switch with service continuity

R2-2006794 NR Multicast dynamic PTM PTP switch with service continuity Qualcomm Inc discussion Rel-17 NR\_MBS-Core

Chair summary, two main aspects:

- gNB dynamically decides whether to deliver multicast data by PTM or PTP.

- Loss-less (or low loss or duplicate handling) behaviour is support by PDCP.

DISCUSSION

- Huawei think Security is not an issue.

- Nokia agrees with the first bullet.

- Nokia wonder it the intention is to have ARQ in PDCP. QC think PDCP can do very exact switching (e.g. if common PDCP).

- FW think we should say that protocol fiunctions of PDCP like reordering, duplicate handline etc need to be supported. Convida agrees.

- Ericsson agrees with the first bullet, and for e second point maybe a common PDCP could be used but would like to do this in the DU, This may impact also R3.

- Fujitsu think QC arch is that RLC has two legs, which layer will deceide which leg. QC think this is done at the PDCP layer, and RLC is independent per leg.

- vivo think that PDCP doesn’t have to be this layer.

- CATT think that loss-less is only for RLC-AM bearers, and we should not discuss loss-less for PDCP until that has been decided

- Samsung think that reliability will be done by HARQ, for PDCP ti focus on interruption

- Lenovo think we need to decide if to have both PTM and PTP for a UE.

* For a UE, gNB dynamically decides whether to deliver multicast data by PTM or PTP (Shared delivery)
* FFS which layer(s) handles reliability (in general), inorder delivery / duplicate handling, and it is FFS how it works at PTM PTP switch.

R2-2007015 Simultaneous transmission of multicast/unicast NEC discussion

R2-2007631 Protocol structure and bearer modelling for NR MBS Ericsson discussion Rel-17 NR\_MBS-Core

R2-2007026 Dynamic switch between PTP and PTM for MBS bearer Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

R2-2006575 UE Reception Model of NR MBS Radio Bearer and its Dynamic PTM/PTP switch MediaTek Inc. discussion Rel-17 NR\_MBS-Core

R2-2006982 Dynamic change between PTM and PTP transmission in gNB Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core

R2-2006594 Discussion on Dynamic PTM and PTP Switch with Service Continuity CATT discussion Rel-17 NR\_MBS-Core

R2-2007637 Dynamic switch between PTM and PTP for service continuity Intel Corporation discussion Rel-17 NR\_MBS-Core

R2-2006569 Radio Bearer based Multicast PTM and PTP mode switching TCL Communication Ltd. discussion Rel-17 NR\_MBS

R2-2006803 Dynamic PTM and PTP switching with service continuity OPPO discussion Rel-17 NR\_MBS-Core

R2-2007248 Counting scheme for dynamically switching PTM and PTP ITRI discussion NR\_MBS-Core

R2-2007034 Dynamic PTM PTP switch for RRC Connected UE vivo discussion

R2-2007053 Consideration on switching between PTP and PTM Spreadtrum Communications discussion

R2-2007178 NR multicast in connected mode Sony discussion Rel-17 NR\_MBS-Core

R2-2007134 Discussion on delivery mode switch with service continuity in NR multicast KT Corp. discussion

R2-2007413 Discussion on dynamic delivery mode switch CMCC discussion Rel-17 NR\_MBS-Core

R2-2007443 Delivery mode switching for NR MBS ZTE, Sanechips discussion Rel-17

R2-2007466 Protocols and Dynamic Switching for 5G MBS PTP and PTM Lenovo, Motorola Mobility discussion Rel-17

R2-2007551 Discuss dynamic change of MBS delivery method Futurewei discussion Rel-17 NR\_MBS-Core

R2-2007992 Dynamic bearer type change LG Electronics Inc. discussion

R2-2008063 Transfer Type Change with Service Continuity Samsung discussion Rel-17 NR\_MBS-Core

#### 8.1.2.2 Mobility with Service continuity

R2-2007027 Service continuity during mobility for MBS Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

DISCUSSION

- Oppo think we can consider all cases for handover, and think there will be a whole container of control information at HO, Agree with p4.

- P1 QC think we should discuss all scenarios. Agree with P2, P3, QC think all scenarios is considered. Can agree to send an LS.

- CMCC also think we should focus on Shared delivery, and think a key is to have commonality between HO and PTP PTM switch

- Nokia agrees with P1, 2, 3, but have some concerns on P4, this may be complex for the network.

- MTK has the same understanding as Huawei on P1, and think now we should focus on MBS-MBS case. Support P4.

- FW think MBS-to-Unicast HO is complex. Support P2 and P3, but are not sure whether P4 is needed, in LTE we didn’t need this.

- CATT agree with P1, think P2 and P3 is R3, P4: think this is R3 scope.

- Samsung support P1 and 2, Do not support P3 and P4, think this is not required (loss-less), and also think P4 is complex for the network.

- Intel agree w P1, P2 need some more thinking, P4 think there could be some loss. Don’t think we shall ask SA2.

- vivo agree p123, have concerns with P4, wonder about packets in different shared channels.

- NEC agree P1 and P2, for P3 P4 not sure lossless is required.

- LG partially support P1 and P2

- Convida think it can be useful to clarify terminology.

- ZTE think P1 makes sense. Have concerns on P4.

- Apple think we need requiremens from SA2. Huawei think the requirements for V2X are already clear.

- Ericsson think that requirements for service continuity are already specified e.g. for ciritical communication.

* Focus on MBS-MBS scenario initially (i.e. shared delivery), including both PTM and PTP (if applicable). Other scenarios later, TBD.
* Requirements for lossless mobility are TBD. Assume for now that R2 will anyway discuss service continuity functionality for low or no data loss.

R2-2006796 NR Multicast mobility enhancements with service continuity Qualcomm Inc discussion Rel-17 NR\_MBS-Core

DISCUSSION

- MTK think it is too early to discuss variants of Handover, DAPS might be needed but thikn we can focus on legacy HO first. Samsung think legacy HO can be the baseline.

- Nokia think it is important that we don’t duplicate functionality, and we should reuse what we have. QC deliberately not mention enhancements, but expect some adaptation is needed.

- Sony wonder what is the interest indication. QC thikn now he network knows and the UE doesn’t have to provide interest indication.

- Lenovo think we also need to consider unicast – MBS and think that for such cases, all Handover types can also be used.

- LG think we need confirmation from SA2 for P3. There might be some cases when the gNB doesn’t know,

- Samsung wonder if it has been agreed how the association is done, TMGI etc. Chair think there remains many details to be agreed.

- ZTE agrees with the proposed agreement for P2, ZTE agree with P3 for multicast.

- Huawei think we don’t need to agree on P3 now.

* R2 assumes that for Rel-17 NR multicast Mobility in Connected mode, handover (including variants) is the baseline, TBD exactly which variants.

R2-2006802 Discussion on mobility with MBS Service continuity OPPO discussion Rel-17 NR\_MBS-Core

R2-2007414 Discussion on MBS mobility with service continuity CMCC discussion Rel-17 NR\_MBS-Core

R2-2006984 Service Continuity for Connected mode UE NEC discussion

R2-2006827 Scenarios and Requirements for Mobility with Service Continuity MediaTek Inc. discussion

R2-2008061 MBS Mobility for Connected Mode UEs Samsung discussion Rel-17 NR\_MBS-Core

R2-2006595 Discussion on Mobility with Service Continuity in RRC\_CONNECTED CATT discussion Rel-17 NR\_MBS-Core

R2-2007035 MBS Service Continuity for RRC Connected UE vivo discussion

R2-2007054 Discussion on Mobility with Service continuity for connected UE Spreadtrum Communications discussion

R2-2007444 Discussion about basic mobility support in NR MBS ZTE, Sanechips discussion Rel-17

R2-2007467 PDCP Count Value Alignment to support of Loss-less handover for 5G MBS Lenovo, Motorola Mobility discussion Rel-17

R2-2007552 Support MBS service continuity with mobility Futurewei discussion Rel-17 NR\_MBS-Core

R2-2007628 Mobility for NR MBS Ericsson discussion Rel-17 NR\_MBS-Core

R2-2007991 MBS service continuity LG Electronics Inc. discussion

#### 8.1.2.3 Other

Addtitional tdoc: 1

Dynamic Control of Transmission Area, Reliability. These topics are lower priority initially, and expected to not be treated at R2 111. Tdoc submission is allowed to allow coordination by cross-review of tdocs.

Reliability

R2-2007633 Mechanisms to improve reliability for UEs in RRC\_CONNECTED Ericsson discussion Rel-17 NR\_MBS-Core

R2-2008032 Discussion on reliability improvement and UL feedback in NR multicast LG Electronics Inc. discussion Rel-17 NR\_MBS-Core

On the 2 papers above, Chair Summary, for PTM (and PTP):

- HARQ w feedback

- RLC-AM

- Dynamic Switching PTM PTP

- PDCP reliability, split/duplication etc.

DISCUSSION

- MTK thikn HARQ w feedback is good and expect RLC AM is needed. MTK think PDCP reliability is legacy ..

- Samsung think we need short latency for some UC in this WI, so HARQ feedback can be enoung, RLC-AM and plit bearer can be complex. Also dynamic switching is easy as it is network impl. Nokia agree with Samsung, and thikn it is good to keep this simple. CATT agrees as well, think RLC AM is not needed, PDCP not needed.

- QC think HARQ will be there, but RLC-AM is needed. Dynamic switching is good, and PDCP can be considered. RAN must provide high reliability.

- Oppo think L2 feedback is needed, but we need to decide the protocol stack first.

* R2 expect that there may be HARQ with feedback (for PTM) and this is specified by R1.

R2-2006596 Discussion on the Reliability of Broadcast/Multicast Service CATT discussion Rel-17 NR\_MBS-Core

R2-2007415 Discussion on MBS dynamic area control and reliability enhancements CMCC discussion Rel-17 NR\_MBS-Core

R2-2006576 Reliability Improvement for NR MBS Reception MediaTek Inc. discussion Rel-17 NR\_MBS-Core

R2-2008062 Reliability Enhancement for MBS Samsung discussion Rel-17 NR\_MBS-Core

* [Post111-e][MBS] L2 Architecture ()

Scope: L2 architecure, have proposals on the table, find potential agreeements

Intended outcome:

Deadline: Next meeting

Transmission Area

R2-2007036 Discussion on dynamic control of transmission area for MBS vivo discussion

R2-2007028 Reliability enhancement and dynamic control of transmission area for NR MBS Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

R2-2007445 Miscellaneous issues in NR MBS ZTE, Sanechips discussion Rel-17

### 8.1.3 Idle and Inactive mode UEs

R2-2006597 Consideration on Idle and Inactive mode UEs CATT discussion Rel-17 NR\_MBS-Core

DISCUSSION

- Chair: think the main proposal is that EUTRA SC PTM is the baseline for Idle/Inactive.

- FW think Idle do need to be supported. Think there is SIB overhead.

- Oppo think R2 cannot decide in service continuity. Support BWP and 3456

- MTK agrees with Oppo.

- NEC are not sure SIB oh will be a problem, NEC wonder if UEs need to go to connected for service. Not sure counting is needed.

- Ericsson think Idle mode is complex but think we can support Idle mode by going to connected mode, which means we have a high degree of re-use. Ericsson also think service continuity is complex. Ericsson are also concerned that a UE may reselect non-best cells on a frequency. Think we should agree that UE shall go to connected.

- Kyocera think it is difficult to have the same reliability as in Connected mode, but think we can reuse LTE and it is not so complex.

- vivo think mandating to go to connected can be an issue for the first connection setup (load), think we can use LTE solution, but can also conside signalling enhancements.

- Apple agrees with vivo, and think it is not reasonable to have all UEs in Connected mode.

- CMCC also think this need to be supported, and think we should reuse LTE mechanisms, e.g. SC-MCCH etc.

- ZTE has concerns with P1, Idle/inactive must be supported.

- QC think that companies are mixing up multicast and broadcast.

- Chair observations: Many proposals to reuse (to significant extent or even 100%) LTE SC-PTM for Idle/Inactive for NR. Some companies suggest to do control etc in connected also for Idle/Inactive delivery.

R2-2007416 Discussion on MBS supported UEs in RRC\_IDLE and RRC\_INACTIVE states CMCC discussion Rel-17 NR\_MBS-Core

R2-2006795 NR Multicast services and configuration for UEs in different RRC states Qualcomm Inc discussion Rel-17 NR\_MBS-Core

R2-2007262 NR Multicast in Idle and Inactive mode Ericsson discussion Rel-17 NR\_MBS-Core

R2-2007673 RRC IDLE/ INACTIVE aspects of NR MBS Samsung discussion Rel-17 NR\_MBS-Core

R2-2006801 Discussion on MBS reception of idle or inactive mode UE OPPO discussion Rel-17 NR\_MBS-Core

R2-2007014 Some consideration for IDLE mode and IN\_ACTIVE mode UE NEC discussion

R2-2007029 IDLE/INACTIVE UE support for NR MBS Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

R2-2007037 Discussion on Idle and Inactive mode UEs vivo discussion

R2-2007055 MBS for Idle and Inactive mode UE Spreadtrum Communications discussion

R2-2007446 MBS for UE in RRC\_INACTIVE/RRC\_IDLE State ZTE, Sanechips discussion Rel-17

R2-2007896 Group Based MBS Notification for Idle/Inactive mode UEs MediaTek Inc. discussion Rel-17 NR\_MBS-Core

R2-2008052 NR MBS solution for UE in RRC\_IDLE or RRC\_INACTIVE state CHENGDU TD TECH LTD. discussion Rel-17

## 8.2 MR DC/CA further enhancements

(LTE\_NR\_DC\_enh2-Core; leading WG: RAN2; REL-17; WID: [RP-201040](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201040.zip))

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

Email max expectation: 2 threads

Focus for this meeting: a) get a common understanding of the WID b) get technical proposals on the table for questions and scrutiny.

### 8.2.1 Organizational, Requirements and Scope

Including work plan and any other rapporteur input.

R2-2007676 Work plan for R17 Further MR-DC enhancements WI Huawei Work Plan Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007677 Status of the work on efficient SCell activation/deactivation Huawei discussion Rel-17 LTE\_NR\_DC\_enh2-Core

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

R2-2006756 On Support of Activation/Deactivation for SCG InterDigital discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2006806 Discussion on SCG suspension OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2006900 Framework of SCG deactivation and activation ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007009 Efficient Activation/Deactivation Mechanism for SCG and Scells CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007046 Discussion on efficient activation mechanism for one SCG Spreadtrum Communications discussion

R2-2007068 On fast deactivation and activation of one SG and SCells Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007109 Scoping the usage of SCG suspension Apple discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007215 Efficient activation and deactivation mechanism for SCG and SCells vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007236 Enhancements for Rel-17 efficient activation/de-activation Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007438 Discussion on CPAC scenarios CMCC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007598 Efficient SCG/SCell (de)activation Ericsson discussion LTE\_NR\_DC\_enh2-Core

R2-2007623 Further enhancements regarding deactivation and resumption for R17 Samsung Telecommunications discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007678 Discussion on SCG deactivation and activation Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007748 Efficient SCG activation/deactivation in MR-DC Qualcomm Incorporated discussion Rel-17

R2-2007867 Discussion on SCG suspension MediaTek Inc. discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007986 Time-efficient SCG Activation mechanism LG Electronics discussion Rel-17

R2-2007994 Discussion of SCG activation/deactivation SHARP Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

### 8.2.3 Conditional PSCell change / addition

R2-2006695 Scope and scenario for CPAC vivo discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2006757 Coexistence of CHO and CPC at the UE InterDigital discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2006805 Discussion on conditional PSCell change and addition OPPO discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2006901 Discussion on conditional PSCell addition/change ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2006976 Overview of conditional PSCell addition NEC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2006977 Inter-SN Conditional PSCell Change NEC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007010 Scope and basic procedure for Conditional PSCell Addition/Change ??(CPAC)? CATT discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007052 Discussion on conditional PSCell addition or change Spreadtrum Communications discussion

R2-2007089 Discussion on conditional PSCell change and addition Apple discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007130 Scenarios and General Principles of CPAC ETRI discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007237 Rel-17 Conditional PSCell Addition Intel Corporation discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007364 On the scope of Rel-17 CPAC Nokia, Nokia Shanghai Bell discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007439 Consideration on dormant SCG CMCC discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007553 Inter node CPAC procedure and configuration discussion Futurewei discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007599 Conditional reconfigurations Ericsson discussion LTE\_NR\_DC\_enh2-Core

R2-2007624 Further enhancements on conditional configuration for R17 Samsung Telecommunications discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007679 Discussion on Conditional PSCell addition/change Huawei, HiSilicon discussion Rel-17 LTE\_NR\_DC\_enh2-Core

R2-2007749 Conditional PSCell addition/change Qualcomm Incorporated discussion Rel-17

R2-2007839 Conditional PSCell addition and change in MR-DC Potevio discussion LTE\_NR\_DC\_enh2-Core

R2-2007985 Considerations of CPAC in Rel-17 LG Electronics discussion Rel-17

R2-2008079 Remaining issues of Conditional PSCell Addition NTT DOCOMO INC. discussion Rel-17 LTE\_NR\_DC\_enh2-Core Late

## 8.3 Multi SIM

(LTE\_NR\_MUSIM-Core; leading WG: RAN2; REL-17; WID: [RP-201309](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201309.zip))

Time budget: 0 TU

Tdoc Limitation: 2 tdocs

Email max expectation: 0 threads

This item will not be treated at meeting. However it is expected to receive LSes that need to be replied, and it is exptected that the LSes will be discussed by email to next meeting. Companies may input in order to announce their interntions and thus facilitate coordination etc.

R2-2006540 Guidance for SA2 on Solution #16 for Key Issue 2 Vodafone discussion

R2-2006627 Consideration on the Work Scope for Multi-SIM CATT discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2006807 Discussion on Multi-SIM OPPO discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2006916 Considerations for Multi-SIM WI Objectives Charter Communications discussion Rel-17

R2-2006944 Handling of paging collision for Multi-SIM Qualcomm Incorporated discussion

R2-2006981 Consideration on Multi-SIM China Telecom discussion

R2-2007129 Coordination of concurrent communication for Multi-SIM Qualcomm Incorporated discussion

R2-2007163 Work plan for Multi SIM WI vivo, Charter Communications discussion

R2-2007164 Initial Considerations for Multi-SIM vivo discussion

R2-2007179 Discussion on Multi-SIM Sony, Convida Wireless discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2007191 Support for Multi-SIM Devices MediaTek Inc. discussion Rel-17

R2-2007207 Overview of Multi-SIM ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2007208 Consideration on the RAN2 issues on Multi-SIM ZTE Corporation, Sanechips discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2007352 Clarification and Finalisation of Scope for MUSIM Work Nokia, Nokia Shanghai Bell discussion Rel-17

R2-2007353 Paging reception for MUSIM scenario Nokia, Nokia Shanghai Bell discussion Rel-17

R2-2007357 Support of UE capabilities coordination for Multi-USIM UEs China Telecommunications discussion

R2-2007394 Way forward for the progress of Multi-SIM WI in RAN2 Huawei, HiSilicon discussion

R2-2007396 Discussion on Multi-SIM WI Objectives 1 and 2 Huawei, HiSilicon discussion

R2-2007418 Discussion on the paging collision and interruption issues for multi-sim UEs CMCC discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2007602 Graceful leaving for a MultiSIM device Ericsson discussion

R2-2007603 Paging collision avoidance Ericsson discussion

R2-2007620 RAN2 impacts of Multi-SIM support Futurewei Technologies discussion

R2-2007740 Mechanism for UE to notify network switch ASUSTeK discussion Rel-16 LTE\_NR\_MUSIM-Core

R2-2007952 General consideration for solving MUSIM problems Xiaomi Communications discussion

R2-2007956 Discussion of the coordinated leaving problem Xiaomi Communications discussion

R2-2007961 Solution analysis for R17 Multi-SIM KI#2 and KI#3 Intel Corporation discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2008020 General considerations on potential RAN2 works for Multi-USIM devices Samsung Electronics Co., Ltd discussion Rel-17 LTE\_NR\_MUSIM-Core

R2-2008021 Overview on SA2 progress for Multi-USIM devices Samsung Electronics Co., Ltd discussion Rel-17 LTE\_NR\_MUSIM-Core

## 8.4 NR IAB enhancements

(NR\_IAB\_enh-Core; leading WG: RAN2; REL-17; WID: [RP-201293](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201293.zip))

Time budget: 0 TU

Tdoc Limitation: 3 tdocs

Email max expectation: 0 threads

This item will not be treated at meeting. However some parts, e.g. scope clarifications and work split might be initiated by email to next meeting. Tdoc sumbission is allowed to facilitate coordination by tdocs cross-review.

[R2-2006964](file:///D:\Documents\3GPP\tsg_ran\WG2\TSGR2_111-e\Docs\R2-2006964.zip) Workplan for Rel-17 IAB Qualcomm Incorporated (WI Rapporteur) Work Plan Rel-17

R2-2008024 Correction of text on measIdleCarrierListEUTRA and measIdleCarrierListNR LG Electronics France CR Rel-16 38.331 16.1.0 1975 - F LTE\_NR\_DC\_CA\_enh-Core

R2-2008025 Enhancements of Topological Resilience LG Electronics discussion Rel-17

R2-2008026 BH RLF enhancements LG Electronics discussion Rel-17

### 8.4.1 Enhancements to improve topology-wide fairness, multi-hop latency and congestion mitigation

R2-2006624 Consideration on Topology, Routing and Transport Enhancements CATT discussion Rel-17 NR\_IAB\_enh-Core

R2-2006946 Congestion handling and traffic splitting in IAB Intel Corporation discussion Rel-17 NR\_IAB\_enh-Core

R2-2006960 Multi-hop scheduling and local routing enhancements for IAB AT&T discussion

R2-2006965 Simulations on fairness support in IAB topology Qualcomm Incorporated discussion Rel-17

R2-2006966 IAB flow and congestion control enhancements Qualcomm Incorporated discussion Rel-17

R2-2007019 Topology optimization in IAB NEC discussion

R2-2007023 Discussion on the Rel-17 scope of IAB enhancement Fujitsu discussion Rel-17 NR\_IAB\_enh-Core

R2-2007165 Discussion on RLF handling enhancements vivo discussion

R2-2007166 Discussion on congestion mitigation enhancements vivo discussion

R2-2007200 Scoping out issues of topology-wide fairness, multi-hop latency and congestion mitigation Samsung Electronics GmbH discussion

R2-2007201 On topology-wide fairness Samsung Electronics GmbH discussion

R2-2007295 Consideration on routing enhancement LG Electronics Inc. discussion Rel-17 NR\_IAB\_enh-Core

R2-2007312 Miscellaneous enhancements for IAB network ZTE, Sanechips discussion Rel-17

R2-2007487 On the CP/UP separation Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core

R2-2007658 Other Enhancements to IAB for NR Ericsson discussion

R2-2007659 User plane Latency in Multi-hop IAB Systems Ericsson discussion

R2-2007840 Rel. 17 IAB enhancements for fairness, multi-hop latency reduction, and congestion mitigation Futurewei Technologies discussion

R2-2007865 Further enhancements for R17 IAB Huawei, HiSilicon discussion Rel-16 NR\_IAB\_enh-Core

### 8.4.2 Topology adaptation enhancements, RAN2 scope

R2-2006625 Consideration Issues on Inter-CU migration CATT discussion Rel-17 NR\_IAB\_enh-Core

R2-2006626 Consideration on Enhancements to Reduce Service Interruption CATT discussion Rel-17 NR\_IAB\_enh-Core

R2-2006947 Enhancements to establish efficient topologies Intel Corporation discussion Rel-17 NR\_IAB\_enh-Core

R2-2006948 Backhaul failure recovery enhancments Intel Corporation discussion Rel-17 NR\_IAB\_enh-Core

R2-2006961 Enhancements to support IAB topology adaptation AT&T discussion

R2-2006967 Enhancements to BH RLF recovery for Rel-17 IAB Qualcomm Incorporated discussion Rel-17

R2-2007167 Consideration of Inter-CU IAB Migration vivo discussion

R2-2007313 Initial considerations on inter-donor migration ZTE, Sanechips discussion Rel-17

R2-2007488 Inter-donor topology adaptation Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IAB\_enh-Core

R2-2007501 Scope of topology adaptation issues for Rel-17 IAB Samsung Electronics Romania discussion

R2-2007660 Scenarios of topology adaptation for IAB network Ericsson discussion

R2-2007689 Separation of CP/UP for improved CP robustness AT&T discussion

R2-2007773 Initial consideration of topology adaptation enhancements for eIAB Kyocera discussion Rel-17 NR\_IAB\_enh

R2-2007863 Consideration of inter-CU migration Huawei, HiSilicon discussion Rel-16 NR\_IAB\_enh-Core

R2-2007864 Discussion on RLF handling issues Huawei, HiSilicon discussion Rel-16 NR\_IAB\_enh-Core

R2-2007984 RAN2 impacts of Rel.17 IAB topology adaptation enhancements Futurewei Technologies discussion

### 8.4.3 Duplexing enhancements, RAN2 scope

R2-2007314 Discussion on duplexing enhancement ZTE, Sanechips discussion Rel-17

## 8.5 NR IIoT URLLC

(NR\_IIOT\_URLLC\_enh-Core; leading WG: RAN2; REL-17; WID: [RP-201310](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201310.zip))

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

Email max expectation: 2 threads

Focus to clarify the scope, understand the dependencies to other groups, get proposals on the table.

### 8.5.1 Organizational

Rapporteur input

R2-2006921 Work Plan for NR IIoT/URLLC Nokia Work Plan Rel-17 NR\_IIOT\_URLLC\_enh

### 8.5.2 Enhancements for support of time synchronization

Including requirements and scope

R2-2006635 Discussion on Time Synchronization in Rel-17 CATT discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2006697 Discussion on enhancements for support of time synchronization Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2006701 Enhancements for support of time synchronization Ericsson discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2006719 IIoT Enhancements for Support of Time Synchronization Intel Corporation discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2006831 Enhancements for time synchronization in TSN ZTE Corporation, Sanechips, China Southern Power Grid Co., Ltd discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2006864 Topics for time synchronization in IIoT Fujitsu discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2006906 Propagation Delay Compensation for Reference Timing Delivery Qualcomm Incorporated discussion

R2-2006922 Discussion on enhancements for support of propagation delay compensation for accurate time synchronization Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2007141 Consideration of TSN time synchronization enhancements OPPO discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2007145 Discussion on the TSN enhancements vivo discussion

R2-2007294 Discussion on uplink time synchronization for TSN NTT DOCOMO INC. discussion Rel-17 Late

R2-2007475 Considerations on time synchronization enhancement Lenovo, Motorola Mobility discussion Rel-17

R2-2007611 On propagation delay compensation MediaTek Inc. discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2007627 Enhancements for support of time synchronization Sequans Communications discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2007999 Consideration on Time Synchronization for TSN in R17 CMCC discussion Rel-17

R2-2008033 Discussion on support of time synchronization LG Electronics Inc. discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2008059 Enhancements for Timing Synchronization Samsung discussion Rel-17

### 8.5.3 Uplink enhancements for URLLC in unlicensed controlled environments

RAN2 aspects related to URLLC in unlicensed controlled environments. Initial discussion on potential impacts, including requirements and scope

R2-2006636 Uplink Enhancements for URLLC in Unlicensed Spectrum CATT discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2006696 Discussion about uplink enhancements for URLLC in unlicensed controlled environments Huawei, HiSilicon discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2006700 Uplink enhancements for URLLC in unlicensed controlled environments Ericsson discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2006923 Configured Grant Enhancement Harmonization for NR-U and URLLC Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2006939 Uplink enhancements for URLLC in unlicensed controlled environments Intel Corporation discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2007139 Consideration on URLLC over NRU OPPO discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2007146 Harmonizing CG enhancements in NR-U and URLLC/IIoT vivo discussion

R2-2007204 Potential aspects to be considered for the enhancements for URLLC in unlicensed controlled environments Lenovo, Motorola Mobility discussion Rel-17 NR\_IIOT\_URLLC\_enh-Perf

R2-2007417 Discussion on CG enhancement for URLLC in unlicensed controlled environments CMCC discussion Rel-17

R2-2007532 Disscusion on the hormination of enhanced configured grant in NRIIOT and NRU ZTE Corporation, Sanechips discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2007614 IIoT operation in unlicensed controlled environments InterDigital discussion Rel-17 NR\_IIOT\_URLLC\_enh

R2-2007884 Support of IIoT on unlicensed spectrum LG Electronics UK discussion NR\_IIOT\_URLLC\_enh

R2-2007958 Uplink enhancements for controlled unlicensed operation Qualcomm Incorporated discussion

R2-2007988 Consideration on timers for URLLC/IIoT in unlicensed controlled environments III discussion Rel-17

R2-2008060 CG Harmonization for IIOT in Unlicensed Band Samsung discussion Rel-17

## 8.6 Small Data enhancements

(NR\_SmallData\_INACTIVE-Core; leading WG: RAN2; REL-17; WID: [RP-201305](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201305.zip))

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

Email max expectation: 2 threads

Focus to clarify the scope, understand the dependencies to other groups e.g. including context fetch and anchor relocation, understand RRC vs non-RRC methods (downselection will be needed), get proposals on the table, initial focus on RACH based schemes and common aspects.

### 8.6.1 Organizational

R2-2007125 RAN2 Study on the Small Data Enhancement Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2007192 Scope for Small Data Transmission Ericsson discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2007447 Work plan for the INACTIVE small data WI Work Item Rapporteur (ZTE) Work Plan Rel-17

R2-2007612 UL small data transmission in inactive state InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core

### 8.6.2 UL small data transmissions for RACH-based schemes

Including also parts that are common between RACH-based schemes and use of pre-configured PUSCH resources. Including Requirements and Scope as well as technical proposals.

R2-2006550 General Considerations on Small Data Transmission vivo discussion

R2-2006551 Supporting Small Data Transmission via RA procedure vivo discussion

R2-2006582 Common aspects between RACH and CG-based scheme Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2006583 Small data transmission with RA-based schemes Huawei, HiSilicon discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2006653 Small data transmission in RRC\_IACTIVE state ETRI discussion Withdrawn

R2-2006713 SDT mechanism on RRC/non-RRC based approaches and RACH requirements Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2006714 Radio bearer configuration for SDT considering UE context relocation and CU/DU split Intel Corporation discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2006772 Random Access based Small Data Transmission - Signaling Flow Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2006773 Random Access based Small Data Transmission - Details Samsung Electronics Co., Ltd discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2006800 Handling of small data transmission in RRC\_INACTIVE PANASONIC R&D Center Germany discussion

R2-2006824 The RACH-Based Small Data Transmission PANASONIC R&D Center Germany discussion

R2-2006829 Requirements and Solutions for INACTIVE Small Data Transmission MediaTek Inc. discussion

R2-2006830 Subsequent Transmission of Small data in INACTIVE MediaTek Inc. discussion

R2-2006836 Procedure of Small Data Transmission OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2006837 The Conditions for Small Data Transmission in Inactive State OPPO discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2006845 RACH based small data transmission ITL discussion

R2-2006865 Topics for small data transmission in INACTIVE Fujitsu discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2006991 Requirements and scopes of Small Data Transmissions CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2006992 General procedure analysis for Small Data Transmissions CATT discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2007047 Discussion on UL small data transmissions for RACH-based schemes Spreadtrum Communications discussion

R2-2007069 Small data transmission in RRC\_INACTIVE state ETRI discussion

R2-2007126 Small data transmission via RACH procedure Apple discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2007180 Discussion on different aspects of UL Small data transmissions in NR Sony discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2007195 Initial consideration on RACH based SDT NEC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2007197 2-step and 4-step based RACH Small Data transmission Ericsson discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2007432 Scheme selection and scheme switch CMCC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2007433 Basic procedure for data transmission in RRC inactive state CMCC discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2007448 Selection between RRC-based and RRC-less solutions for IDT ZTE Corporation, Sanechips, CSPG discussion Rel-17

R2-2007449 Details of RRC-based IDT ZTE Corporation, Sanechips, CSPG discussion Rel-17

R2-2007469 UL small data transmissions in 2-step RACH and 4-step RACH Lenovo, Motorola Mobility discussion Rel-17

R2-2007479 The basic principle for small data transmissions Lenovo, Motorola Mobility discussion Rel-17

R2-2007489 Small data transmission over pre-configured PUSCH resources Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE

R2-2007540 RACH based NR small data transmission Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2007541 RACH based uplink small data transmission with or without anchor relocation Qualcomm Incorporated discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2007564 Design of RACH-based Small Data Transmission schemes and common aspects Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_SmallData\_INACTIVE

R2-2007613 RACH-based UL small data transmission InterDigital discussion Rel-17 NR\_SmallData\_INACTIVE-Core

R2-2007741 Discussion on NR RRC for small data transmission ASUSTeK discussion Rel-16 NR\_SmallData\_INACTIVE-Core

R2-2007742 Discussion on RA procedure for small data transmission ASUSTeK discussion Rel-16 NR\_SmallData\_INACTIVE-Core

R2-2007746 considerations on small data transmission procedure in RRC\_inactive Beijing Xiaomi Mobile Software discussion

R2-2007747 UL transmission procedure using Pre-configured PUSCH resources in RRC\_inactive Beijing Xiaomi Mobile Software discussion

R2-2007838 Discussion on small data transmission Potevio discussion NR\_SmallData\_INACTIVE-Core

R2-2007953 Techniques for enabling NR small data transmissions in INACTIVE state Sierra Wireless, S.A. discussion Rel-17

R2-2008013 Issues in dependency to other groups LG Electronics discussion NR\_SmallData\_INACTIVE-Core

R2-2008015 Considerations on UL small data transmission LG Electronics discussion NR\_SmallData\_INACTIVE-Core

## 8.7 NR Sidelink relay SI

(FS\_NR\_SL\_relay; leading WG: RAN2; REL-17; WID: [RP-193253](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-193253.zip))

Time budget: 2 TU

Tdoc Limitation: 4 tdocs

Email max expectation: 4 threads

### 8.7.1 Organizational

TR skeleton, rapporteur inputs, other organizational documents. Documents in this AI do not count towards the tdoc limitation.

R2-2006531 LS on Security Requirements for Sidelink/PC5 Relays (S2-2004750; contact: MediaTek) SA2 LS in Rel-17 FS\_5G\_ProSe To:SA3 Cc:RAN2, RAN3

R2-2006601 Work plan of R17 SL relay OPPO discussion Rel-17 FS\_NR\_SL\_relay

R2-2006602 Skeleton of TR 38.836 v0.0.0 OPPO draft TR Rel-17 38.836 0.0.0 FS\_NR\_SL\_relay

R2-2007038 SL relay discussion in SI phase vivo discussion Rel-17

R2-2007168 ?[Draft]? LS to SA3 on the security related aspects for NR sidelink relay CATT LS out FS\_NR\_SL\_relay To:SA3

### 8.7.2 Scope, requirements, and scenarios

Clarify the required contents of the TR, high-level requirements, assumptions on supported scenarios. Including expectations on other groups if any.

R2-2006554 Discussion on sidelink relay study item scope and focus areas prioritization Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

R2-2006570 Scenarios and Assumptions on Sidelink Relay MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

R2-2006572 Architecture Options for Sidelink Relay MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

R2-2006603 Scenarios for sidelink relay OPPO discussion Rel-17 FS\_NR\_SL\_relay

R2-2006609 Clarification on the Scenarios for NR Sidelink Relay CATT discussion Rel-17 FS\_NR\_SL\_relay

R2-2006717 Requirements, Assumptions and Supported Scenarios for NR Sidelink Relay Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

R2-2006721 Considerations on the Study of NR Sidelink Relay Futurewei discussion Rel-17 FS\_NR\_SL\_relay

R2-2006735 Initial considerations on NR sidelink relay ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

R2-2006758 Discussion and TP on Requirements and Scenarios for SL Relays InterDigital discussion Rel-17 FS\_NR\_SL\_relay

R2-2006856 NR SL-based UE-to-UE relay for unicast SL Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_SL\_relay

R2-2006857 Casting types in NR SL-based relays Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_SL\_relay

R2-2006866 Scope, Requirements and Scenarios in NR Sidelink Relaying Fujitsu discussion Rel-17 FS\_NR\_SL\_relay

R2-2006968 NR sidelink relay scenarios Samsung Electronics Co., Ltd discussion Rel-17 FS\_NR\_SL\_relay

R2-2007039 Scope and Scenarios of SL relay vivo discussion Rel-17

R2-2007043 Scope and scenarios on NR sidelink relay Spreadtrum Communications discussion

R2-2007099 Discussion on NR Sidelink Relay Scenarios Apple, Convida Wireless discussion Rel-17 FS\_NR\_SL\_relay

R2-2007202 High-level requirements Samsung Electronics GmbH discussion

R2-2007290 Service continuity scenarios for sidelink relay Ericsson discussion Rel-17 FS\_NR\_SL\_relay

R2-2007293 Scope and initial steps for SL relay Ericsson discussion Rel-17 FS\_NR\_SL\_relay

R2-2007626 Initial considerations for SL relaying Kyocera discussion Rel-17

R2-2007775 Discussion on UE-to-network coverage extension ETRI discussion Rel-17

R2-2008017 Scope and scenarios for NR sidelink relay LG Electronics Inc. discussion Rel-17 FS\_NR\_SL\_relay

R2-2008046 General considerations on working for NR SL relay Huawei, HiSilicon, Apple, CMCC, China Telecom, China Unicom, MediaTek Inc., Sharp, Spreadtrum, Xiaomi, ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

### 8.7.3 Relaying Mechanisms and their characteristics

Start to populate the TR. Put on the table mechanisms, their characteristics at least with respect to aspects A-F for L2 and L3 relay etc.

R2-2006555 UE-to-network relay architecture and procedures Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

R2-2006557 Discussion on NR sidelink relay selection and reselection Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

R2-2006571 RRC States for Relaying MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

R2-2006604 Protocol stack and CP procedure for SL relay OPPO discussion Rel-17 FS\_NR\_SL\_relay

R2-2006610 User and Control Plane Procedures for L2 UE-to-NW Relay CATT discussion Rel-17 FS\_NR\_SL\_relay

R2-2006611 L2/L3 UE-to-NW Relay Comparison CATT discussion Rel-17 FS\_NR\_SL\_relay

R2-2006639 L2 vs L3 - Relay (re-)Selection, Quality of Service (QoS) Fraunhofer HHI, Fraunhofer IIS discussion

R2-2006641 L2 vs L3 - Relay/Remote UE Authorization, Service Continuity Fraunhofer HHI, Fraunhofer IIS discussion

R2-2006718 Characteristics of L2 and L3 based Sidelink relaying Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

R2-2006722 Protocol Stack and Connection Setup Procedure of Sidelink Relay Futurewei discussion Rel-17 FS\_NR\_SL\_relay

R2-2006723 Service Continuity with Sidelink Relay Futurewei discussion Rel-17 FS\_NR\_SL\_relay

R2-2006724 QoS Control with Sidelink Relay Futurewei discussion Rel-17 FS\_NR\_SL\_relay

R2-2006736 Discussion on relay initiation and relay UE (re-)selection ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

R2-2006737 Discussion on NR SL Relay Architecture ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

R2-2006759 Discussion and TP on UE to NW Relay Based on L2 Relay Architecture InterDigital discussion Rel-17 FS\_NR\_SL\_relay

R2-2006760 Discussion and TP on UE to UE Relay Based on L2 Relay Architecture InterDigital discussion Rel-17 FS\_NR\_SL\_relay

R2-2006770 Discussion on SL relay (re)selection and authorization OPPO discussion Rel-17

R2-2006843 View on L2/L3 SL relay ITL discussion

R2-2006855 Considerations for L3 UE-to-Network Relays Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_SL\_relay

R2-2006861 NR Sidelink Relay (Re-)Selection Criterion and Procedure Fraunhofer IIS, Fraunhofer HHI discussion Rel-17

R2-2006867 Mechanisms and Characteristics in NR Sidelink Relaying Fujitsu discussion Rel-17 FS\_NR\_SL\_relay

R2-2006962 Mechanisms for supporting L2-based Sidelink Relays AT&T discussion

R2-2007040 Selection/Authorization and Security for L2 and L3 relay vivo discussion Rel-17

R2-2007041 Protocol stack and service continuity for L2 and L3 relay vivo discussion Rel-17

R2-2007044 Discusssion on architecture for NR sidelink relay Spreadtrum Communications discussion

R2-2007100 Discussion on User Plane mechanisms for Layer 2 Relay Apple discussion Rel-17 FS\_NR\_SL\_relay

R2-2007101 Discussion on Control Plane mechanisms for Layer 2 Relay Apple discussion Rel-17 FS\_NR\_SL\_relay

R2-2007181 Overview of Layer-2 and Layer-3 sidelink relay mechanisms Sony discussion Rel-17 FS\_NR\_SL\_relay

R2-2007203 L3 vs L2 relaying Samsung Electronics GmbH discussion

R2-2007292 Considerations on L2 and L3 SL relay protocol design Ericsson discussion Rel-17 FS\_NR\_SL\_relay

R2-2007460 Protocol stack design for L2 relay Lenovo, Motorola Mobility discussion Rel-17

R2-2007461 Relayed connection management Lenovo, Motorola Mobility discussion Rel-17

R2-2007462 RRC state and CN registration of the remote UE Lenovo, Motorola Mobility discussion Rel-17

R2-2007608 Impact on user plane protocol stack and control plane procedure for Sidelink Relay Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

R2-2007816 Considerations on UE-to-NW Relay ETRI discussion FS\_NR\_SL\_relay

R2-2008019 Relaying mechanism for NR sidelink LG Electronics Inc. discussion Rel-17 FS\_NR\_SL\_relay

R2-2008043 Consideration of Relay characteristics LG Electronics Inc. discussion Rel-17 FS\_NR\_SL\_relay

R2-2008047 Study aspects of UE-to-Network relay and solutions for L2 relay Huawei, HiSilicon discussion Rel-17 FS\_NR\_SL\_relay

R2-2008048 Service continuity for L2 UE-to-Network relay Huawei, HiSilicon discussion Rel-17 FS\_NR\_SL\_relay

R2-2008066 Discussion on service continuity from Uu to relay Xiaomi communications discussion

### 8.7.4 Discovery model/procedure for sidelink relaying

R2-2006556 Discussion on relay discovery model / procedure Qualcomm Incorporated discussion Rel-17 FS\_NR\_SL\_relay

R2-2006573 Initiation of relaying operation MediaTek Inc. discussion Rel-17 FS\_NR\_SL\_relay

R2-2006612 Discovery Model/Procedure for NR Sidelink Relay CATT discussion Rel-17 FS\_NR\_SL\_relay

R2-2006738 Discussion on relay discovery and link management ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_SL\_relay

R2-2006761 Discovery Procedure for SL Relaying InterDigital discussion Rel-17 FS\_NR\_SL\_relay

R2-2006771 Discussion on SL relay discovery procedure OPPO discussion Rel-17 FS\_NR\_SL\_relay

R2-2006862 NR Sidelink Relaying Discovery Fraunhofer IIS, Fraunhofer HHI discussion Rel-17

R2-2006868 Discovery Model and Procedure in NR Sidelink Relaying Fujitsu discussion Rel-17 FS\_NR\_SL\_relay

R2-2006931 On Sidelink Discovery for Relaying Intel Corporation discussion Rel-17 FS\_NR\_SL\_relay

R2-2006969 Sidelink relay discovery model and procedure Samsung Electronics Co., Ltd discussion Rel-17 FS\_NR\_SL\_relay

R2-2007042 Discussion of Relay UE discovery vivo discussion Rel-17

R2-2007045 Discussion on discovery procedure for sidelink relay Spreadtrum Communications discussion

R2-2007098 Discussion on NR Sidelink Relay Discovery Apple, Convida Wireless discussion Rel-17 FS\_NR\_SL\_relay

R2-2007291 Discovery aspects for NR sidelink relay Ericsson discussion Rel-17 FS\_NR\_SL\_relay

R2-2007476 Considerations on discovery procedure for sidelink relay Lenovo, Motorola Mobility discussion Rel-17

R2-2008045 Consideration of discovery model/procedure for sidelink relay LG Electronics Inc. discussion Rel-17 FS\_NR\_SL\_relay

R2-2008049 Common aspects for L2 and L3 UE-to-Network relay Huawei, HiSilicon discussion Rel-17 FS\_NR\_SL\_relay

## 8.8 RAN slicing SI

(FS\_NR\_slice; leading WG: RAN2; REL-17; WID: [RP-193254](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-193254.zip))

Time budget: 0.5 TU

Tdoc Limitation: 1 tdocs

Email max expectation: 1 threads

Expect to reply to outstanding LSes, could also have an initial discussion on the scope/requirements.

R2-2006513 Response to 5GC assisted cell selection for accessing network slice (R3-202558; contact: ZTE) RAN3 LS in Rel-17 FS\_NR\_slice To:SA2 Cc:RAN,RAN2,SA1

R2-2006527 Reply LS on GSMA NG.116 Attribute Area of service and impact on PLMN (S1-202294; contact: Nokia) SA1 LS in Rel-17 FS\_eNS\_Ph2 To:SA2, CT1, RAN2, RAN3, GSMA 5GJA, GSMA WAS

R2-2006528 LS on 5GC assisted cell selection for accessing network slice (S1-202264; contact: ZTE) SA1 LS in Rel-17 FS\_eNS\_Ph2 To:SA2 Cc:RAN2, RAN3 Withdrawn

R2-2006529 LS on 5GC assisted cell selection for accessing network slice (S2-2001728; contact: ZTE) SA2 LS in Rel-17 FS\_eNS\_Ph2 To:SA1, RAN2, RAN3 Withdrawn

R2-2006534 LS on SA5 Rel-17 work on SLA (S5-203370; contact: CMCC) SA5 LS in Rel-17 EMA5SLA To:GSMA 5GJA, SA2, RAN3, IETF TEAS WG Cc:SA, SA1, SA6, RAN2, ETSI ISG ZSM

R2-2006632 Initial Discussion on the Scope and Requirements for Slicing CATT discussion Rel-17 FS\_NR\_slice

R2-2006655 LS on 5GC assisted cell selection for accessing network slice (S1-202264; contact: ZTE) SA1 LS in Rel-17 FS\_eNS\_Ph2 To:SA2 Cc:RAN2, RAN3

R2-2006656 LS on 5GC assisted cell selection for accessing network slice (S2-2001728; contact: ZTE) SA2 LS in Rel-17 FS\_eNS\_Ph2 To:SA1, RAN2, RAN3

R2-2006707 Considerations on slice aware cell selection KDDI Corporation discussion

R2-2006767 Discussion on RAN slicing enhancement Qualcomm Incorporated discussion Rel-17 FS\_NR\_slice

R2-2006854 Considerations on slice-based cell reselection Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_slice

R2-2006871 Consideration on the scope and solutions for RAN slicing enhancement ZTE corporation, Sanechips discussion Rel-17 FS\_NR\_slice

R2-2006883 Considerations on scope of RAN slicing enhancements Lenovo, Motorola Mobility discussion Rel-17 FS\_NR\_slice

R2-2006887 5G RAN Slicing Framework During Cell Reselection MITRE Corporation discussion Late

R2-2006951 Slicing based cell (re)selection Intel Corporation discussion Rel-17 FS\_NR\_slice

R2-2006970 Considerations for RAN slicing Samsung Electronics Co., Ltd discussion Rel-17 FS\_NR\_slice

R2-2007051 Consideration on RAN slicing Spreadtrum Communications discussion

R2-2007088 Scoping of RAN Slicing Apple discussion Rel-17 FS\_NR\_slice

R2-2007140 Consideration on Rel-17 slicing OPPO discussion Rel-17 FS\_NR\_slice

R2-2007250 Assistant information to enable UE fast access network slice ITRI discussion FS\_NR\_slice

R2-2007302 Consideration on RAN slicing vivo discussion Rel-17 FS\_NR\_slice

R2-2007402 Discussion on RAN Slicing LG Electronics UK discussion Rel-17

R2-2007419 Skeleton for TR 38.832 CMCC draft TR Rel-17 38.832 0.0.0 FS\_NR\_slice

R2-2007420 Work Plan for RAN Slicing CMCC, ZTE discussion Rel-17 FS\_NR\_slice

R2-2007421 Discussion on support of RAN slicing CMCC discussion Rel-17 FS\_NR\_slice

R2-2007521 Enhancement on RAN support of network slicing Beijing Xiaomi Software Tech discussion Rel-17

R2-2007606 Considerations on Frequency Band Selection for RAN Slicing SHARP Corporation discussion Rel-17

R2-2007607 Basic requirements for RAN slicing Google Inc. discussion Rel-17 FS\_NR\_slice

R2-2007609 Discussion on Network Slicing’s Impact on Cell Reselection Convida Wireless discussion FS\_NR\_slice

R2-2007645 Methods for serving slices on different frequencies Ericsson discussion Rel-17 FS\_NR\_slice

R2-2007716 Scenarios and requirements for RAN slicing SoftBank Corp. discussion Rel-17 FS\_NR\_slice

R2-2007772 Considerations on enhancing the RAN support of network slicing Huawei, HiSilicon discussion Rel-17 FS\_NR\_slice

R2-2008071 Considerations scenarios on enhancing the RAN support of network slicing China Unicom discussion Rel-17 FS\_NR\_slice

## 8.9 UE Power Saving

(NR\_UE\_pow\_sav\_enh-Core; leading WG: RAN2; REL-17; WID: [RP-200938](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-200938.zip))

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

Email max expectation: 2 threads

Focus on initial discussions to understand the WID, and to get proposals on the table for idle/inactive mode.

### 8.9.1 Organizational, Scope and Requirements

R2-2007189 RAN2 Work Plan for UE Power Saving Enhancements WI MediaTek Inc. Work Plan Rel-17

DISCUSSION

- Ericsson think overall it is ok, but for 1 and 2, it says “study”, Ericsson think R2 cannot make any agreement until R1 has done their performance work. Nokia agrees.

- vivo think R2 can start the work, but think R1 input is needed for decisions, and tink decisions can be made both by R1 and R2.

- For BFD vivo has concerns on R2 plan, as R2 will need 3 meetings to decide on relaxation criteria. ZTE think R4 should start this ..

- LG agrees with Ericssons comment, but this doesn’t mean that R2 cannot start.

- QC support the work plan from the rapporteur. QC think R2 can start discussion and start evaluate.

- Samsung think that for R2 specifc solutions we can start.

- Nokia: on P5, R1 should design the signalling.

- Lenovo think R2 should start, but could wait with final decision

- Oppo are ok, and with paging enhancements R2 need to cooperate with R1.

- Apple also think R2 can start.

- Huawei think that R1 need to do some basic work, but once they have figure out power consumption for various steps etc, then any group can put together calcuations.

- CATT think R2 need to start, but we do need R1

- MTK confirms that R1 will do evaluation assumptions for all subfeatures of this WI, and MTK expect both WG can use this methodology.

* Noted

R2-2007440 Discussion on RAN2 scope for UE Power Saving Huawei, HiSilicon discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

DISCUSSION

P1 P2

- Xiaomi agrees with P1 P2 but not P3.

- Ericsson agrees with P1 P2 as well, think eg. False paging enhancement could be applicable to RedCap

- QC agree with P2 but would like to re-phrase P1, as redcap UEs should have also their own enhancements

- MTK agrees as well w P2 P1

- vivo agree but think we don’t need to disucss redcap specficis here.

- OPPO agrees but have doubt whether we should take into account redcap enhancements during the work.

- Apple agrees in principle.

- LG think we should not agree to anything wrt redcap right now. Chair think redcap will do eDRX

- Sony agrees but think we need to be careful so we don’t introduce too much complexity for redcap UEs.

* For PowSav solutions for Idle/Inactive (for smart phones) that can easily also be applied to redcap, R2 assume they may be applied. Details FFS and to be discuss case by case when the maturity is high (might in the end just be a question of UE caps).

R2-2006730 Views on Rel-17 NR UE power saving Xiaomi Communications discussion

DISCUSSION

- Ericsson think this is not in the scope of the power saving WID, think this can be discussed under TEI16. Think Dual DRX becomes stable during this meeting.

- Chair think if Dual DRX enh are needed, it should be added to a WID rather than TEI16 (we have already spread between PowSav and redcap.

- LG and vivo agrees this is not in the scoipe of the WID. LG further think R2 shall not do anything for connected mode in R17 – only R1 and R4.

* Dual DRX not in the scope of current WID.

R2-2006789 Discussion on use cases of UE power saving enhancements OPPO discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2007326 Discussion on RAN2 scope in Power saving LG Electronics. discussion NR\_UE\_pow\_sav\_enh-Core

R2-2007436 Initial consideration on RAN2’s work on UE power saving CMCC discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

### 8.9.2 Idle/inactive-mode UE power saving

General

R2-2007190 Paging Enhancements for UE Power Saving in NR MediaTek Inc. discussion Rel-17

Chair summary:

**Proposal:** WUS / Paging early indication, to reduce the total wake up time

**Proposal**: R2 can do evaluation once R1 has done the basic work.

**Proposal:** Sub-grouping of UEs

Q for Clarification

- QC wonder what the PEI is assumed to be. IS it a new signal of based on current PDCCH (new DCI etc). Think we cannot determine anything unless we know.

- MTK think this details need to be determined by R1. Chair think the PEI somehow need to be very robust (otherwise it seems it doesn’t work)

- CATT think the Pei is a WUS-like signal, and think we need to wait for R1. CATT think sub-grouping is indeed one direction, and think these three proposals summarizes what we can discussion. Convida agres with CATT. Samsung as well.

- Ericsson think the WID objective doesn’t say “WUS”, and think the TU budget doesn’t allow a WUS.

- Lenovo think the main benefit of WUS/PEI is mainly beneficial in low SINR, but are not sure this is needed even for low SINR. Lenovo wonder if a PEI would indicate skip of one paging occasion or several paging occasions. MTK are open for such detailed discussions later,

- Samsung wonder if the UE need to monitor the SSB in order to receive the WUS. MTK assumes that in any case the monitoring can be less with the PEI. MTK think this realtes to UE processing timeline, which will be assumed in the R1 evaluation methodology.

R2-2006775 Power Consumption by RRC IDLE\_INACTIVE UE Samsung Electronics Co., Ltd discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

Chair Modification:

**Proposal:** RAN2 should at lest discuss mechanisms to minimize PDSCH processing for paging message reception, i.e. false alarm.

Q for Clarification / DISCUSSION

- vivo think PDCCH PDSCH processing is R1. Is it sfficint if R2 tries to reduce the RX time. Samsung think that we can at least discuss PDSCH / false alarms. PDCCH might be more in R1 dmpain.

- OPPO wonder what kind of mechanisms would be applied to minimise PDCCH and PDSCH processing. Samsung think this paper doesn’t present any solution at all, but think we should at least reduce PDSCH reception.

- QC think that for beamforming there are more SSB, but a good UE implementation can decide what to receive and the impact of beamforming is not so significant.

- MTK think the overall wake-up is the main issue, for everything that need to be done.

R2-2006790 Paging enhancement for power saving OPPO discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

**Proposal:** RAN2 discuss the following candidate paging enhancements.

- Option 1: UE group-based paging with UE group indication in paging DCI

- Option 2: UE group-based paging with separate paging time/frequency PDCCH resource configuration for different UE groups

- Option 3: WUS-based paging

DISCUSSION

- Chair wonder if Option 3 is different to MTK .OPPO think we can use the R16 solution, but that is a R1 issues,

- MTK think all of these are possible candidates.

- vivo wonder what kind of enhancement is envisioned for Time resource separation, as legacy is also grouped time-wise. OPPO think the difference is that PDCCH is here grouped like this.

- QC support UE grouping but are against WUS based solution.

- ZTE think P3 is similar to MTK proposal

R2-2006608 Power saving enhancements for paging reception Qualcomm Inc discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

Proposal 1. Introduce multiple P-RNTIs for Rel-17 UEs.

Proposal 2. Discuss whether additional enhancements, such as beam-specific paging, are needed to further reduce unnecessary paging reception.

Proposal 3. Apply cross-slot scheduling (i.e. K0>0) for Rel-17 UE’s paging message.

DISCUSSION

- QC think P2 is for stationary UEs, and this could reduce the false paging rate.

- QC think Grouping + cross-slot scheduling are essential and think this is simple.

- ZTE think P2 is a network side enhancement. QC think that how UEs are assigned to differnet paging occasions a UE need to know.

- CMCC wonder if P3 is for Idle or connected. QC clarifies that this is for Idle and Inactive.

- P1 Lenovo wonder if the UE will have multiple RNTIs. QC think a UE will have only one. Lenovo wonder what happens if UEs has same paging occasions byt different RNTI.

- P3 Ericsson fully agrees. P1 ericsson support a DCI based approach.

Chair think we need to stop

- MTK would like email disc to next meeting. Vivo agrees, can identify potential solutions, Apple agrees. Huawei also ok with email discussion.

- CATT think WUS is not exclusing to grouping, can be used with/without grouping. Can also include WUS. Ericsson think WUS is too much R1’ish.

- LG would like to focus on the requirement rather than solutions.

- Oppo think we should limit to R2 scope. QC agrees.

- vivo agrees with CATT that WUS can be included as well.

- Chair: think we can postpone WUS details until at least R1 had a chance to discuss, i.e. to next meeting.

- MTK indicate: R1 is sending an LS on evaluation methodology.

* [Post111-e][] UE grouping ()

Scope: UE grouping, put solutions on the table, describe intentions / how they work (high level), and their potential to save power. Possibly take into account R1 evalaution methodology (if they have agreements on the evaluation parameters).

Intended outcome:

Deadline:

R2-2006729 Discussion on UE Power saving for RRC-IDLE and RRC-INACTIVE State Xiaomi Communications discussion

R2-2007182 Discussion on reduction unnecessary UE paging receptions Sony discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2007115 False Paging Mitigation Apple discussion Rel-17 NR\_UE\_pow\_sav-Core

R2-2006690 Paging enhancement in idle inactive mode for power saving vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2006654 UE power saving for paging procedures ETRI discussion

R2-2006689 Coordination between RAN1 and RAN2 for paging enhancement vivo discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2006720 Paging enhancements to reduce UE power consumption Intel Corporation discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2006774 Paging Enhancements to Reduce Unnecessary Paging receptions Samsung Electronics Co., Ltd discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2006874 Solutions to reduce unnecessary paging reception ZTE corporation, Sanechips discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2006990 Considerations on paging enhancements for Power saving CATT discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2007116 Wakeup and Paging Reception Apple discussion Rel-17 NR\_UE\_pow\_sav-Core

R2-2007249 Discussion on the UE grouping based solution for idle/inactive-mode UE power saving ITRI discussion NR\_UE\_pow\_sav\_enh-Core

R2-2007260 Paging enhancement to reduce unnecessary UE paging receptions Ericsson discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2007437 Paging enhancement for idle inactive-mode UE power saving CMCC discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2007441 Discussion on paging enhancements Huawei, HiSilicon discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2007468 Consideration on Idle/inactive-mode UE power saving Lenovo, Motorola Mobility discussion Rel-17

R2-2007563 IDLE / INACTIVE mode UE power saving Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2007990 Paging enhancement for power saving LG Electronics Inc. discussion

TRS / CSI-RS

R2-2007261 Exposure of connected mode TRS occasions to Idle and Inactive mode Ericsson discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

R2-2007562 Potential TRS/CSI-RS occasion(s) Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_UE\_pow\_sav\_enh-Core

## 8.10 NR Non-Terrestrial Networks (NTN)

(NR\_NTN\_solutions-Core; leading WG: RAN2; REL-17; WID: [RP-201256](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201256.zip))

Time budget: 2 TU

Tdoc Limitation: 4 tdocs

Email max expectation: 4 threads

R2-2007565 NR\_NTN\_solutions work plan THALES Work Plan Rel-17

### 8.10.1 Scope, requirements, scenarios, architecture

E.g. understand the WID, confirm the scenarios that shall be addressed, the role of and architecture for Location Service.

R2-2006536 LS on Requirements on positioning for UAS (S6-200269; contact: InterDigital) SA6 LS in Rel-17 FS\_UASAPP To:SA1 Cc:SA2, RAN2

R2-2006630 Further Clarifications on the NTN WID CATT discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006699 NR-NTN: Positioning Methods Fraunhofer IIS, Fraunhofer HHI discussion Rel-17 38.821

R2-2006941 NTN WI- Overall Observations and Proposals SAMSUNG discussion Rel-17 NR\_NTN\_solutions

R2-2006971 Discussion of SA2 LS on fixed cell identity Qualcomm Inc discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006972 [Draft] LS Reply on SA WG2 assumptions on architecture aspects for using Qualcomm Inc LS out Rel-17 NR\_NTN\_solutions-Core To:SA2 Cc:RAN3, CT1

R2-2007143 Discussion on task prioritization for NR NTN Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007185 Location Services in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007363 On the scenarios and simulation assumptions for evaluating NTN mobility Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007431 Discussion on NTN workplan CMCC discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007519 Impact of pre-compensation on RACH capacity for NTN NEC Telecom MODUS Ltd. agenda Withdrawn

R2-2007537 NTN scope, scenarios, architecture, and requirements Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007572 NR NTN Reference scenarios definition for Rel-17 normative phase THALES discussion Rel-17

R2-2007712 Impact of pre-compensation on RACH capacity for NTN NEC Telecom MODUS Ltd. discussion Rel-17

### 8.10.2 User Plane

In particular, initial focus on getting a common understanding of pre-compensation and offsets.

R2-2007105 On User Plane Latency reduction mechanisms in NTN Networks Apple discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007172 Discussion on UP enhancement in NTN Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

#### 8.10.2.1 MAC aspects

R2-2006631 Discussion on MAC Enhancement and Impact for NTN CATT discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006638 On Updating MAC Timers in NR-NTN MediaTek Inc. discussion

R2-2006702 Enhancements for NTN on MAC Layer – Impact Analysis on TS Nomor Research GmbH, Thales discussion Rel-17

R2-2006781 Consideration on MAC enhancement for NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006799 Discussion on DRX and BSR in NTN PANASONIC R&D Center Germany discussion

R2-2006927 MAC issues for NTN Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006928 Timing advance for NTN Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006943 MAC User Plane Enhancements for an NTN- Observations and Proposals SAMSUNG discussion Rel-17 NR\_NTN\_solutions

R2-2006974 UP aspects including Random Access procedure enhancements Qualcomm Inc discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007056 Introducing offsets in MAC Spreadtrum Communications discussion

R2-2007104 On Preamble Ambiguity in NTN Networks Apple discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007176 Discussion on UL scheduling enhancement Beijing Xiaomi Electronics discussion

R2-2007186 MAC enhancements in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007397 Consideration on TA Precompensation Beijing Xiaomi Mobile Software discussion Rel-17

R2-2007428 Discussion of HARQ feedback for NTN CMCC discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007430 Discussion on TA compensation CMCC discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007474 Timing advance pre-compensation in NTN Lenovo, Motorola Mobility discussion Rel-17

R2-2007477 Discussion on DRX for NTN Lenovo, Motorola Mobility discussion Rel-17

R2-2007590 Timing Advance, Random Access and DRX aspects in NTN Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007615 Summary of MAC open issues in NTN InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007616 Pre-compensation and offset calculation in NTN InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007617 RACH preamble ambiguity in NTN InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007714 On scheduling, HARQ, DRX, RLC, and PDCP for NTN Ericsson discussion Rel-17 NR\_NTN\_solutions

R2-2007715 On Random Access in NTN Ericsson discussion Rel-17 NR\_NTN\_solutions

R2-2007784 Consideration on MAC enhancements for NTN ZTE Corporation, Sanechips discussion Rel-17

R2-2007888 Discussion on MAC aspects for NTN LG Electronics Inc. discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007995 MAC enhancements on the initial access procedures for NTN ETRI discussion Rel-17

#### 8.10.2.2 Other aspects

R2-2006640 RLC and PDCP Enhancements in NR-NTN MediaTek Inc. discussion

R2-2006703 Enhancements for NTN on RLC Control Loops and Timers Nomor Research GmbH, Thales discussion Rel-17

R2-2006705 Enhancements for NTN on PDCP Control Loops and Timers Nomor Research GmbH, Thales discussion Rel-17

R2-2006782 Consideration on RLC and PDCP enhancements for NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007573 On NTN Feeder link switch over THALES discussion

R2-2007785 Consideration on UP timers and RLC/PDCP SN for NTN ZTE Corporation, Sanechips discussion Rel-17

R2-2007889 Discussion on RLC and PDCP aspects for NTN LG Electronics Inc. discussion Rel-17 NR\_NTN\_solutions-Core

### 8.10.3 Control Plane

Also identify things not covered in the TR that need to be covered, if any.

R2-2007103 On Timing Advance for NTN Networks Apple discussion Rel-17 NR\_NTN\_solutions-Core

#### 8.10.3.1 Idle/Inactive mode

Including cell selection/reselection & system information.

R2-2006628 Initial Discussion for Idle and Inactive Mode in NTN CATT discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006642 On Idle Mode Procedures in NR-NTN MediaTek Inc. discussion

R2-2006783 Discussion on cell reselection for NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006821 Issues of the Fixed Tracking Area in NTN PANASONIC R&D Center Germany discussion

R2-2006872 Consideration on system information and cell (re)selection in NTN ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006924 HAPS-Satellite ephemeris broadcast Loon discussion Rel-17

R2-2006925 HAPS-Terrestrial PCI confusion mitigation Loon and Google discussion Rel-17

R2-2006929 Tracking area issue for NTN Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006945 Control Plane Enhancements for Idle and Inactive Modes in an NTN- Overall Observations and Proposals SAMSUNG discussion Rel-17 NR\_NTN\_solutions

R2-2006973 IDLE mode procedure Qualcomm Inc discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007048 Consideration on Celll Reselection evaluation in NTN Spreadtrum Communications discussion

R2-2007171 Discussion on RRC\_IDLE mode issues in NTN Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007175 Control Plane for Idle/Inactive mode UE Beijing Xiaomi Electronics discussion

R2-2007184 Idle mode enhancement in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007251 Ephemeris data to be included in system information ITRI discussion NR\_NTN\_solutions-Core

R2-2007362 On Tracking Areas and IDLE mode handling for NTN Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007429 Discussion of cell selection and reselection for NTN CMCC discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007473 Ephemeris data provision in NTN Lenovo, Motorola Mobility discussion Rel-17

R2-2007558 Idle mode aspects for NTN Ericsson discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007574 Considerations on satellite ephemeris THALES discussion Rel-17

R2-2007743 Initial discussion on Idle mode procedures in NR NTN LG Electronics France discussion Rel-17

#### 8.10.3.2 Connected mode

Including mobility management.

R2-2006547 Discussion on feeder link hard switch in NTN LEO CENC discussion Late

R2-2006552 Feeder link hard switch triggered HO CENC discussion Late

R2-2006553 Gateway data handling in NTN LEO CENC discussion Late

R2-2006629 Initial Discussion for Connected Mode in NTN CATT discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006643 On Connected Mode Mobility Procedures in NR-NTN MediaTek Inc. discussion

R2-2006784 Discussion on mobility management for connected mode UE in NTN OPPO discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006822 Overhead Reduction for the Handover Procedure in NTN PANASONIC R&D Center Germany discussion

R2-2006873 Consideration on mobility enhancement in NTN ZTE corporation, Sanechips discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006930 mobility enhacement for NTN Intel Corporation discussion Rel-17 NR\_NTN\_solutions-Core

R2-2006953 Control Plane Enhancements for the Connected Mode in an NTN- Overall Observations and Proposals SAMSUNG discussion Rel-17 NR\_NTN\_solutions

R2-2006975 Connected mode mobility enhancements Qualcomm Inc discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007144 Discussion on enhancements for connected mode in NTN Huawei, HiSilicon discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007174 Control Plane for Connected mode UE Beijing Xiaomi Electronics discussion

R2-2007183 Mobility management in NTN Sony discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007463 Mobility management in NTN Lenovo, Motorola Mobility discussion Rel-17

R2-2007601 Adjusting timers according to delay variations in NTN Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007618 Location-assisted connected mobility in NTN InterDigital discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007744 Initial discussion on connected mobility in NR NTN LG Electronics France discussion Rel-17 NR\_NTN\_solutions-Core

R2-2007955 Discussion on delay difference on measurements for NTN Asia Pacific Telecom co. Ltd discussion NR\_NTN\_solutions-Core

## 8.11 NR positioning enhancements SI

(FS\_NR\_pos\_enh; leading WG: RAN1; REL-17; WID: [RP-200928](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-200928.zip))

Time budget: 2 TU

Tdoc Limitation: 4 tdocs

Email max expectation: 4 threads

### 8.11.1 Organizational

Rapporteur inputs and other organizational documents. Documents in this AI do not count towards the tdoc limitation.

R2-2006542 Proposed table of contents - Section 9 (positioning integrity) - TR 38.857 Swift Navigation, Ericsson, Intel Corporation discussion Rel-17

R2-2006669 Summary on Rel-17 positioning enhancement discussion in RAN1 CATT, Intel Corporation, Ericsson discussion Rel-17 FS\_NR\_pos\_enh

R2-2006670 Updated Work Plan for R17 SI NR Positioning Enhancements CATT, Intel Corporation, Ericsson discussion Rel-17 FS\_NR\_pos\_enh

R2-2006671 Skeleton proposals for TR38.857 CATT draftCR Rel-17 38.857 0.0.1 FS\_NR\_pos\_enh

R2-2006749 Handling on Rel-16 leftover issue in Rel-17 Intel Corporation discussion Rel-17 FS\_NR\_pos\_enh

R2-2006958 skeleton for TR38857 Ericsson TS or TR cover Rel-17 38.857 0.0.1 FS\_NR\_pos\_enh

### 8.11.2 Enhancements for commercial use cases

Scope and general discussion related to the RAN2 objective on enhancements to support high accuracy, low latency, network efficiency, and device efficienty for commercial use cases. Detailed discussions may need to wait until RAN1 have progressed.

R2-2006567 Discussion on potential positioning enhancement vivo discussion FS\_NR\_pos\_enh

R2-2006578 Discussion on R17 positioning enhancement Huawei, HiSilicon discussion Rel-17 FS\_NR\_pos\_enh

R2-2006672 Discussion on ehancements for commercial use cases CATT discussion Rel-17 FS\_NR\_pos\_enh

R2-2006750 Consideration on the support of low latency requirement Intel Corporation discussion Rel-17 FS\_NR\_pos\_enh

R2-2006956 Enhancements for commercial use cases Ericsson discussion Rel-17

R2-2007049 Discussion on positioning enhancements for commercial use cases Spreadtrum Communications discussion

R2-2007128 On-demand PRS transmission and dynamic PRS resource allocation Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_pos\_enh

R2-2007157 Positioning for UE in RRC Idle and Inactive state OPPO discussion Rel-17 FS\_NR\_pos\_enh

R2-2007159 Discussion on on-demand DL-PRS OPPO discussion Rel-17 FS\_NR\_pos\_enh

R2-2007170 Discussion on PRS enhancements Beijing Xiaomi Electronics discussion

R2-2007173 Positioning enhancements for RRC IDLE and RRC INACTIVE state UE Beijing Xiaomi Electronics discussion

R2-2007587 End-to-end latency reduction for DL/UL positioning InterDigital, Inc. discussion Rel-17

R2-2007629 NR Positioning Enhancements Qualcomm Incorporated discussion

R2-2007694 On-demand PRS transmission and dynamic PRS resource allocation Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_pos\_enh Withdrawn

### 8.11.3 Integrity and reliability of assistance data and position information

R2-2006541 TP for Study on Positioning Integrity and Reliability Swift Navigation, Deutsche Telekom, u-blox, Ericsson, Mitsubishi Electric, Intel Corporation, CATT, UIC discussion Rel-17

R2-2007187 Discussion on Integrity of positioning information Sony discussion Rel-17 FS\_NR\_pos\_enh

#### 8.11.3.1 KPIs and use cases

R2-2006564 Identify positioning integrity use case and KPIs vivo discussion FS\_NR\_pos\_enh

R2-2006579 Discussion on positioning integrity KPIs and relevant use cases Huawei, HiSilicon discussion Rel-17 FS\_NR\_pos\_enh

R2-2006673 Discussion on integrity KPIs and use cases CATT discussion Rel-17 FS\_NR\_pos\_enh

R2-2006754 Consideration on positioning integrity Intel Corporation discussion Rel-17 FS\_NR\_pos\_enh

R2-2006954 Positioning integrity KPIs and support for RAT dependent use cases Ericsson discussion Rel-17

R2-2007050 Discussion on positioning integrity KPIs and use cases Spreadtrum Communications discussion

R2-2007073 Discussion on integrity and reliability for positioning based on an IIoT use case Sumitomo Elec. Industries, Ltd discussion Rel-17

R2-2007102 Discussion on Positioning Integrity Apple discussion Rel-17 FS\_NR\_pos\_enh

R2-2007158 Discussion on the KPIs of integrity OPPO discussion Rel-17 FS\_NR\_pos\_enh

R2-2007646 Discussion on use cases and KPIs for position integrity ESA discussion Rel-17 FS\_NR\_pos\_enh

R2-2007936 Discussion of the positioning integrity definition ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_pos\_enh

R2-2007937 Discussion of the integrity events and integrity failure ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_pos\_enh

#### 8.11.3.2 Error sources, threat models, occurrence rates and failure modes

R2-2006565 Identify Error sources for positioning integrity vivo discussion FS\_NR\_pos\_enh

R2-2006580 Discussion on positioning integrity validation and reporting Huawei, HiSilicon discussion Rel-17 FS\_NR\_pos\_enh

R2-2006674 Discussion on error sources, threat models, occurrence rates and failure modes CATT discussion Rel-17 FS\_NR\_pos\_enh

R2-2006955 Factors impacting positioning integrity Ericsson discussion Rel-17

R2-2007647 Discussion on GNSS position integrity error sources ESA discussion Rel-17 FS\_NR\_pos\_enh

R2-2007938 Discussion of the positioning error sources, threat models and failure modes ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_pos\_enh

#### 8.11.3.3 Methodologies for network-assisted and UE-assisted integrity

R2-2006566 Discussion on positioning integrity methodologies vivo discussion FS\_NR\_pos\_enh

R2-2006581 Discussion for network-assisted and UE-assisted integrity Huawei, HiSilicon discussion Rel-17 FS\_NR\_pos\_enh

R2-2006675 Discussion on methodologies for network-assisted and UE-assisted integrity CATT discussion Rel-17 FS\_NR\_pos\_enh

R2-2006957 LPP signalling for integrity support of RAT dependent positioning Ericsson discussion Rel-17

R2-2007160 Discussion on methodologies for UE-based and UE-assisted integrity OPPO discussion Rel-17 FS\_NR\_pos\_enh

R2-2007238 Reporting movement model Fraunhofer IIS, Fraunhofer HHI discussion Rel-17

R2-2007246 Reporting the situational quality of RAT and RAT-independent technologies Fraunhofer IIS, Fraunhofer HHI discussion

R2-2007588 Methodologies for network-assisted and UE-assisted integrity InterDigital, Inc. discussion Rel-17

R2-2007656 Discussion on methodologies for position integrity ESA discussion Rel-17

R2-2007939 Discussion of the methodologies for network-assisted and UE-assisted integrity ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_pos\_enh

## 8.12 Reduced Capability SI

(FS\_NR\_redcap; leading WG: RAN1; REL-17; WID: [RP-201386](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201386.zip))

Time budget: 2 TU

Tdoc Limitation: 4 tdocs

Email max expectation: 4 threads

### 8.12.1 Organizational and scope

Get a common understanding of the SID, eg. what is RAN2 scope in the RAN1 centric objectives, what is required to be in the TR in order to start a WI.

R2-2006732 General views on Higher-layer impacts for Redcap devices Xiaomi Communications discussion

R2-2006753 RAN1-2 work scope discussion on RedCap capability Intel Corporation discussion Rel-17 FS\_NR\_redcap

R2-2006910 Scope of RedCap SI Ericsson discussion FS\_NR\_redcap

R2-2006978 Expected RAN2 scope of RedCap NEC discussion Rel-17 FS\_NR\_redcap

R2-2007366 TR38.875 skeleton updates for Study on support of reduced capability NR devices Ericsson discussion

### 8.12.2 Framework for reduced capabilities

#### 8.12.2.1 Principles for how to define and constrain reduced capabilities

R2-2006605 Defining and constraining UEs with reduced capabilities Qualcomm Inc discussion Rel-17 FS\_NR\_redcap

R2-2006660 Capability and initial access of RedCap UEs Samsung discussion Rel-17 FS\_NR\_redcap

R2-2006691 UE type and capability for RedCap UEs vivo, Guangdong Genius discussion Rel-17 FS\_NR\_redcap

R2-2006733 Discussion on UE Capaiblity Issues for reduced capability NR devices Xiaomi Communications discussion

R2-2006751 Reduced capability signalling framework Intel Corporation discussion Rel-17 FS\_NR\_redcap

R2-2006785 Discussion on definition of RedCap Ues OPPO discussion Rel-17 FS\_NR\_redcap

R2-2006903 Define and constrain reduced capability ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_redcap

R2-2006911 Framework and Principles for Reduced Capability Ericsson discussion FS\_NR\_redcap

R2-2006979 Constraint on usage of RedCap functions NEC discussion Rel-17 FS\_NR\_redcap

R2-2007011 On definition and constraint of reduced capabilities CATT discussion Rel-17 FS\_NR\_redcap

R2-2007110 RedCap UE characterization and access restriction Apple discussion Rel-17 FS\_NR\_redcap

R2-2007344 Capability definition of REDCAP UE Huawei, HiSilicon discussion Rel-17 FS\_NR\_redcap

R2-2007400 Discussion on how to define reduced capability devices LG Electronics UK discussion Rel-17

R2-2007478 The principle to constrain reduced capability NR devices Lenovo, Motorola Mobility discussion Rel-17

R2-2007490 Principles for reduced capabilities Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_redcap

R2-2007492 On the definition of a RedCap device type MediaTek Inc. discussion Rel-17 FS\_NR\_redcap

#### 8.12.2.2 Identification and access restrictions

R2-2006606 Identification and access restriction for RedCap UEs Qualcomm Inc discussion Rel-17 FS\_NR\_redcap

R2-2006661 Coexistence between legacy UEs and RedCap UEs Samsung discussion Rel-17 FS\_NR\_redcap

R2-2006692 Identification and access restrictions for RedCap UEs vivo, Guangdong Genius discussion Rel-17 FS\_NR\_redcap

R2-2006734 Discussion on Identification and UE access restrictions for Redcap devices Xiaomi Communications discussion

R2-2006752 Identification and Access restriction for RedCap devices Intel Corporation discussion Rel-17 FS\_NR\_redcap

R2-2006786 Discussion on RedCap UE’s identification and access control OPPO discussion Rel-17 FS\_NR\_redcap

R2-2006904 Identification and access control for Redcap UE ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_redcap

R2-2006912 Identification and access restriction for devices with reduced capabilities Ericsson discussion FS\_NR\_redcap

R2-2007012 Identification and access restrictions for reduced capability UE CATT discussion Rel-17 FS\_NR\_redcap

R2-2007345 Identification and access restriction of REDCAP UE Huawei, HiSilicon discussion Rel-17 FS\_NR\_redcap

R2-2007399 Access restriction for reduced capability devices LG Electronics UK discussion Rel-17

R2-2007480 Discussion on the identification of Redcap Lenovo, Motorola Mobility discussion Rel-17

R2-2007491 Cell access for REDCAP UE with reduced bandwidth Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_redcap

R2-2007493 On UE identification and access restrictions MediaTek Inc. discussion Rel-17 FS\_NR\_redcap

R2-2007560 Cell access restrictions for REDCAP UE Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_redcap

### 8.12.3 UE power saving and battery lifetime enhancement

UE power saving and battery lifetime enhancement for reduced capability UEs in applicable use cases (e.g. delay tolerant case).

R2-2006607 Power saving enhancements for RedCap UEs Qualcomm Inc discussion Rel-17 FS\_NR\_redcap

R2-2006662 RRM relaxation for stationary devices Samsung discussion Rel-17 FS\_NR\_redcap

R2-2006693 RRM relaxation for power saving vivo, Guangdong Genius discussion Rel-17 FS\_NR\_redcap

R2-2006694 DRX enhancement for RedCap UEs vivo, Guangdong Genius discussion Rel-17 FS\_NR\_redcap

R2-2006731 Discussion on UE Power saving for Redcap Devices Xiaomi Communications discussion

R2-2006748 Use cases target to extend paging DRX cycle and relax measurements for stationary devices Intel Corporation discussion Rel-17 FS\_NR\_redcap

R2-2006787 Consideration on extended DRX for RedCap OPPO discussion Rel-17 FS\_NR\_redcap

R2-2006788 Discussion on RRM relaxation OPPO discussion Rel-17 FS\_NR\_redcap

R2-2006902 Consideration on RRM relaxation for Redcap UE ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_redcap

R2-2006905 Introduction of eDRX for Redcap UE ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_redcap

R2-2006913 Reducing power consumption in RedCap devices Ericsson discussion FS\_NR\_redcap

R2-2007013 eDRX for NR RRC Inactive and Idle States CATT discussion Rel-17 FS\_NR\_redcap

R2-2007111 Impact of power-saving aspects on RedCap UEs Apple discussion Rel-17 FS\_NR\_redcap

R2-2007346 Discussion on eDRX for RRC\_INACTIVE and RRC\_IDLE Huawei, HiSilicon discussion Rel-17 FS\_NR\_redcap

R2-2007347 RRM measurement relaxation for REDCAP UE Huawei, HiSilicon discussion Rel-17 FS\_NR\_redcap

R2-2007393 Introducing Extended DRX for RRC Inactive and/or Idle Samsung discussion FS\_NR\_redcap

R2-2007401 Extended DRX for reduced capability devices in RRC\_IDLE and RRC\_INACTIVE LG Electronics UK discussion Rel-17

R2-2007470 eDRX for Idel/inactive-mode UE with reduced capability Lenovo, Motorola Mobility discussion Rel-17

R2-2007471 RRM relaxation for stationary UE with reduced capability Lenovo, Motorola Mobility discussion Rel-17

R2-2007494 eDRX for reduced capability UEs MediaTek Inc. discussion Rel-17 FS\_NR\_redcap

R2-2007561 Power saving and battery lifetime enhancement for REDCAP UE Nokia, Nokia Shanghai Bell discussion Rel-17 FS\_NR\_redcap

R2-2007653 eDRX for Reduced Capability NR Devices Convida Wireless discussion Rel-17 FS\_NR\_redcap

R2-2007654 Discussion on eDRX Configuration Convida Wireless discussion Rel-17 FS\_NR\_redcap

R2-2007745 Considerations on RRM for reduced capability UEs LG Electronics France discussion Rel-17 FS\_NR\_redcap

## 8.13 SON/MDT

(NR\_ENDC\_SON\_MDT\_enh-Core; leading WG: RAN3; REL-17; WID: [RP-201281](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201281.zip))

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

Email max expectation: 2 threads

Focus on scope clarification, identify the detailed use cases, and the associated measurment collections. Can also discuss other organizational aspects.

R2-2007233 R17 MDT scope for MR-DC and early measurments Samsung Telecommunications discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.1 Organizational

R2-2007996 Work plan for enhancement of data collection for SON\_MDT in NR and EN-DC WI CMCC, Ericsson discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

### 8.13.2 SON, RAN2 scope and requirements

R2-2006651 Clarification for SON Scope and Use Cases CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2006678 Discussion on rel-17 Radio Link Failure Report NTT DOCOMO INC. discussion Rel-17

R2-2006746 Mobility support in SON/MDT for Rel17 Intel Corporation discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007071 Open Issues in SON QUALCOMM Incorporated discussion Rel-17

R2-2007155 Enhancements and scope of R17 SON OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007196 SON for Rel-16 mobility enhancement NEC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007301 Discussion on SON enhancements vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007392 Optimization for Rel-16 Features Samsung discussion NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007435 SON Consideration for R16 Mobility Enhancement CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007464 MRO for Inter-RAT handover Lenovo, Motorola Mobility discussion Rel-17

R2-2007465 MRO for CHO and DAPS Handover Lenovo, Motorola Mobility discussion Rel-17

R2-2007516 Rel-17 SON enhancements scope Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007661 SON Scope and Requirements for Rel.17 Ericsson discussion

R2-2007662 SON Summary Ericsson discussion Late

R2-2007769 Discussion for RAN2 SON scope and requirements Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007782 Consideration on SON enhancements ZTE Corporation, Sanechips discussion Rel-17

### 8.13.3 MDT Scope and requirements

R2-2006652 Clarification for MDT Scope and Use Cases CATT discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2006747 Scope of MDT for Rel17 Intel Corporation discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core Withdrawn

R2-2007070 Open Issues in MDT QUALCOMM Europe Inc. - Spain discussion Rel-17 Late

R2-2007072 Open Issues in MDT Qualcomm Incorporated discussion Rel-17

R2-2007156 Enhancements and scope of R17 MDT OPPO discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007300 Discussion on MDT enhancements vivo discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007434 MDT Enhancement for 2-step RA CMCC discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007515 Rel-17 MDT enhancements scope Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007667 MDT scope and requirements Ericsson discussion

R2-2007770 Discussion for MDT Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core

R2-2007771 Summary on 8.13.3 MDT Huawei, HiSilicon discussion Rel-17 NR\_ENDC\_SON\_MDT\_enh-Core Late

R2-2007783 Consideration on MDT enhancements ZTE Corporation, Sanechips discussion Rel-17

## 8.14 NR QoE SI

(FS\_NR\_QoE; leading WG: RAN3; REL-17; WID: [RP-193256](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-193256.zip))

Time budget: 0 TU

Tdoc Limitation: 1 tdocs

Email max expectation: 0 threads

Not Treated AT meeting. Can open incoming LSes if any.

R2-2007081 NR QoE management Samsung Electronics discussion Rel-17 38.331 FS\_NR\_QoE

R2-2007600 NR QoE Measurement Triggering, Configuration, Collection and Reporting Ericsson discussion FS\_NR\_QoE

R2-2007768 Discussion for NR QoE Huawei, HiSilicon discussion Rel-17 FS\_NR\_QoE

R2-2007940 Discussion on QoE in NR ZTE Corporation, Sanechips discussion Rel-17 FS\_NR\_QoE

## 8.15 NR Sidelink enhancements

(NR\_SL\_enh-Core; leading WG: RAN1; REL-17; WID: [RP-201385](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201385.zip))

Time budget: 0 TU

Tdoc Limitation: 0 tdocs (no contributions expected).

Email max expectation: 0 threads

Not Treated AT meeting. Can open incoming LSes if any.

## 8.16 NR R17 Other

Time budget: 0.5 TU

Tdoc Limitation: tdocs

Email max expectation: threads

This item carries the otherwise unbudgeted time to treat LSes for not yet started items.

R2-2006514 Response LS on the “LS out on Location of UEs and associated key issues” (R3-202824; contact: Thales) RAN3 LS in Rel-17 FS\_5GSAT\_ARCH To:SA2, RAN2, SA3-LI

R2-2006530 LS on SA WG2 assumptions from conclusion of study on architecture aspects for using satellite access in 5G (S2-2004688; contact: Qualcomm) SA2 LS in Rel-17 FS\_5GSAT\_ARCH To:RAN2, RAN3, CT1

R2-2006532 Response LS on the “LS OUT on Location of UEs and associated key issues” (S3i200056; contact: Rogers) SA3-LI LS in Rel-17 FS\_5GSAT\_ARCH To:SA2, RAN2, RAN3 Cc:SA1

R2-2006537 Reply LS to extend the scope of eV2X (SP-191379; contact: Telecom Italia) SA LS in Rel-17 FS\_eV2XARC\_Ph2 To:5GAA WG4 Cc:SA2, SA1, RAN, RAN2

# 9 Rel-17 EUTRA Work Items

## 9.1 NB-IoT and eMTC enhancements

(NB\_IOTenh4\_LTE\_eMTC6-Core; leading WG: RAN1; REL-17; WID: [RP-201306](file:///D:\Documents\3GPP\tsg_ran\TSG_RAN\TSGR_88e\Docs\RP-201306.zip))

Time budget: 1 TU

Tdoc Limitation: 2 tdocs

Email max expectation: 2 threads

Focus on two objectives only, initial discussions to understand the context, scope, potential solution proposals.

### 9.1.1 Organizational

R2-2007696 Work plan of Rel-17 enhancements for NB-IoT and LTE-MTC Ericsson, Huawei Work Plan NB\_IOTenh4\_LTE\_eMTC6-Core

### 9.1.2 NB-IoT neighbor cell measurements and corresponding measurement triggering before RLF

R2-2006833 Reducing time taken for reestablishment procedures in NB-IOT Ericsson discussion Rel-17

R2-2006834 Cell measurement in connected mode for NB-IoT ZTE Corporation, Sanechips discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

R2-2007342 Discussion on RLF enhancements Huawei, HiSilicon discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

R2-2007472 Neighbor cell measurements triggering before RLF Lenovo, Motorola Mobility discussion Rel-17

R2-2007569 Connected mode neighbor cell measurement in NB-IoT Qualcomm Incorporated discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

R2-2007619 Clarification on Agenda Item – 9.1.2 THALES discussion Rel-17

R2-2007951 Measurement before radio link failure Shanghai Chen Si Electronics discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

### 9.1.3 NB-IoT carrier selection based on the coverage level, and associated carrier specific configuration

R2-2006832 NB-IoT carrier selection and configuration based on coverage level Ericsson discussion Rel-17

R2-2006835 Enhancements on multi carrier configuration and selection ZTE Corporation, Sanechips discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

R2-2007343 Use cases and scenarios of carrier specific configuration Huawei, HiSilicon discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

R2-2007354 Analysis on carrier selection options Nokia, Nokia Shanghai Bell discussion Rel-17

R2-2007570 Support for NB-IoT carrier selection based on the coverage level Qualcomm Incorporated discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

R2-2007957 Carrier selection enhancement Shanghai Chen Si Electronics discussion Rel-17 NB\_IOTenh4\_LTE\_eMTC6-Core

## 9.2 EUTRA R17 Other

Time budget: 0 TU

Tdoc Limitation: X tdocs

Email max expectation: X threads