3GPP TSG-RAN WG2 Meeting #101 R2-18xxxxx

Athens, Greece, 26th February - 2nd March 2018

Source: RAN2 Chairman (Intel)

Title: Proposed Agenda

# 1 Opening of the meeting (9 AM)

## 1.1 Call for IPR

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

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

## 1.2 Network usage conditions

The PCG has laid down the following network usage conditions

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

## 1.3 Other

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

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

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

# 2 General

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

## 2.1 Approval of the agenda

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

## 2.2 Approval of the report of the previous meeting

## 2.3 Reporting from other meetings

## 2.4 Others

Rapporteur changes

Spec former rapporteur proposed new rapporteur

Isolated impact analysis

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

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

RAN2 WG compendium

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

Drafting rules

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

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

Time Budget

The time budget endorsed at RAN-78 is available in RP-172830

Offline discussion during RAN2 meeting

Chairs will allocate a number of offline discussions during the meeting. Create a folder containing this number within inbox/drafts and use this to share any documents relating to the offline discussion. Also use this number in the title of any reflector emails relating to this offline discussion. Do not share documents over the reflector during the meeting.

# 3 Incoming liaisons

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

# 4 Joint LTE/NR topics

## 4.1 Handover interruption time for LTE and NR

Contributions related to the given to RAN2 from RAN#78 as described in RP-172807.

Including output from email discussion [RAN2#101] email discussion on IMT-2020 requirement for 0ms handover interruption time.

# 5 Void

# 6 LTE: Rel-12 and earlier releases

Including corrections related to the following WIs:

(LTE-L23, leading WG: RAN2, REL-8, started: Sep. 06, closed: Dec. 08, WID: RP-080747)

(LTE\_CA-Core, leading WG: RAN1, REL-10, started: Dec. 09, closed: June 11, WID: RP-100661)

(LTE\_UL\_MIMO-Core, leading WG: RAN1, REL-10, started: Dec.09, closed: June 11, WID: RP-100959)

(LTE\_eDL\_MIMO-Core, leading WG: RAN1, REL-10, started: Dec.09, closed: March 11, WID: RP-100196)

(LTE\_Relay-Core, leading WG: RAN1, REL-10, started: Dec. 09, closed: June 11, WID: RP-110911)

(MBMS\_LTE\_enh-Core, leading WG: RAN2, REL-10, started: June 10, closed: March 11, WID: RP-101244)

(MDT\_UMTSLTE-Core, leading WG: RAN2, REL-10, started: Dec. 09, closed: June 11, WID: RP-100360)

(eICIC\_LTE-Core, leading WG: RAN1, REL-10, started: March 10, closed: June 11, WID: RP-100383)

(SONenh\_LTE-Core, leading WG: RAN3, REL-10, started: March 10, closed: June 11, WID: RP-101004)

(LTE\_CA\_enh-Core, leading WG: RAN1, REL-11, started: March 11, closed: Mar.13, WID: RP-121999)

(MBMS\_LTE\_SC-Core, leading WG: RAN2, REL-11, started: June 10, closed: Sep.12, WID: RP-120258)

(LTE\_eDDA-Core, leading WG: RAN2, REL-11, started: March 11, closed: Dec.12, WID: RP-120256)

(LCS\_LTE-NBPS-Core, leading WG: RAN2, REL-11, started: March 09, closed: June. 13, WID: RP-131259)

(eICIC\_enh\_LTE-Core, leading WG: RAN1, REL-11, started: March 11, closed: Dec. 12, WID: RP-120860)

(SPIA\_IDC\_LTE-Core, leading WG: RAN2, REL-11, started: Sep.11, closed: Dec. 12, WID: RP-111355)

(COMP\_LTE\_DL-Core, leading WG: RAN1, REL-11, started: Sep.11, closed: Dec.12, WID: RP-111365)

(COMP\_LTE\_UL-Core, leading WG: RAN1, REL-11, started: Sep.11, closed: Dec.12, WID: RP-111365)

(LTE\_TDD\_add\_subframe, leading WG: RAN1, REL-11, started: March 12; closed: Sep. 12, WID: RP-120384)

(FS\_HetNet\_eMOB\_LTE, leading WG: RAN2, REL-11, started: March 11, closed: Sep. 12, WID: RP-110709)

(LTE\_enh\_dl\_ctrl-Core, leading WG: RAN1, REL-11, started: Dec. 11, closed: Dec. 12, WID: RP-120871)

(LTE\_SC\_enh\_dualC-Core, leading WG: RAN2, REL-12, started: Dec.13, closed: Dec.14, WID: RP-141797)

(LTE\_SC\_enh\_L1-Core, leading WG: RAN1, REL-12, started: Dec.13, closed: Dec.14, WID: RP-132073)

(LTE\_D2D\_Prox-Core, leading WG: RAN1, REL-12, started: Mar.14, closed: Mar.15, WID: RP-142043)

(MBMS\_LTE\_OS-Core, leading WG: RAN2, REL-12, started: Sep.13, closed: Dec.14, WID: RP-140282)

(LTE\_NAICS-Core, leading WG: RAN1, Rel-12, started: Mar 14, closed: Dec.14, WID: RP-140519)

(LC\_MTC\_LTE-Core, leading WG: RAN1, REL-12, started: Jun 13, closed: Dec 14, WID: RP-140522)

(GCSE\_LTE-MBMS\_CM-Core, leading WG: RAN3, started: Sep. 14, closed: Mar. 2015, WID: RP-141035)

(LTE\_CA\_TDD\_FDD-Core, leading WG: RAN1, REL-12, started: Jun 13, closed: Jun 14, WID: RP-140465)

(LCS\_BDS-LTE-Core, leading WG: RAN2, REL-12, started: Mar 13, closed: Dec 13, WID: RP-130416)

(LTE\_eDL\_MIMO\_enh-Core, leading WG: RAN1, REL-12, started: Sep 12, closed: June 14, WID: RP-121416)

(HetNet\_eMOB\_LTE-Core, leading WG: RAN2, REL-12, started: Dec.12, , closed: Sep 14, WID: RP-122007)

(Cov\_Enh\_LTE-Core, leading WG: RAN1, REL-12, started: Jun.13, closed: Jun.14, WID: RP-130833)

(LTE\_TDD\_eIMTA-Core, leading WG: RAN1, REL-12, started: Dec 12, closed: Jun.14, WID: RP-121772)

(SCM\_LTE-Core, leading WG: RAN2, REL-12, started: Mar.14, closed: Sep.14, WID: RP-140434)

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

(SIMTC-RAN\_OC-Core, leading WG: RAN2, REL-11, started: Sep.11, closed: Sep. 12, WID: RP-111373)

(eMDT\_UMTSLTE-Core, leading WG: RAN2, REL-11, started: Sep.11, closed: Dec.12, WID: RP-121204)

(SONenh2\_LTE\_UTRA-Core, leading WG: RAN3, REL-11, started: Sep.11, closed: Dec.12, WID: RP-120314)

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

(EHNB\_enh3-Core, leading WG: RAN3, REL-12, started: Sep.12, closed: Dec 13, WID: RP-130741)

(MTCe\_RAN-Core, leading WG: RAN2, REL-12, started: Dec.13, closed: Sep.14, WID: RP-132053)

(UTRA\_LTE\_WLAN\_interw-Core, leading WG: RAN2, REL-12, started: Dec.13, closed: Sep.14, WID: RP-132101)

(LTE\_UTRA\_IncMon-Core, leading: RAN4, REL-12, started: Dec.13, closed: Dec. 14, WID: RP-132061)

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

# 7 LTE: Rel-13

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

(LTE\_MTCe2\_L1-Core, leading WG: RAN1, REL-13; started: Sep. 14, closed: Mar. 16, WID: RP-150492)

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

## 7.2 WI: Narrowband IOT

(NB\_IOT-Core; leading WG: RAN1; started: Sep. 15; target: Jun. 16; WID: RP-152284)

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

## 7.3 Other LTE Rel-13 WIs

Including corrections related to the following WIs:

(LTE\_LAA-Core, leading WG: RAN1, REL-13; started: June 15, closed: Dec. 15, WID: RP-151045)

(LTE\_CA\_enh\_b5C-Core, leading WG: RAN1, REL-13; started: Dec. 14, closed: Dec. 15, WID: RP-151984)

(LTE\_SC\_PTM-Core, leading WG: RAN2, REL-13; started: June 15, closed: Dec. 15, WID: RP-151110)

(LTE\_eD2D\_Prox-Core, leading WG: RAN2, REL-13; started: Dec. 14, closed: Mar. 16, WID: RP-150441)

(LTE\_MC\_load-Core, leading WG: RAN2, started: Mar. 15, closed: Dec. 15, WID: RP-152181)

(LTE\_dualC\_enh-Core, leading WG: RAN2, started: Mar. 15, closed: Dec. 15, WID: RP-151739)

(LTE\_extDRX-Core; leading WG: RAN2; started: Mar. 15; closed: Mar. 16; WID: RP-150493)

(LTE\_EBF\_FDMIMO-Core; leading WG: RAN1; started: June. 15; closed: Dec. 15; WID: RP-151085)

(LTE\_eMDT2-Core; leading WG: RAN2; started: Sep. 15; closed: Dec 15; WID: RP-151611)

(UTRA\_LTE\_iPos\_enh-Core; leading WG: RAN2; started: Sep. 15; closed: Dec 15; WID: RP-152251)

(LTE\_WLAN\_radio-Core, leading WG: RAN2, started: Mar. 15, closed: Mar. 16, WID: RP-152213)

(LTE\_WLAN\_radio\_legacy-Core; leading WG: RAN2; started: Sep. 15; closed: Mar 15; WID: RP-151615)

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

(ACDC-RAN-Core; leading WG: RAN2; REL-13; started: Mar. 15; closed: Dec. 15; RP-150662)

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

# 8 LTE Rel-14

## 8.1 WI: Enhanced LAA for LTE

(LTE\_eLAA-Core; leading WG: RAN1; REL-14; started: Dec. 15; closed: Mar. 17; WID:RP-162229)

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

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

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

(LTE\_SL\_V2V-Core; leading WG: RAN1; started: Dec. 15; closed: Sept 16; WID: RP-161603)

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

### 8.2.1 User plane

### 8.2.2 Control plane

## 8.3 Void

## 8.4 Void

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

(LTE\_WLAN\_aggr-Core; leading WG: RAN2; REL-14; started: Mar. 16; closed: Mar. 17; WID: RP-160923)

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

## 8.6 WI: Further mobility enhancements in LTE

(LTE\_eMob-Core; leading WG: RAN2; REL-14; started: Mar. 16; closed: Mar. 17; WID:RP-162503)

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

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

(UTRA\_LTE\_iPos\_enh2-Core; leading WG: RAN2; REL-14; started: Mar. 16; closed: Dec. 16; WID: RP-162026)

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

## 8.8 WI: L2 latency reduction techniques for LTE

(LTE\_LATRED\_L2-Core; leading WG: RAN2; REL-14; started: Mar. 16; closed: Sep. 16; WID: RP-160667)

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

## 8.9 Void

## 8.10 WI: eMBMS enhancements for LTE

(MBMS\_LTE\_enh2-Core; leading WG: RAN1; REL-14; started: Mar. 16; closed: Sep. 17; WID:RP-162231)

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

## 8.11 WI: Enhancements of NB-IoT

(NB\_IOTenh-Core; leading WG: RAN1; REL-14; started: June 16; closed: Jun. 17; WID: RP-171060)

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

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

Including output of email discussion [100#37][NB-IoT R14] Measurement Report for NB-IoT (CMCC)

## 8.12 WI: Further Enhanced MTC for LTE

(LTE\_feMTC-Core; leading WG: RAN1; REL-14; started: June 16; closed: Jun. 17; WID: RP-170532)

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

### 8.12.1 Multicast for feMTC and eNB-IoT

### 8.12.2 Other

## 8.13 WI: LTE-based V2X Services

(LTE\_V2X-Core, leading WG: RAN1; REL-14; started: June 16; closed: Mar. 17; WID: RP-162519)

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

### 8.13.1 Stage 2

### 8.13.2 User plane

### 8.13.3 Control plane

## 8.14 WI: SRS switching between LTE component carriers

(LTE\_SRS\_switch; leading WG: RAN1; REL-14; started: Mar.16: closed: Dec. 16; WID: RP-160935)

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

## 8.15 WI: Measurement Gap Enhancement for LTE

(LTE\_meas\_gap\_enh-Core; leading WG: RAN4; REL-14; started: Mar. 16; closed: Jun. 17; WID: RP-160912)

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

## 8.16 Void

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

(LTE\_high\_speed-Core; leading WG: RAN4; REL-14; started: Dec. 15. 16; closed: Dec. 16; WID: RP-160172)

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

## 8.18 WI: Voice and Video enhancement for LTE

(LTE\_VoLTE\_ViLTE\_enh; leading WG: RAN2; REL-14; started: Sep. 16; closed: Mar. 17: WID: RP-161856)

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

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

(LTE\_UE\_cat\_1Rx-Core; leading WG: RAN4; REL-14; started: Sep. 16; closed: Jun. 17: WID: RP-171149)

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

## 8.20 Uplink Capacity Enhancements for LTE

LTE\_UL\_CAP\_enh-Core; leading WG: RAN1; REL-14; started: Mar. 16; closed: Mar. 17: WID: RP-162488

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

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

(LTE\_eFD\_MIMO-Core; leading WG: RAN1; REL-14; started: Mar. 2016; closed: Mar. 17: WID: RP-160623)

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

## 8.22 Void

## 8.23 WI: Downlink Multiuser Superposition Transmission for LTE

(LTE\_MUST-Core; leading WG: RAN1; REL-14; started: Mar. 16; closed: Dec. 16: WID: RP-161019)

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

## 8.24 Other LTE Rel-14 WIs

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

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

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

(eDECOR-UTRA\_LTE-Core; leading WG: RAN3; REL-14; started: Dec. 16; closed: Mar. 17: WID: RP-162543)

## 8.25 LTE TEI14 enhancements

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

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

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

This agenda item is for items already discussed under TEI14. New proposals should be submitted to TEI15, AI 9.19.

# 9 LTE Rel-15

## 9.1 Void

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

(LTE\_STTIandPT-core; leading WG: RAN1; REL-15; started: June 16; target: Jun. 18; WID: RP-171468)

Time budget: 0 TU

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

This WI is complete from RAN2 point of view but RAN2 CRs have not been implemented to the specification as described in RP-172755. The CRs will be maintained as running CRs and then agreed again in RAN2#102. This AI is for corrections to the running CRs.

## 9.3 Void

## 9.4 Void

## 9.5 Further video enhancements for LTE

(LTE\_ViLTE\_enh2-Core; leading WG: RAN2; REL-15; started: Mar. 17; target: Jun. 18: WID: RP-172726)

Time budget: 0 TU

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

This WI is complete from RAN2 point of view but RAN2 CRs have not been implemented to the specification as described in RP-172755. The CRs will be maintained as running CRs and then agreed again in RAN2#102. This AI is for corrections to the running CRs.

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

(LTE\_QMC\_Streaming; leading WG: RAN2; REL-15; started: Mar. 17; target: Jun. 18: WID: RP-170956)

Time budget: 0 TU

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

This WI is complete from RAN2 point of view but RAN2 CRs have not been implemented to the specification as described in RP-172755. The CRs will be maintained as running CRs and then agreed again in RAN2#102. This AI is for corrections to the running CRs.

## 9.7 LTE connectivity to 5G-CN

(LTE\_5GCN\_connect-Core; leading WG: RAN2; REL-15; started: Mar. 17; target: Jun. 18: WID: RP-172342)

Time budget: 1.5 TU

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

### 9.7.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

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

### 9.7.2 Stage 2 aspects independent from NR/5GC

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

### 9.7.3 Stage 2 aspects dependent on NR/5GC

No documents should be submitted to 9.7.3. Please submit to 9.7.3.x.

The agenda items 9.7.3.x will be disscussed when the corresponding NR topic has made sufficient progress.

#### 9.7.3.1 Inactive state

#### 9.7.3.2 Flow based QoS

#### 9.7.3.3 Slicing

#### 9.7.3.4 Access control

#### 9.7.3.5 Other

## 9.8 Positioning Accuracy Enhancements for LTE

(LCS\_LTE\_acc\_enh-Core; leading WG: RAN2; REL-15; started: Mar. 17; target: Jun. 18: WID: RP-172313)

Time budget: 1 TU

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

### 9.8.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

Including output of email discussion [99bis#56][LTE/Positioning] Running LPP CR (Qualcomm)

### 9.8.2 GNSS positioning enhancements

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

Including output of email discussion [99bis#57][LTE/Positioning] Future phase support of SSR (u-blox)

### 9.8.3 Support for IMU positioning

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

Including output of email discussion [99bis#58][LTE/Positioning] Measurements for IMU positioning (Intel)

### 9.8.4 UE-based OTDOA positioning

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

### 9.8.5 Broadcasting of assistance data

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

## 9.9 Enhancing CA Utilization

(LTE\_euCA-Core; leading WG: RAN2; REL-15; started: Mar. 17; target: Jun. 18: WID: RP-170805)

Time budget: 0.5 TU

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

### 9.9.1 General

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

### 9.9.2 Delay reduction for SCell set-up

### 9.9.3 Signalling overhead reduction for configuration activation

Including output of email discussion [100#36][LTE/euCA] Solutions on signalling overhead reduction (Nokia)

### 9.9.4 Others

## 9.10 Enhancements on LTE-based V2X Services

(LTE\_eV2X-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Jun. 18: WID: RP-171740)

Time budget: 1 TU

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

### 9.10.1 General

Including incoming LSs, work plan and rapporteur inputs.

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

Focus should be on RAN2 aspects.

Details of carrier selection

Handling of the UE with limited Rx chains

Protocol architecture and details for packet duplication

Including output of email discussion [100#41][LTE – eV2X] TX carrier selection – LG

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

Focus should be on RAN2 aspects.

Including output of email discussion [100#42][LTE – eV2X] Radio resource pool sharing – OPPO

### 9.10.4 Others

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

## 9.11 High capacity stationary wireless and 1024 QAM

(LTE\_1024QAM\_DL-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Mar. 18: WID: RP-171738)

Time budget: 0.5 TU

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

### 9.11.1 General

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

### 9.11.2 UE capability and potential new categories

### 9.11.3 Corresponding higher-layer procedures and signalling

## 9.12 Enhancements to LTE operation in unlicensed spectrum

(LTE\_unlic-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Jun. 18: WID: RP-172841)

Time budget: 1 TU

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

### 9.12.1 General

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

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

### 9.12.3 Other operation on Frame structure type 3

### 9.12.4 Others

## 9.13 Further NB-IoT enhancements

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

Time budget: 2.5 TU

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

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

### 9.13.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

### 9.13.2 Early Data Transmission

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

### 9.13.3 System Acquisition Enhancements

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

### 9.13.4 Relaxed Monitoring for cell reselection

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

### 9.13.5 Semi-Persistent Scheduling

### 9.13.6 RRC Connection Release Enhancements

### 9.13.7 UE differentiation

### 9.13.8 TDD

### 9.13.9 Wake Up Signal

Wake Up Signal etc for MTC and NB-IoT is treated jointly under this Agenda Item.

### 9.13.10 Other

E.g. Support for RLC-UM, Support for physical layer SR, Measurement Accuracy Enhancements, NPRACH reliability, NPRACH range, small cell support, other

## 9.14 Even further enhanced MTC for LTE

(LTE\_eMTC4-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Jun. 18: WID: RP-172811)

Time budget: 2.5 TU

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

### 9.14.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

Including output of email discussion [100#39][MTC R15] 36.331 CR [Qualcomm]

Including output of email discussion [100#40][MTC R15] 36.321 CR [Intel]

### 9.14.2 Early data transmission

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

Including output of email discussion [100#38][MTC Rel-15] padding issue in Msg3 [Ericsson]

### 9.14.3 System acquisition time enhancements

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

### 9.14.4 Relaxed monitoring for cell reselection

Relaxed monitoring for cell reselection for MTC is treated jointly with NB-IoT under AI 9.13.4. Do not use this AI for any item that can be discussed jointly.

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

### 9.14.6 Uplink HARQ-ACK feedback

### 9.14.7 Increased PDSCH spectral efficiency

### 9.14.8 Increased PUSCH spectral efficiency

### 9.14.9 Wake Up Signal

Wake Up Signal etc for MTC is treated jointly with NB-IoT under AI 9.13.9 Do not use this AI for any item that can be discussed jointly.

### 9.14.10 Other

Including higher UE velocity, lower UE power class, CRS muting etc.

## 9.15 Highly Reliable Low Latency Communication for LTE

LTE\_HRLLC-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Jun. 18: WID: RP-172845

Time budget: 1.0 TU

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

## 9.16 UL data compression in LTE

(LTE\_UDC-Core; leading WG: RAN2; Rel-15; started Sep 17; target: Mar 18; WID RP-172365)

Time budget: 1.0 TU

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

## 9.17 Further enhancements to CoMP for LTE

(feCOMP\_LTE-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Mar. 18: WID: RP-171031)

Time budget: 0.5 TU

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

## 9.18 Enhanced LTE Support for Aerial Vehicles

(LTE\_Aerial-Core;leading WG: RAN2; REL-15; started: Dec. 17; target: June. 18: WID: [RP-172826](file:///C:\Data\3GPP\TSGR\TSGR_78\docs\RP-172826.zip))

Time budget: 1.0 TU

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

## 9.19 Bluetooth/WLAN measurement collection in MDT

(LTE\_MDT\_BT\_WLAN-Core; leading WG: RAN2; REL-15; started: Dec. 17; target: June. 18: WID: [RP-172820](file:///C:\Data\3GPP\TSGR\TSGR_78\docs\RP-172820.zip))

Time budget: 0.5 TU

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

## 9.20 Other LTE Rel-15 WIs

This agenda item may be used for documents relating to Rel-15 WIs with no allocated RAN2 time but which might have minor RAN2 impact (e.g. CT/SA WIs for which we have received an LS requesting RAN2 action)

## 9.21 LTE TEI15 enhancements

Small Technical Enhancements affecting LTE Rel-15 that do not belong to any Rel-15 WI.

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

Time budget: 1 TU

### 9.21.1 CP latency for LTE

Contributions related to the task given to RAN2 from RAN#78 as described in LS RP-172840.

### 9.21.2 Other

Including output of email discussion [100#35][LTE/TEI15] New L2 measurements (Huawei)

# 10 WI: New Radio (NR) Access Technology

(NR\_newRAT-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Jun. 18: WID: RP-172834)

## 10.1 Organisational

Incoming LSs, work plan, status from other groups, etc.

## 10.2 Stage 2 and common UP/CP aspects

### 10.2.1 Stage 2 TSs and running CR

TS 38.300, TS 37.340 rapporteur inputs (e.g. FFS lists, etc) and running CR to 36.300. Please submit proposed corrections to the appropriate agenda item.

### 10.2.2 Stage 2 corrections for EN-DC

No documents should be submitted to 10.2.2. Please submit to 10.2.2.x.

#### 10.2.2.1 User plane

Corrections to 38.300 or 37.340 for EN-DC related to user plane or common UP/CP aspects (i.e. that should be discussed with both user plane control plane people present)

#### 10.2.2.2 Other

Corrections to 38.300 or 37.340 for EN-DC other than those that fall into 10.2.2.2

### 10.2.3 Stage 2 corrections for non EN-DC

Correction 38.300 or 37.340 not related to EN-DC

### 10.2.4 Mobility mechanisms - basic handover

Any remaining stage 2 aspects of basic handover (and not common to SCG change for EN-DC). Contributions should include a TP to show how the stage 2 specification would be impacted (if no stage 2 spec impact then the contribution should be submitted to an appropriate stage 3 AI)

### 10.2.5 Bandwidth parts

Stage 2 aspects of bandwidth parts for standalone operation. Note that corrections to bandwidth parts for EN-DC should be submitted to the appropriate UP or CP stage 3 AI.

### 10.2.6 Supplementary uplink

Stage 2 aspects of supplementary uplink for standalonne operation. Note that corrections to SUL for EN-DC should be submitted to the appropriate UP or CP stage 3 AI.

### 10.2.7 Mobility mechanisms - other

Note decisions at RAN2#97bis to progress the basic HO mechanism and only when stable to discuss conditional handover and potential optimisations to target close to 0ms or 0ms interruption.

Note at this meeting the specific task on 0ms interruption given to RAN2 from RAN#78 as described in RP-172807 will be discussed under AI 4.1

### 10.2.8 Mobility - RLM,RLF

Any remaining stage 2 aspects of radio link monitoring procedure and criteria for declaring radio link failure, including impact of beam failure/recovery. This AI will be discussed after receiving input from RAN1 on the questions we asked.

Maximum 1 tdoc per company

### 10.2.9 Mobility - Inter-RAT

Connected mode mobility between NR and E-UTRA.

RRM measurements to be discussed under appropriate stage 3 AI.

### 10.2.10 Security (non EN-DC)

Stage 2 aspects of security for cases other than EN-DC

### 10.2.11 Slicing

Including signalling of slice info to RAN, impact to access control, confirmation (or otherwise) of working assumption from RAN2#99 on use of dedicated prioritises to control idle mode mobility for slicing, etc

### 10.2.12 QoS

Any remaining stage 2 aspects, including QoS operation with DC.

Detailed topics, including QoS flow remapping, should be discussed in stage 3 user plane

### 10.2.13 Positioning

### 10.2.14 Other

Other stage 2 aspects for non EN-DC

## 10.3 Stage 3 user plane

Documents in this agenda item will be handled in the NR user plane break out session

### 10.3.1 MAC

#### 10.3.1.1 TS

Latest TS 38.321, rapporteur inputs, etc

Editorial and small corrections/clarifications should be provided to the rapporteur. Single rapporteur TP is encouraged for editorials and clarifications.

#### 10.3.1.2 MAC general aspects

Correction related to NR Unit, BWP and SUL general issues. Detailed functional corrections related to BWP and SUL should be submitted under corresponding function.

#### 10.3.1.3 MAC PDU format

Correction CRs related to MAC PDU format

New MAC CE formats related to RAN1 procedures

#### 10.3.1.4 Random access

##### 10.3.1.4.1 Differentiation of RA parameters

Contributions should focus on stage 3 details on prioritized RACH procedures. Idle mode prioritized RACH is out-of-scope of Rel-15.

##### 10.3.1.4.2 Random access in presence of multi-beam operation

*Corrections/critical issues related to random access in presence of multi-beam operation*

*Finalize beam failure recovery design/specification*

##### 10.3.1.4.3 Random access procedures

Corrections/critical issues related to general random access procedure

#### 10.3.1.5 SR

Corrections/critical issues related to SR

#### 10.3.1.6 BSR

Corrections/critical issues related to BSR

Finalize how to handle the “immediate transmission” and ensure that an SR is triggered for URLLC transmission

#### 10.3.1.7 LCP

Corrections/critical issues related to LCP

#### 10.3.1.8 SPS/Grant-free

Corrections/critical issues related to Configured grant and SPS

Including output of email discussion [NR-AH1801#15][NR UP/MAC] Repetition aspects – Huawei. New contributions on repetition aspects are not encouraged.

#### 10.3.1.9 HARQ

Corrections/critical issues related to HARQ

#### 10.3.1.10 DRX

Contributions should focus on final critical issues/corrections for DRX

#### 10.3.1.11 Impact of PDCP duplication on MAC

MAC CE for activation/deactivation of PDCP duplication (max 1 contribution per company)

Aspects related to fallback to split bearer and handling of RLC/PDCP entities during activation/deactivation should be submitted in AI 10.3.3.5

#### 10.3.1.12 PHR

Corrections/critical corrections related to PHR

Including output of email discussion [NR-AH1801#16][NR UP/ MAC] – PHR for SUL – Huawei. Contributions on this topic are not encouraged.

#### 10.3.1.13 Other

Other corrections on topics not included in the detailed agenda items.

### 10.3.2 RLC

#### 10.3.2.1 TS

Latest TS 38.322, rapporteur inputs, etc

Editorial and small corrections/clarifications should be provided to the rapporteur. Single rapporteur TP is encouraged for editorials and clarifications.

#### 10.3.2.2 RLC header format

Corrections related to RLC header format

#### 10.3.2.3 Impact of PDCP duplication to RLC

#### 10.3.2.4

### 10.3.3 PDCP

#### 10.3.3.1 TS

Latest TS 38.323, rapporteur inputs, etc

Editorial and small corrections/clarifications should be provided to the rapporteur. Single rapporteur TP is encouraged for editorials and clarifications.

#### 10.3.3.2PDCP PDU formats

Corrections/critical issues related to PDCP PDU formats

#### 10.3.3.5 PDCP duplication

*Impacts of PDCP duplication and whether duplication is supported for SRB for CA.*

*Max 1 contribution per company*

#### 10.3.3.7 Other

*Corrections/critical issues related to PDCP*

### 10.3.4 SDAP

#### 10.3.4.1 TS

Latest TS 37.324, rapporteur inputs, etc

Including output of email discussion [NR-AH1801#17][NR UP/SDAP] Running TS 37.324 – Huawei

#### 10.3.4.2 Header Format

Details of header format with the 8bit header size limitations. Contributions on RQI setting and size of QFI should be submitted in this AI. (max 1 contributions per company)

Contributions on this topic should depend on SA2 input and whether there is a need to remap NAS QFI to AS QFI

#### 10.3.4.3 QoS flow remapping and handover

How to ensure in-order delivery in case of QoS flow remapping (max 1 contribution per company)

#### 10.3.4.4 Others

*Other remaining issues*

## 10.4 Stage 3 control plane

### 10.4.1 NR RRC

#### 10.4.1.1 TS and running CR

38.331 rapporteur inputs including FFS list, running CR to add non-EN-DC aspects, etc. Please submit corrections to the appropriate agenda item.

#### 10.4.1.2 Specification methodology

#### 10.4.1.3 Connection control procedures

No documents should be submitted to 10.4.1.3. Please submit to 10.4.1.3.x.

##### 10.4.1.3.1 Corrections to connection control for EN-DC

Corrections related to connection control procedures for EN-DC and not covered within the ASN.1 review.

##### 10.4.1.3.2 Connection control message harmonisation

Harmonisation/merging of messages to be used for different procedures, UE identity and other message content to be used in different cases, etc.

Maximum 1 tdoc per company

##### 10.4.1.3.3 Connection establishment procedures

Connection establishment procedures for standalone operation

##### 10.4.1.3.4 Connection reconfiguration procedures

Aspects related to connection reconfiguration procedure for standalone operation

##### 10.4.1.3.5 Other

Other aspects of connection control procedures, state transitions, etc for standalone operation

#### 10.4.1.4 RRM measurements

No documents should be submitted to 10.4.1.4. Please submit to 10.4.1.4.x.

##### 10.4.1.4.1 Corrections to RRM for EN-DC

Corrections related to RRM measurement and measurement reporting for EN-DC and not covered within the ASN.1 review.

##### 10.4.1.4.2 Measurement gaps for EN-DC

Any remaining aspects of measurement gaps for EN-DC

Including output of email discussion [NR-AH1801#08][NR] Measurement gap coordination assistance info (Samsung)

##### 10.4.1.4.3 Measurement gaps for non EN-DC

##### 10.4.1.4.4 Measurement events

Any additional aspects of measurement events.

##### 10.4.1.4.5 Inter-RAT measurements

Inter-RAT E-UTRA measurements for the purpose of inter-RAT handover from NR to E-UTRA

##### 10.4.1.4.6 Other

Other RRM related aspects that are not related for EN-DC

#### 10.4.1.5 Mobility

No documents should be submitted to 10.4.1.5. Please submit to 10.4.1.5.x.

##### 10.4.1.5.1 Corrections SCG change for EN-DC

Corrections to 38.331 related to SCG change for EN-DC and not covered within the ASN.1 review.

##### 10.4.1.5.2 SCG failure for EN-DC

Corrections to 38.331 and 36.331 related to SCG failure for EN-DC and not covered within the ASN.1 review.

##### 10.4.1.5.3 Handover

Stage 3 details of basic handover.

#### 10.4.1.6 System information

No documents should be submitted to 10.4.1.6. Please submit to 10.4.1.6.x.

##### 10.4.1.6.1 System information content/structure

Progress details of the content and structure of system information (excluding MIB content for which any corrections should be handled as part of the ASN.1 review)

Including output of email discussion [NR-AH1801#11][NR] System information content/structure (Ericsson)

##### 10.4.1.6.2 System information procedures email discussion

Output of email discussion [NR-AH1801#12][NR] System information procedures (Samsung)

This AI is for the output of the email discussion only. Please submit company contributions to the appriopriate AI 10.4.1.6.3, 10.4.1.6.4, or 10.4.1.6.5.

##### 10.4.1.6.3 Stored system information

Further details of stored SI including index/identifier format

Maximum 1 tdoc per company

##### 10.4.1.6.4 System information modification

Maximum 1 tdoc per company

##### 10.4.1.6.5 System information scheduling

Maximum 1 tdoc per company

##### 10.4.1.6.6 On demand system information

Including need for additional bit to indicate if SI message is actually being broadcast

##### 10.4.1.6.7 System information -other

Other system information related aspects

#### 10.4.1.7 Inactive state

No documents should be submitted to 10.4.1.6. Please submit to 10.4.1.6.x.

##### 10.4.1.7.1 RAN area configuration

Any further details of RAN area configuration given LS response to RAN3 from RAN2#99bis.

Maximum 1 tdoc per company

Including output of email discussion [NR-AH1801#13][NR] RRC inactive (RAN area configuration) (Intel)

##### 10.4.1.7.2 RRC inactive procedures email discussion

Output of email discussion [NR-AH1801#14][NR] RRC inactive procedures (Qualcomm)

This AI is for the output of the email discussion only. Please submit company contributions to the appriopriate AI 10.4.1.7.3 or 10.4.1.7.4.

##### 10.4.1.7.3 RAN area update procedure

Maximum 1 tdoc per company

##### 10.4.1.7.4 Paging in inactive

RRC procedure to respond to paging, including any differences between RAN and CN paging

##### 10.4.1.7.5 Inter-RAT mobility between NR Inactive and E-UTRA/5GC Inactive

##### 10.4.1.7.6 Security framework for inactive

Security framework for inactive UEs to address FFS arising from email discussion 98#30.

##### 10.4.1.7.7 Inactive - other

Other inactive state related aspects

#### 10.4.1.8 Access control

No documents should be submitted to 10.4.1.8. Please submit to 10.4.1.8.x.

##### 10.4.1.8.1 Access control for Idle/Inactive

Including output of email discussion [NR-AH1801#07][NR/] Reply LS to CT1 on AC (Intel)

##### 10.4.1.8.2 Access control for connected

#### 10.4.1.9 Inter-Node RRC messages

No documents should be submitted to 10.4.1.9. Please submit to 10.4.1.9.x.

##### 10.4.1.9.1 Inter-Node RRC messages for non EN-DC

Start to progress structure and content of the Inter-Node RRC messages used for non EN-DC procedures.

#### 10.4.1.10 Other (non EN-DC)

Other RRC related aspects

### 10.4.2 LTE RRC changes related to NR

No documents should be submitted to 10.4.2. Please submit to 10.4.2.x.

#### 10.4.2.1 Running CR

36.331 rapporteur inputs including FFS list, running CR to add non-EN-DC aspects, etc. Please submit corrections to the appropriate agenda item.

#### 10.4.2.2 Corrections to RRM measurements for EN-DC

Corrections to 36.331 related to RRM procedures for EN-DC and not covered within the ASN.1 review.

#### 10.4.2.3 Corrections to other EN-DC aspects

Corrections to 36.331 related to EN-DC procedures other than RRM and not covered within the ASN.1 review.

### 10.4.3 EN-DC ASN.1 review

No documents should be submitted to 10.4.3. Please submit to 10.4.3.x

#### 10.4.3.1 Rapporteur inputs

ASN.1 Review Issue Lists and ASN.1 review CRs for 38.331 and 36.331, plus any other rapporteur inputs related to ASN.1 review. No company contributions inot this agenda item.

Including output of email discussion [NR-AH1801#18][NR] 36.331 ASN.1 review (Samsung)

Including output of email discussions [NR-AH1801#19-24][NR] 38.331 ASN.1 review parts 1-6

#### 10.4.3.2 ASN.1 issue documents

Discussion documents related to issues identified in the ASN.1 review. Issue number from the issue list is to be included in the title of all discussion documents

### 10.4.4 UE capabilities

No documents should be submitted to 10.4.4. Please submit to 10.4.4.x.

#### 10.4.4.1 TS

38.306 rapporteur inputs including FFS list, etc. Please submit corrections to the appropriate agenda item.

#### 10.4.4.2 UE capabilities for EN DC

Including output of email discussion [NR-AH1801#10][NR] UE Capabilities (Intel)

Including output of email discussion [NR-AH1801#09][NR/] L2 buffer size (Intel)

#### 10.4.4.3 Temporary capability restriction

Maximum 1 tdoc per company

#### 10.4.4.4 Other aspects for non EN-DC

Any other aspect related to UE capabilities relevant for non EN-DC cases

### 10.4.5 Idle/inactive mode procedures

#### 10.4.5.1 TS

Latest 38.304, other rapporteur inputs, anything related to specification methodology. Please submit any new text proposals to the appropriate agenda item.

#### 10.4.5.2 Selection/reselection rules

Basic criteria and rules for cell selection and reselection

Maximum 1 tdoc per company

#### 10.4.5.3 Cell quality derivation

Derivation of cell quantity from beam measurements (including filtering and FFS points from previous meetings)

Maximum 1 tdoc per company

#### 10.4.5.4 Service based reselection

Maximum 1 tdoc per company

#### 10.4.5.5 Selection/reselection - other aspects

Including, for example mobility states, speed dependent scaling, forward compatibility for CSG, cell reservations, etc

#### 10.4.5.6 Idle/inactive paging

Including beam related aspects, response driven paging and calculation of paging occasion.

# 11 Rel-15 NR Study Items

## 11.1 Study on Integrated Access and Backhaul for NR

(FS\_NR-IAB; leading WG: RAN2; REL-15; started: Mar. 17; target: Jun. 18: SID: RP-172290)

Time budget: 0 TU

This agenda item is a placeholder. The SI will not be discussed at RAN2#101

# 12 Comebacks

This agenda item will be used during the meeting. No documents are supposed to be submitted by delegates.

## 12.1 Breakout sessions

### 12.1.1 Report from Break-Out session

Report from session on Rel-14 and Rel-15 LTE

R2-18xxxxx Report from Break-Out Session, Vice-Chair (CMCC)

* CBF: Report from LTE Break-Out Session, Vice-Chair (CMCC)

### 12.1.2 Report from Break-Out session

Report from session on Rel-13/14 NB-IoT, Rel-13/14 MTC, Rel-15 NB-IoT WIs

R2-18xxxxx Report from Break-Out Session, Session Chair (MediaTek)

* CBF: Report from LTE Break-Out Session, Vice-Chair (MediaTek)

### 12.1.3 Report from Break-Out session

Report from session on Rel-14 LTE and NR UP

R2-18xxxxx Report from Break-Out Session, Vice-Chair (InterDigital)

* CBF: Report from LTE Break-Out Session, Session Chair (InterDigital)

### 12.1.4 Report from Break-Out session

Report from session on Rel-15 MTC

R2-18xxxxx Report from Break-Out Session, Session Chair (Ericsson)

* CBF: Report from LTE Break-Out Session, Session Chair (Ericsson)

### 12.1.5 Report from Break-Out session

Report from session on Rel-15 V2X WI

R2-18xxxxx Report from Break-Out Session, Session Chair (Intel)

* CBF: Report from LTE Break-Out Session, Session Chair (Intel)

## 12.2 Main session

This section contains a temporary list of comebacks (press F9 to update while the cursor is inside the list).

# 13 Outgoing LSs

Draft LSs should be submitted to their corresponding agenda item if there is one. If there is no appropriate agenda item, draft LSs, and any association discussion documents, may be submitted to this agenda item.

# 14 Any other business

# 15 Closing of the meeting (17:00)