3GPP TSG-RAN WG2 Meeting #103bis R2-18xxxxx

Chengdu, China, 8th - 12th October 2018

Source: RAN2 Chairman (Intel)

Title: Proposed Agenda

# 1 Opening of the meeting (9 AM)

## 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.

## 1.2 Network usage conditions

The PCG has laid down the following network usage conditions

|  |
| --- |
| 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

|  |
| --- |
| 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-15 CRs from Q3 2018 onwards.

Only corrections where there is a proven problem are allowed for frozen releases (Rel-8 to Rel-15).

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-81 is available in RP-18xxxx

Offline discussion during RAN2 meeting

Chairs will allocate a number for offline discussions during the meeting. Create a folder starting with this number within inbox/drafts and use this to share any documents relating to the offline discussion (please use format "[Offline-nnn] ....", i.e. a 3 digit number). Also use this number in the title of any reflector emails relating to this offline discussion. (please use format "[RAN2#103bis Offline-nnn]....."). 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 Void

# 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: LTE based V2X

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

(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

## 8.2 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

## 8.3 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

## 8.4 Other LTE Rel-14 WIs

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

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

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

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

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

(MBMS\_LTE\_enh2-Core; leading WG: RAN1; REL-14; started: Mar. 16; closed: Sep. 17; WID:RP-162231) (LTE\_SRS\_switch; leading WG: RAN1; REL-14; started: Mar.16: closed: Dec. 16; WID: RP-160935)

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

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

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

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

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

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

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

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

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

# 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; closed: Sep. 18; WID: RP-171468)

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

## 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; closed: Sep. 18: WID: RP-181746)

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

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

(LTE\_QMC\_Streaming; leading WG: RAN2; REL-15; started: Mar. 17; closed: Sep 18: WID: RP-181640)

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

## 9.7 LTE connectivity to 5G-CN

(LTE\_5GCN\_connect-Core; leading WG: RAN2; REL-15; started: Mar. 17; closed: Sep. 18: WID: RP-181680)

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

### 9.7.1 Organisational

Including incoming LSs

### 9.7.2 Aspects independent from NR/5GC

### 9.7.3 Inactive state

### 9.7.4 Access control

### 9.7.5 Other

## 9.8 Positioning Accuracy Enhancements for LTE

(LCS\_LTE\_acc\_enh-Core; leading WG: RAN2; REL-15; started: Mar. 17; closed: Sep. 18: WID: RP-181298)

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

### 9.8.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

### 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;

### 9.8.3 Support for IMU positioning

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

### 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; closed: Sep. 18: WID: RP-180561)

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

### 9.9.4 Others

## 9.10 Enhancements on LTE-based V2X Services

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

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

### 9.10.1 General

Including incoming LSs

### 9.10.2 Control plane

Including output of email discussion [103#41][LTE/V2X] Limited TX capability (LG)

### 9.10.3 User plane

Including output of email discussion [103#40][LTE/V2X] MAC CRs (LG)

Including output of email discussion [103#42][LTE/V2X] PDCP operation for duplication (OPPO)

## 9.11 High capacity stationary wireless and 1024 QAM

(LTE\_1024QAM\_DL-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Mar. 18: WID: RP-181670)

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; closed: Jun. 18: WID: RP-180402)

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; closed: Sep. 18: WID: RP-182114)

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 Enhancements to standalone Operation

### 9.13.11 PHR enhancements

### 9.13.12 Support for physical layer SR

### 9.13.13 NPRACH range

### 9.13.14 Other

E.g. UE Feedback, Measurement Accuracy Enhancements, NPRACH reliability, small cell support, Support for RLC-UM, other.

Access baring enhancement for NB-IoT is treated jointly with MTC under AI 9.14.5. Do not use this AI for any item that can be discussed jointly

## 9.14 Even further enhanced MTC for LTE

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

Time budget: 0 TU

This AI is for corrections to a WI that is complete from RAN2 point of view.

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

### 9.14.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

### 9.14.2 Early data transmission

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

### 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, dense PRS configurations etc.

## 9.15 Highly Reliable Low Latency Communication for LTE

LTE\_HRLLC-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Sep. 18: WID: RP-181259

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

### 9.15.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

### 9.15.2 Packet Duplication

### 9.15.3 Other Priority Items

Other priority items for Rel-15 as identified in RAN plenary endorsed RP-180586

### 9.15.4 Provision of Time Reference

Provision of time reference is a second priority item for Rel-15 as identified in RAN plenary endorsed RP-180586

## 9.16 UL data compression in LTE

(LTE\_UDC-Core; leading WG: RAN2; Rel-15; started Sep 17; closed: Sep 18; WID RP-180914)

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; closed: Sep. 18: WID: RP-182004)

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; closed: Sep. 18: WID:RP-181310)

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

### 9.14.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

### 9.18.2 Subscription based identification

### 9.18.3 Mobility enhancement for connected mode

### 9.18.4 Airborne status/interference detection and indication

### 9.18.5 Others

## 9.19 Bluetooth/WLAN measurement collection in MDT

(LTE\_MDT\_BT\_WLAN-Core; leading WG: RAN2; REL-15; started: Dec. 17; closed: Sep. 18: WID: RP-181743)

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

## 9.20 Increased number of E-UTRAN data bearers

(INOBEARRAN-Core ; leading WG: RAN2; REL-15; started: Dec. 17; closed: Sep. 18: WID: RP-182133)

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

## 9.21 Other LTE Rel-15 WIs

This agenda item may be corrections relating to Rel-15 WIs which had 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)

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

## 9.22 LTE TEI15 enhancements

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

This AI is for corrections to items introduced under TEI15. New proposals shoud be submitted to TEI16 when it time is allocated for it later in the release/

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

Including output of email discussion [103#43][LTE/NR] Early implementable features/CRs (DOCOMO)

# 10 WI: New Radio (NR) Access Technology

(NR\_newRAT-Core; leading WG: RAN1; REL-15; started: Mar. 17; target: Dec. 18: WID: RP-181726)

## 10.1 Organisational

Incoming LSs, status from other groups, etc.

## 10.2 Stage 2 and common UP/CP aspects

### 10.2.1 Stage 2 corrections for TS 38.300

As previously requested stage 2 description improvements should be discussed with the specification rapporteur before submission to the meeting - the aim is reduce the required discussion time in the meeting.

### 10.2.2 Stage 2 corrections for TS 37.340

Corrections to 38.300 or 37.340 for Standalone and any EN-DC related aspects added in June 18.

As previously requested stage 2 description improvements should be discussed with the specification rapporteur before submission to the meeting - the aim is reduce the required discussion time in the meeting.

### 10.2.3 Positioning

Corrections to both the stage 2 and stage 3 aspects related to positioning.

### 10.2.4 Other

Including contributions related to SA5 work on L2 measurements.

RAN#80 agreed the Rel-16 work programme. Do not submit any documents that fall within the scope of the Rel-16 WIs/SIs.

## 10.3 Stage 3 user plane

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

Essential functional corrections will be prioritized. For clarity and consistency enhancements, please pre-discuss and seek support with the TS rapporteur.

### 10.3.1 MAC

#### 10.3.1.1 MAC general aspects

Corrections related to BWP and SUL and general issues

#### 10.3.1.2 Random access

*Corrections related to random access procedure, except multi-beam aspects*

#### 10.3.1.3 Multi-beam operation

*Corrections related to multi-beam operation, beam failure detection, beam failure recovery.*

#### 10.3.1.4 PHR

Corrections related to PHR

#### 10.3.1.5 SPS and Configured Grant

Corrections related to Configured grant and SPS

#### 10.3.1.6 DRX

Corrections related to DRX

#### 10.3.1.7 MAC PDU format

Corrections related to MAC PDU and MAC CE formats, if any

#### 10.3.1.8 Other

Other corrections on topics not included in the detailed agenda items, e.g. PDCP duplication, LCP, HARQ, SR, BSR.

### 10.3.2 RLC

Corrections related to RLC

### 10.3.3 PDCP

Corrections related to PDCP

### 10.3.4 SDAP

Corrections related to SDAP

## 10.4 Stage 3 control plane

### 10.4.1 NR RRC

#### 10.4.1.1 TS

38.331 rapporteur inputs, if any.

#### 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 (early drop)

Corrections related to connection control procedures for EN-DC

###### 10.4.1.3.1.1 Corrections to L1 Parameters

Including output of email discussion [103#46][NR] Restriction on the total RRC configuration size (MediaTek)

###### 10.4.1.3.1.2 Other

##### 10.4.1.3.3 Connection establishment procedure

Access control and establishment cause are discussed in the access control agenda items 10.4.1.8.x

##### 10.4.1.3.4 Connection reconfiguration procedure

Including corrections related to handover (i.e. reconfig with sync)

##### 10.4.1.3.5 Connection re-establishment procedure

##### 10.4.1.3.6 Connection resume procedure

Including success, reject, fallback to connection establishment, and release to idle cases.

##### 10.4.1.3.7 Connection release procedure

Including release from connected to inactive and connected to inactive.

##### 10.4.1.3.8 Security procedures

Including initial security activation and counter check procedure.

##### 10.4.1.3.9 Inactive

Including aspects of inactive not addressed by the AI 10.4.1.3.6 on the resume procedure

Including the confirmation, or otherwise, of the working assumption from RAN2 NR AH1807 on behaviour of a UE in Inactive going out of service.

##### 10.4.1.3.10 Access control

##### 10.4.1.3.11 Other

Including corrections related to RLM/RLF

Including output of email discussion [103#45][NR] RLC failure information reporting (Samsung)

Including overheating for NR standalone as requested by RAN in RP-182074.

#### 10.4.1.4 RRM measurements

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

##### 10.4.1.4.1 RRM

##### 10.4.1.4.2 Measurement gaps

##### 10.4.1.4.3 Inter-RAT measurements

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

##### 10.4.1.4.4 ANR

All cases of ANR (i.e. inter-RAT ANR from E-UTRA, inter-RAT ANR from NR, and intra-RAT ANR within NR) and hence both 36.331 and 38.331 impacts should be discussed in this agenda item.

#### 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

Corrections to broadcast parameters required for idle mobility should be discussed in 10.4.5.x

##### 10.4.1.6.2 System information procedures

Corrections to SI procedures including stored SI, SI modification, SI scheduling, stored SI, etc but not including on demand SI.

##### 10.4.1.6.3 On demand system information

##### 10.4.1.6.4 System information reception in connected mode

#### 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 EN-DC

##### 10.4.1.9.2 Inter-Node RRC messages for standalone operation

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

Other RRC related corrections

### 10.4.2 LTE changes related to NR

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

#### 10.4.2.1 RRM measurements

#### 10.4.2.2 Inter-RAT Handover

Including both 36.331 and 38.331 correction of both inter-RAT HO from NR to LTE and from LTE to NR should be discussed in this AI. Idle mobility from LTE to NR should be discussed in 10.4.5.7

Including output of email discussion [103#44][NR] LTE/NR mobility capability and eLTE capability (Intel)

#### 10.4.2.3 Others

Other corrections to LTE RRC for EN-DC and SA

Including handling SCG failure with split SRB

### 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, etc

#### 10.4.4.2 UE capabilities for EN-DC

#### 10.4.4.3 UE capabilities for standalone

#### 10.4.4.4 Other

### 10.4.5 Idle/inactive mode procedures

This AI addresses the idle and inactive behaviour specified in 38.304 or 36.304. Other aspects related to inactive (e.g. state transitions or other behaviour triggered by cell reselection, out of coverage, etc) are covered under RRC agenda items (10.4.1.x)

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

#### 10.4.5.1 TS

Rapporteur inputs.

#### 10.4.5.2 Cell selection/reselection

Corrections to criteria and rules for cell selection and reselection

#### 10.4.5.3 Idle/inactive paging

Corrections to paging

#### 10.4.5.4 Idle mobility from LTE to NR

Corrections to LTE TS 36.304 on idle mobility from LTE to NR.

## 10.5 Late Drop

### 10.5.1 NG-EN DC, NE-DC and NR-NR DC common aspects

Stage 2 aspects that are common to NG-EN-DC and NE-DC. Some aspects may also be common to NR-NR DC

Including output of email discussion [103#47][NR late drop] 37.340 agreements [ZTE]

Including output of email discussion [103#50][NR late drop] MR-DC configuration in INACTIVE [Interdigital]:

Including output of email discussion [103#51][NR late drop] MR-DC security aspects [Huawei]:

Including output of email discussion [103#52][NR late drop] MR-DC measurement and gap configuration framework [CATT]:

### 10.5.2 NG-EN DC

Stage 2 aspects specific to NG-EN-DC

### 10.5.3 NE-DC

Stage 2 aspects specific to NE-DC

### 10.5.4 NR-NR-DC

Stage 2 aspects specific to NE-DC

Including output of email discussion [103#48][NR late drop] RRC details for NR-DC [Ericsson]

Including output of email discussion [103#49][NR late drop] Capability coordination for NR-DC [Nokia]:

# 11 Rel-16 NR Work Items

## 11.1 Study on Integrated Access and Backhaul for NR

(FS\_NR\_IAB; leading WG: RAN2; REL-16; started: Mar. 17; target: Dec. 18: SID: [RP-181349](file:///C:\Data\3GPP\Extracts\RP-181349_revision_of_IAB_SID.doc))

Time budget: 2 TU

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

### 11.1.1 Organisational

Including incoming LSs, draft TS, rapporteur inputs, etc

### 11.1.2 User plane aspects

Including consideration of adaptation layer, multi-hop RLC ARQ, scheduler and QoS impacts

Including output of email discussion [103#53][IAB] E2E reliability in hop-by-hop RLC ARQ (LG)

### 11.1.3 Control plane aspects

Including consideration of control plane protocol stack and control plane procedures (e.g. topology management, route management, etc)

Including output of email discussion [103#54][IAB] TP for Control Plane Transport (Ericsson)

### 11.1.4 Other

## 11.2 Study on NR-based Access to Unlicensed Spectrum

(FS\_NR\_unlic; leading WG: RAN1; REL-16; started: Mar. 17; target: Jun. 18: SID RP-181339)

Time budget: 1 TU

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

### 11.2.1 User plane

#### 11.2.1.2 MAC

MAC impacts other than RACH

#### 11.2.1.1 RACH

Including RACH 4-step, RACH 2-step

Including output of email discussion [103#55][NR-U] 2-step RACH Model and Initial Information Contents (Qualcomm)

#### 11.2.1.3 Other

User plane impacts other than MAC

### 11.2.2 Control plane

#### 11.2.2.1 Inactive and Idle mode

Impacts to 38.304: mobility, paging in idle and inactive modes, system information

#### 11.2.2.2 Connected mode and RRC

General Mobility Aspects: How to find and identify NR-U target cell(s).

Impact to 38.331: RLM/RLF, mobility in connected mode (note that mobility solutions to be covered by the NR Mobility Enh WI are not to be discussed).

Including output of email discussion [103#56][NR-U] Connected Mode Mobility (Interdigital)

#### 11.2.2.3 Other

E.g. system topics for Stand Alone, if any.

### 11.2.3 Other

Including general topics covering both CP and UP, organisational

## 11.3 Study on Self Evaluation towards IMT-2020 submission

(FS\_5G\_eval; leading WG: RAN; REL-16; started: Mar. 17; target: Jun. 19: SID: RP-171451)

This agenda item is for submission of any contributions related to the RAN2 aspects of the self-evaluation for the IMT-2020 submission.

## 11.4 Study on NR V2X

(FS\_NR\_V2X; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 19; SID: RP-182111)

Time budget: 1 TU

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

### 11.4.1 General

Including incoming LSs, work plan, rapporteur inputs, skeleton TR

### 11.4.2 Sidelink design

#### 11.4.2.1 Scenarios

Including scenarios to be considered in SI

#### 11.4.2.2 Sidelink broadcast

Including L2/3 protocol impacts (other than resource allocation aspect) for SL broadcast

#### 11.4.2.3 Sidelink unicast and groupcast

Including L2/3 protocol impacts (other than resource allocation aspect) for SL unicast and groupcast

#### 11.4.2.4 Resource allocation/configuration

Including SL resource allocation mechanism

#### 11.4.2.5 Others

### 11.4.3 Uu enhancements

Including analysis/evaluation on the need of Uu enhancement, identification of enhancements if any

### 11.4.4 RAT/Interface selection

Including RAT/interface selection mechanism

### 11.4.5 QoS management

Including solutions for QoS management of the radio interface

### 11.4.6 Others

## 11.5 Study in UE radio capability signalling

(FS\_RACS\_RAN; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 19; SID: [RP-181459](file:///C:\Data\3GPP\TSGR\TSGR_80\Docs\RP-181459.zip))

Time budget: 0.5 TU

### 11.5.1 Radio interface signalling optimisations based on using UE capability identity

Including consideration of the interaction of the proposed optimisations with the Rel-15 mechanisms

### 11.5.2 Radio interface signalling optimisations based on other means

Including optimisations based on e.g. compression, segmentation and including consideration of the interaction of the proposed optimisations with the Rel-15 mechanisms

### 11.5.3 Other

Any other aspects

## 11.6 Study on NR non-terrestrial network

(FS\_NR\_NTN\_solutions; leading WG: RAN3; REL-16; started: Jun 18; target; Jun 19; SID: RP-181598)

Time budget: 0.5 TU

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

## 11.7 Study on NR Industrial Internet of Things (IoT)

(FS\_ NR\_IIOT; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 19; SID: RP-182090)

Time budget: 0.5 TU

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

### 11.7.1 TSN

Aim at this meeting is to Attempt to reply to LS in S2-189051 (as agreed at RAN#81 in RP-182042)

### 11.7.2 Other

Contributions may be submitted on other aspects of the WI for the purpose of sharing views, but contrbutions will not be discussed at this meeting.

# 12 Rel-16 LTE Work Items

## 12.1 Additional MTC enhancements for LTE

(LTE\_eMTC5-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Dec 19; WID: RP-181878)

Time budget: 2 TU

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

Some sub-items in 12.1 and 12.2 may be treated jointly.

### 12.1.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

### 12.1.2 Mobile-terminated (MT) early data transmission (EDT)

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

### 12.1.3 UE-group wake-up signal (WUS)

UE-group wake-up signal (WUS) for MTC is treated jointly with NB-IoT under AI 12.2.3. Do not use this AI for any item that can be discussed jointly.

### 12.1.4 Transmission in preconfigured resources

Transmission in preconfigured resources for MTC is treated jointly with NB-IoT under AI 12.2.4. Do not use this AI for any item that can be discussed jointly.

### 12.1.5 Scheduling multiple DL/UL transport blocks

Scheduling multiple DL/UL transport blocks with or without DCI for SC-PTM and unicast

Scheduling multiple DL/UL transport blocks for MTC and NB-IoT is treated jointly under this AI.

### 12.1.6 Quality report in Msg3

### 12.1.7 MPDCCH performance improvement using CRS

### 12.1.8 Improvements for non-BL UEs

CE mode A and B improvements for non-BL UEs among “enhancements to idle mode mobility”, “UE demodulation performance requirements for 2 RX antennas and full duplex FDD”, “Dual layer DL reception”, “Feedback based on CSI-RS”, “ETWS/CMAS in connected mode”

### 12.1.9 Stand-alone deployment

Enable the use of LTE control channel region for DL transmission (MPDCCH/PDSCH) to BL/CE UEs

### 12.1.10 Mobility Enhancements

Improving the DL RSRP and, RSRQ measurement accuracy, through use of RSS, relaxation of RRM measurements for serving cell for UEs using WUS for at least low mobility UEs

### 12.1.11 Coexistence with NR

Study NR and LTE specifications to identify possible issues related to coexistence of MTC with NR

### 12.1.12 Other

## 12.2 Additional enhancements for NB-IoT

(NB\_IOTenh3-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Dec 19; WID: RP-1816740)

Time budget: 2 TU

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

Some sub-items in 12.1 and 12.2 may be treated jointly.

### 12.2.1 Organisational

Including incoming LSs, draft TS, rapporteur inputs, etc

### 12.2.2 Mobile-terminated (MT) early data transmission (EDT)

Mobile-terminated Early Data transmission for NB-IoT is treated jointly with MTC under AI 12.1.2. Do not use this AI for any item that can be discussed jointly.

### 12.2.3 UE-group wake-up signal (WUS)

UE group wake Up signal for MTC and NB-IoT is treated jointly under this Agenda Item.

### 12.2.4 Transmission in preconfigured resources

Including support for transmission in preconfigured resources in idle and/or connected mode based on SC-FDMA waveform for UEs with a valid timing advance.

Transmission in preconfigured resources for MTC and NB-IoT is treated jointly under this Agenda Item.

### 12.2.5 Scheduling multiple DL/UL transport blocks

Including scheduling multiple DL/UL transport blocks with or without DCI for SC-PTM and unicast

Scheduling multiple DL/UL transport blocks for NB-IoT is treated jointly with MTC under AI 12.1.5. Do not use this AI for any item that can be discussed jointly.

### 12.2.6 Network management tool enhancement

Including SON support for ANR, Random access performance and RLF report

### 12.2.7 Improved multi-carrier operation

Including support of Msg3 quality reporting for non-anchor access.

Including signalling to indicate on a non-anchor carrier for paging a set of subframes which will contain NRS even when no paging NPDCCH is transmitted.

### 12.2.8 Inter-RAT cell selection

Including power efficient NB-IoT mechanism which would assist idle mode inter-RAT cell selection for NB-IoT to and from LTE, LTE-MTC and GERAN

### 12.2.9 Coexistence with NR

Study NR and LTE specifications to identify possible issues related to coexistence of NB-IoT with NR

### 12.2.10 Other

Others

## 12.3 Even further mobility enhancement in E-UTRAN

(LTE\_feMob-Core; leading WG: RAN2; REL-16; started: Jun 18; target; Dec 19; WID: RP-181544)

Time budget: 1 TU

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

### 12.3.1 Organizational

Including incoming LSs, work plan and rapporteur inputs

### 12.3.2 Reduction in user data interruption during handover

Including analysis of current interruption and possible solutions to reduce the interruption time

### 12.3.3 Handover robustness improvements

Including analysis of handover robustness issues in Rel-15 and possible solutions to improve that

### 12.3.4 Other

# 13 Comebacks

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

## 13.1 Breakout sessions

### 13.1.1 Report from Break-Out session

Report from session on Rel-15 LTE and NR idle/inactive mobility

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

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

### 13.1.2 Report from Break-Out session

Report from session on NR UP, IAB SI, NR-U SI, NR NTN SI, NR IIoT SI

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

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

### 13.1.3 Report from Break-Out session

Report from session on NB-IoT

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

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

### 13.1.4 Report from Break-Out session

Report from session on MTC

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

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

### 13.1.5 Report from Break-Out session

Report from session on Legacy LTE and Rel-15 LTE

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

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

### 13.1.6 Report from Break-Out session

Report from session on Rel-15 Positioning WI

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

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

### 13.1.7 Report from Break-Out session

Report from session on V2X (LTE and NR)

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

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

### 13.1.8 Report from Break-Out session

Report from session on Rel-16 LTE Mobility Enhancements WI

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

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

## 13.2 Main session

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

# 14 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.

Including documents related to the response to SA2 LS on FS\_eVoLP in R2-1811032 received at RAN2#103

# 15 Any other business

# 16 Closing of the meeting (17:00)