3GPP TSG-RAN WG2 Meeting #109 R2-19xxxxx

Source: RAN2 Chairman (Mediatek)

Title: Proposed Agenda

# 1 Opening of the meeting (9 AM)

## 1.1 Call for IPR

## 1.2 Network usage conditions

## 1.3 Other

# 2 General

## 2.1 Approval of the agenda

## 2.2 Approval of the report of the previous meeting

## 2.3 Reporting from other meetings

## 2.4 Others

# 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.

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.

## 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.

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

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

## 4.4 Positioning corrections Rel-15 and earlier

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

## 4.5 Other LTE corrections Rel-15 and earlier

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

# 5 WI: New Radio (NR) Access Technology

(NR\_newRAT-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Jun. 19: WID: RP-191971)

## 5.1 Organisational

Incoming LSs, etc.

## 5.2 Stage 2

### 5.2.1 Stage 2 corrections for TS 38.300

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

### 5.2.2 Stage 2 corrections for TS 37.340

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

### 5.2.3 Positioning

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

## 5.3 Stage 3 user plane

Essential functional corrections.

### 5.3.1 MAC

### 5.3.2 RLC

### 5.3.3 PDCP

### 5.3.4 SDAP

## 5.4 Stage 3 control plane

Essential functional corrections.

### 5.4.1 NR RRC

#### 5.4.1.1 Connection control

Please submit to 5.4.1.1.x.

##### 5.4.1.1.1 Corrections to L1 Parameters

##### 5.4.1.1.2 Corrections to L2 Parameters

##### 5.4.1.1.3 Connection establishment and release

##### 5.4.1.1.4 Connection reconfiguration

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

##### 5.4.1.1.5 Connection resume and release with RRC\_INACTIVE state..

##### 5.4.1.1.6 Other

Including Security procedures, re-establishment, RRC processing delay requirements etc

#### 5.4.1.2 RRM

#### 5.4.1.3 System information

#### 5.4.1.4 Inter-Node RRC messages

### 5.4.2 LTE changes related to NR

### 5.4.3 UE capabilities

### 5.4.4 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, out of coverage, etc) are covered under RRC agenda items (5.4.1.x)

## 5.5 Late Drop

Corrections that only impact the late drop architecture options (NE-DC, NGEN-DC and NR-DC) should be submitted to 5.5.x. If a correction also impacts EN-DC and/or SA then it should be submitted to an earlier AI.

### 5.5.1 Stage 2 CRs

### 5.5.2 UE capabilities and capability coordination

### 5.5.3 Measurements and measurement coordination

### 5.5.4 Other

# 6 Rel-16 NR Work Items

## 6.0 Rel-16 Organizational

### 6.0.1 RRC

Cross WI issues. CR merge issues. Organizational. Only rapporteurs input (TS rapporteur or running CR editor) is expected.

### 6.0.2 Feature List and UE capabilities

Cross WI issues. Organizational. Only rapporteurs input (TS rapporteur or running CR editor) is expected.

### 6.0.3 Other

Other Cross WI issues, e.g. MAC issues. Only rapporteurs input (TS rapporteur or running CR editor) is expected.

## 6.1 Integrated Access and Backhaul for NR

(NR\_IAB-Core; leading WG: RAN2; REL-16; started: Dec 18; target; Mar 20; WID: RP-192188)

Time budget: 3 TU

Tdoc Limitation: 12 tdocs

### 6.1.1 Organisational

Including incoming LSs, draft TS, rapporteur inputs, etc

### 6.1.2 Stage-2 and general

Including principles and higher level aspects e.g. that involve both user plane and control plane, multi-connectivity etc.

### 6.1.3 BAP functionality

#### 6.1.3.1 Routing

#### 6.1.3.2 Bearer Mapping

#### 6.1.3.3 Flow Control

BAP based flow control

#### 6.1.3.4 Other

### 6.1.4 User plane aspects

User plane aspects not covered by BAP.

#### 6.1.4.1 Scheduling and QoS

#### 6.1.4.2 LCID extension

#### 6.1.4.3 Other

Other MAC RLC PDCP impacts if any, F1 based flow control etc

### 6.1.5 Control plane aspects

#### 6.1.5.1 RLF handling

#### 6.1.5.2 Configuration

#### 6.1.5.3 Other

## 6.2 NR-based Access to Unlicensed Spectrum

(NR\_unlic-Core; leading WG: RAN1; REL-16; started: Dec 18; target; Mar 20; WID: [RP-191575](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-191575%20Revised%20WID%20NR-U.doc); Further prioritization guidance in RP-191581). Documents in this agenda item will be handled in a break out session.

Time budget: 3 TU

Tdoc Limitation: 9 tdocs

### 6.2.1   General

Including incoming LSs, rapporteur inputs, etc.
Contributions in this AI are reserved for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.

### 6.2.2 User plane

#### 6.2.2.1 4-step RACH

Aspects of 4 step RACH procedure specific to unlicensed operation; including supporting extended RAR window, and LBT impact.

#### 6.2.2.2 Handling UL LBT failures

Including detection, recovery, and reporting a consistent UL LBT failure

#### 6.2.2.3 2-step RACH

Aspects of 2 step RACH procedure specific to unlicensed operation, e.g. considering LBT impact. Generic discussion of 2 step RACH will take place under the 2 step RACH WI.

#### 6.2.2.4 DRX

Including impact of non-numeric K1 value on DRX, active time extension, impact on DRX cycle etc.

#### 6.2.2.5 Configured grant operation

Including HARQ aspects, configuration aspects, multiple active configured grants, and conflicts between dynamic and configured grants (NR-U specific).

#### 6.2.2.6 CAPC

Including CAPC selection, impact on TB construction etc

#### 6.2.2.7 Other

Includes wideband operation aspects, HARQ, SR and PHR

### 6.2.3   Control plane

#### 6.2.3.1 Paging

Including configuration of additional PDCCH monitoring occasions for paging and termination of monitoring

#### 6.2.3.2 Mobility and RRM

Including camping and cell (re)-selection. Focus should be on idle and inactive mode mobility.  For connected mode  mobility solutions to be covered by the NR Mobility Enh WI are not to be discussed.

Note RP-191581: RRM Measurements beyond currently agreed ones have lower priority.

#### 6.2.3.3 RLM/RLF

*Depending RAN1 and RAN4 agreements*

#### 6.2.3.5 Other

Other control plane stage-3 aspects including system information. Note RP-191581: Enhancements for System Information has lower priority

## 6.4 NR V2X

(5G\_V2X\_NRSL-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Mar 20; WID: [RP-191723](file:///C%3A%5CData%5C3GPP%5CTSGR%5CTSGR_84%5Cdocs%5CRP-190984.zip)). Documents in this agenda item will be handled in a break out session

Time budget: 3 TU

Tdoc Limitation: 14 tdocs

### 6.4.1 General

Including incoming LSs, rapporteur inputs, running CRs, etc.

### 6.4.2 L2/3 protocols common to mode 1 and mode 2 resource allocation

Including L2/L3 functionalities and procedures that are applied to both mode-1 and mode-2 or independent of resource allocation modes. Note that functionalities specific to QoS support are discussed in 6.4.6.

### 6.4.3 L2/3 protocols for mode 1 resource allocation

Including control and user plane aspects in order to support mode 1 (e.g. RRC procedures, information to be sent to NW/UE, UE behaviours in CP and/or UP, etc.). Note cross-RAT mode 1 resource scheduling is discussed in 6.4.7.

### 6.4.4 L2/3 protocols for mode 2 resource allocation

Including control and user plane aspects in order to support mode 2 (e.g. RRC procedures, information to be sent to NW/UE, UE behaviours in CP and/or UP, etc.). Note cross-RAT mode 2 resource configuration is discussed in 6.4.7.

### 6.4.5 PC5 RRC procedures and information

Identification of the required PC5 RRC procedures, information to be sent to peer UE, UE behaviours, relation with the PC5-S procedures, PC5 RRC security aspects, etc.

### 6.4.6 L2/3 protocols for QoS support

Identification of the required L2/3 procedures, information to be sent NW/UE or peer UE, UE behaviours, etc.

### 6.4.7 L2/3 protocols for cross-RAT resource allocation

Including L2/3 aspects for i) NR sidelink mode 1 scheduling by LTE Uu, ii) NR sidelink mode 2 resource allocation by LTE Uu, iii) LTE sidelink mode 4 resource allocation by NR Uu, and iv) LTE sidelink mode 3 resource allocation by NR Uu

### 6.4.8 Others

Support of simultaneous configuration of mode1 and mode2 (first we need to complete design of mode1 and mode2), other working group procedures which require RAN2 discussion, etc.

## 6.5 Optimisations on UE radio capability signalling

(RACS-RAN-Core; leading WG: RAN2; REL-16; started: Mar 19; target; Mar 20; WID: [RP-191088](file:///C%3A%5CData%5C3GPP%5Carchive%5CRAN%5CRAN%2384%5CTdocs%5CRP-191088.zip)). Documents in this agenda item will be handled in a break out session

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

### 6.5.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs, etc

### 6.5.2 UE radio capability signalling using UE capability identity

Other aspects, if any, can also be covered here

### 6.5.3 Segmentation of UE radio capabilities

## 6.6 Void

## 6.7 NR Industrial Internet of Things (IoT)

(NR\_IIOT-Core; leading WG: RAN2; REL-16; started: Mar 19; target; Mar 20; WID: [RP-192324](file:///C%3A%5CData%5C3GPP%5CTSGR%5CTSGR_84%5Cdocs%5CRP-191561.zip))

Time budget: 3 TU

Tdoc Limitation: 12 tdocs

### 6.7.1 General

Rapporteur input etc.

### 6.7.2 TSC

#### 6.7.2.1 Accurate reference timing

Accurate reference timing delivery from gNB to UE using broadcast and unicast RRC signalling for synchronization requirements defined in TS 22.104

#### 6.7.2.2 Scheduling Enhancements

Enhancements to satisfy QoS for wireless Ethernet when using TSC traffic patterns and support for TSC message periodicities with non-integer multiple of NR supported CG/SPS periodicities.

##### 6.7.2.2.1 CG and SPS for TSC - General and configuration impact

Including support for TSC message periodicities with non-integer multiple of NR supported CG/SPS periodicities, configuration and ranges and limits.

##### 6.7.2.2.2 CG and SPS for TSC - L2 impacts

Including CG SPS Confirmation, LCP impact if any etc.

##### 6.7.2.2.3 Other

Including systems aspects such as TSC assistance information, other L2 impacts if any,

#### 6.7.2.3 Ethernet Header Compression

Specify Ethernet header compression based on structure-aware algorithm.

### 6.7.3 Intra-UE prioritization and multiplexing

Resource conflicts between dynamic grant (DG) and configured grant (CG) PUSCH and conflicts involving multiple CGs. UL data/control and control/control resource collision according to WID.

#### 6.7.3.1 Handling of deprioritized transmissions.

#### 6.7.3.2 Data Data prioritization with CG

#### 6.7.3.3 SR Data prioritization

#### 6.7.3.4 Other

### 6.7.4 PDCP duplication enhancements

Network Controlled duplication. PDCP duplication with up to 4 RLC entities configured by RRC. Mechanisms or enhancements relating to dynamic control of how a set or subset of configured RLC entities or legs are used for PDCP duplication, duplication activation/deactivation.

#### 6.7.4.1 Network Controlled Duplication

#### 6.7.4.2 Other

## 6.8 NR Positioning Support

(NR\_pos-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Mar 20; WID: [RP-191156](file:///C%3A%5CData%5C3GPP%5CTSGR%5CTSGR_84%5Cdocs%5CRP-191156.zip)). Documents in this agenda item will be handled in a break out session

Time budget: 1 TU

Tdoc Limitation: 6 tdocs

### 6.8.1 Organisational

Including incoming LSs, rapporteur inputs, etc

### 6.8.2 Architecture and protocol aspects

#### 6.8.2.1 Support of NR RAT-dependent positioning

#### 6.8.2.2 Support of SSR phase 2 (PPP-RTK)

#### 6.8.2.3 Broadcast assistance data

##### 6.8.2.3.1 Content and delivery of broadcast assistance data

##### 6.8.2.3.2 On-demand system information in connected mode

Note: Documents on on-demand system information in connected mode not specifically related to the positioning WI should be submitted to AI 6.21.

#### 6.8.2.4 UE-based positioning

### 6.8.3 Other

## 6.9 NR mobility enhancements

(NR\_Mob\_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 20; WID: [RP-192277](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_83%5CDocs%5CRP-190489.zip)). Documents in this agenda item will be handled in a break out session

Treated together with 7.3,

Joint 6.9 and 7.3 Time budget: 3 TU

Joint 6.9 and 7.3 Tdoc Limitation: 12 tdocs

### 6.9.1 Organisational

*Including incoming LSs, running CRs, rapporteur inputs, etc*

### 6.9.2 Reduction in user data interruption during DAPS handover

*Contributions on DAPS handovers for LTE and NR are treated jointly in under 7.3.2. Do not use this AI for any item that can be discussed jointly - This AI only addresses NR-specific topics.*

*Including details on SDAP handling during DAPS handover.*

### 6.9.3 Conditional handover and fast handover failure recovery

Contributions on conditional handover for LTE and NR are treated jointly under 6.9.3 except where otherwise noted.

No documents should be submitted to 6.9.3. Please submit to 6.9.3.x

#### 6.9.3.1 Conditional handover – configuration and execution details

*This AI jointly addresses NR and LTE.*

*Including RRC and ASN.1 details not handled in email discussions.*

*Including details of the agreement to stick to current specification on CHO command validity checking, maximum number of configured CHO target cells, details of when CHO configurations are released (e.g. at configuration change, HO command reception, state transition, security key change, re-establishment, etc.).*

#### 6.9.3.2 Conditional handover – failure handling

*This AI jointly addresses NR and LTE.*

*Including open issues and details on CHO failure handling not handled in email discussions*

#### 6.9.3.3 Conditional handover - other aspects

*This AI jointly addresses NR and LTE.*

*Aspects not addressed by the 3 previous agenda items, e.g. UE capabilities, combining DAPS HO and CHO, RRC size limitations, security key aspects, etc.*

*Including details of measurements with CHO(e.g. s-Measure applicability, removal of CHO configuration, restrictions on CHO triggering events, measurement reporting while CHO is configured etc.)*

#### 6.9.3.4 Fast handover failure recovery

This AI only addresses NR.

*Specification details of NR T312 support, including TPs for both PCell and PSCell operation. For PSCell T312, proponents should provide TPs to illustrate the needed functionality.*

#### 6.9.3.5 Conditional handover - beam specific aspects

This AI only addresses NR.

Including *discussion on beam-related aspects for CHO. New proposals should provide TPs illustrating the required Stage-3 specification changes.*

### 6.9.4 Conditional PSCell addition/change

Details of the solution, especially how to resolve the identified open issues of the email discussion, including TPs (where possible) should be provided.

## 6.10 DC and CA enhancements

(LTE\_NR\_DC\_CA\_enh-Core; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 20; WID: [RP-192336](file:///C%3A%5CData%5C3GPP%5CTSGR%5CTSGR_84%5Cdocs%5CRP-191600.zip), see also guidance in RP 192326)

Time budget: 2 TU

Tdoc Limitation: 8 tdocs

### 6.10.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc

### 6.10.2 NR-NR Dual Connectivity

### 6.10.3 Early measurement reporting

Early measurement reporting for MR-DC, NR-DC, and CA in IDLE, INACTIVE.

### 6.10.4 Efficient and low latency configuration signalling

Minimizing signalling overhead and latency needed for initial cell setup, additional cell setup and additional cell activation for data transmission. Contributions related to early measurement reporting should not be submitted in this AI.

Please submit to 6.10.4.x

#### 6.10.4.1 Direct SCell activation

Further details related to direct SCell activation by RRC upon SCell addition or after a handover. Support of MCG SCell and SCG Configuration with RRC Resume (AI 6.10.4.3) should be concluded before discussing whether direct SCell activation by RRC is applicable to RRC Resume.

#### 6.10.4.2 Fast SCell activation

Solutions for fast SCell activation including 'dormancy' like behaviour, provision of temporary RS resources at SCell activation, etc. This topic will be discussed again by RAN2 after receiving input from RAN1/4 on the feasibility and benefit of the potential solutions in response to LS [R2-1908483](file:///C%3A%5CData%5C3GPP%5CExtracts%5CR2-1908483%20-%20LS%20on%20NR%20fast%20SCell%20activation.docx) sent from RAN2#106.

#### 6.10.4.3 MCG SCell and SCG Configuration with RRC Resume

Support of CA/DC configuration with RRC resume.

#### 6.10.4.4 Other

Other enhancements not addressed in the AIs above

### 6.10.5 Fast MCG link Recovery

Further details of fast recovery of MCG link by utilizing the SCG link for recovery during MCG failure while operating under MR-DC.

### 6.10.6 Cross-Carrier scheduling with different numerologies

RAN2 aspects related to cross-carrier scheduling, to be discussed after RAN1 has made some progress.

### 6.10.7 Other

Including any RAN2 aspects related to the objectives 6, 7 and 8 (for which the WID did not identify RAN2 impact)

## 6.11 UE Power Saving in NR

(NR\_UE\_pow\_sav-Core; leading WG: RAN1; REL-16; started: Mar 19; target; Mar 20; WID: [RP-191607](file:///C%3A%5CData%5C3GPP%5CTSGR%5CTSGR_84%5Cdocs%5CRP-191607.zip), See also guidence in RP-192326). Documents in this agenda item will be handled in a break out session. NOTE: "SCell dormancy" like behaviour will be discussed in MR-DC WI.

Time budget: 1 TU

Tdoc Limitation: 4 tdocs

### 6.11.1 Organisational

Including incoming LSs, running TS, rapporteur inputs, etc

Running CRs for 38.304 and 37.340 are expected to be submitted by the rapporteurs Vivo and Oppo

NOTE: any stage 3 identified issues with MIMO configurations should be provided to 38.331 rapporteur (Mediatek)

Contributions in this AI are reserved for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.

### 6.11.2 PDCCH-based power saving signals/channel Additional stage-3 RAN2 aspects

NOTE: 3. As per plenary guidance (RP-192289), RAN2 is not expected to discuss any aspects related to whether additional UE behavior is needed when UE is also configured for receiving PDCCH based power saving signal/channel outside active time. No contributions on this topic should be submitted under power savings.

### 6.11.3 UE assistance

Stage 3 details of reportings mechanisms for a UE to 1) indicate its preference of transitioning out of RRC\_CONNECTED state 2) c-DRX and 3) SCell

### 6.11.6 RRM measurement relaxation

Contributions should focus on additional enhancements to LTE relaxed monitoring criteria that are specific to NR and whether neighbour cell RSRP should also be considered in cell-edge criterial.

Discuss type of RRM measurement relaxation by allowing measurements with longer intervals, and/or by reducing the number of cells/carriers to be measured. NOTE: this topic should be considered together with RAN4.

## SON/MDT support for NR

(NR\_SON\_MDT-Core; leading WG: RAN3; REL-16; started: Jun 19; target; Mar 20; WID: [RP-191](file:///C%3A%5CData%5C3GPP%5CTSGR%5CTSGR_84%5Cdocs%5CRP-191594.zip)776). Documents in this agenda item will be handled in a break out session

Time budget: 1 TU

Tdoc Limitation: 10 tdocs

### 6.12.1 General

Including LSs, work plan, rapporteur inputs, running TS

### 6.12.2 MDT

The procedure, signaling and corresponding measurement quantities for MDT

### 6.12.3 L2 measurements

Definition of L2 measurements in TS 38.314

### 6.12.4 SON

UE reporting necessary to enhance the network configuration for MRO, MLB and RACH optimization

### 6.12.5 Others

## 6.13 2-step RACH for NR

(NR\_2step\_RACH-Core; leading WG: RAN1; REL-16; started: Dec 18; target; Mar 20; WID: [RP-192330](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-190711%20Revised%20work%20item%20proposal%202%20step%20RACH%20for%20NR.docx)). Documents in this agenda item will be handled in a break out session

Time budget: 1 TU

Tdoc Limitation: 6 tdocs

### 6.13.1 General

Running CRs, Incoming LSs, Contributions in this AI are restricted for WI rapporteur inputs and/or spec rapporteur inputs and do not count towards the tdoc limits.

### 6.13.2 Other user plane stage-3 aspects

RA-RNTI design and open aspects of contention resolution.

### 6.13.3 RRC stage-3 related aspects

### 6.13.4 Other

CFRA for 2-step RACH for HO if time permits as per plenary guidance.

ZTE will summarize the proposals and open issues and provide possible way forward for online discussions. Companies are encouraged to work together towards a converged solution.

## 6.14 Single Radio Voice Call Continuity from 5G to 3G

(SRVCC\_NR\_to\_UMTS-Core; leading WG: RAN2; REL-16; started: Dec 18; target; Mar 20; WID: [RP-190713](file:///C%3A%5CData%5C3GPP%5Carchive%5CRAN%5CRAN%2383%5CTdocs%5CRP-190713.zip)). Documents in this agenda item will be handled in a break out session

Time budget: 0.5 TU

Tdoc Limitation: 1 tdoc

### 6.14.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc

### 6.14.2 Other

## 6.15 Cross Link Interference (CLI) handling and Remote Interference Management (RIM) for NR

(NR\_CLI\_RIM; leading WG: RAN1; REL-16; started: Dec 18; target; Dec 19; WID: [RP-191997](file:///C%3A%5CData%5C3GPP%5Carchive%5CRAN%5CRAN%2385%5CTdocs%5CRP-191997.zip)) Documents in this agenda item will be handled in a break out session.

Time budget: 0 TU

Tdoc Limitation: 1 tdoc

### 6.15.1 Organisational

Including incoming LSs, running CRs, rapporteur inputs, etc

### 6.15.2 Other

## 6.16 Enhancements on MIMO for NR

(NR\_eMIMO-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 20; WID: [RP-192271](file:///C%3A%5CData%5C3GPP%5Carchive%5CRAN%5CRAN%2385%5CTdocs%5CRP-192271.zip)). Documents in this agenda item will be handled in a break out session.

Time budget: 1 TU

Tdoc Limitation: 3 tdocs

### 6.16.1 Organisational

Including incoming LSs , rapporteur inputs, running stage 2 CRs , etc

### RRC aspects

Including output of email discussion [108#36][NR eMIMO] Running RRC CR (Ericsson)

### DL MAC CE design

DL MAC CE design for TCI states activation/deactivation (for both single-PDCCH and Multi-PDCCH mTRP operation) and for all other functionalities defined by RAN1.

Including output of email discussion [108#68][NR eMIMO] Design of DL MAC CEs (Oppo)

### 6.16.4 General beam management enhancements

Including details of BFR procedure for Scell. Other aspects, if any, can also be covered here

Including output of email discussion [108#69][NR eMIMO] Running MAC CR (Samsung)

Including output of email discussion [108#70][NR eMIMO] BFR MAC CE (Samsung)

## 6.18 Private Network Support for NG-RAN

(NG\_RAN\_PRN-Core; leading WG: RAN3; REL-16; started: Mar 19; target; Mar 20; WID: [RP-191563](file:///C%3A%5CData%5C3GPP%5Carchive%5CRAN%5CRAN%2384%5CTdocs%5CRP-191563.zip)). Documents in this agenda item will be handled in a break out session.

Time budget: 0.5 TU

Tdoc Limitation: 3 tdocs

### 6.18.1 Organisational

Including incoming LSs , rapporteur inputs, running stage 2 CRs , etc

### 6.18.2 Cell selection and reselection

Including output of email discussion [108#37][PRN] Running RRC CR (Nokia)

Including output of email discussion [108#71][PRN] Running 38.304 CR (Qualcomm)

### 6.18.3 Connected mode aspects

Connected mode specific aspects, also including CAG ID transmission related issues (e.g. inclusion of CAG ID during Resume, etc).

### 6.18.4 Other

Including HRNN (Human Readable Name) aspects and common idle and connected mode aspects (e.g. access control, etc.)

## 6.19 Other NR Rel-16 WIs/SIs

This agenda item is to be used for LSs and documents relating to Rel-16 NR but for which there is no existing RAN WI/SI (e.g. LSs from CT/SA requesting RAN2 action) or for which there is no allocated RAN2 time (e.g. some RAN4 led WIs with no RAN2 time but might require introduction of UE capability signalling).

Time budget: 0.5 TU

## 6.20 NR TEI16 enhancements

Small Technical Enhancements to NR. TEI should be predominantly within a single WG and fully completed within the same quarter in all affected WGs. RAN2 impact of RAN1/4-led TEI shall be limited to RRC signalling of configuration parameters and UE capabilities (no MAC impact, no RRC procedural impact, etc). Please also see [RP-191602](file:///C%3A%5CData%5C3GPP%5CTSGR%5CTSGR_84%5Cdocs%5CRP-191602.zip) endorsed at RAN#84. Please submit to 6.20.x.

NOTE that proponent companies are responsible to ensure that correct CRs are provided in all groups for proposals that have impact in >1 working group.

Time budget: 1 TU

Tdoc Limitation: No Limitation for Operators, 6 tdocs for others. NOTE for TEI, the tdoc limitation applies to new proposals, not to open proposals since previous meeting(s)

### 6.20.1 RAN2 led TEI16 enhancements - Control plane related

#### 6.20.1.0 In-principle-agreed CRs

CRs in-principle agreed at previous meeting(s) need to be submitted at this meeting. They need to be updated to be based on the lastest version of the specification.

#### 6.20.1.1 Open / ongoing proposals

#### 6.20.1.3 New proposals

### 6.20.2 RAN2 led TEI16 enhancements - User plane related

#### 6.20.1.0 In-principle-agreed CRs

CRs in-principle agreed at previous meeting(s) need to be submitted at this meeting. They need to be updated to be based on the lastest version of the specification.

#### 6.20.1.1 Open / ongoing proposals

#### 6.20.1.3 New proposals

### 6.20.3 TEI16 enhancements led by other WGs

Documents submitted to this agenda item will only be treated after a decision on the TEI has been made by another group and an LS informing RAN2 of their decision has been received. Tdoc limitation does not apply.

#### 6.20.1.0 In-principle-agreed CRs

CRs in-principle agreed at previous meeting(s) need to be submitted at this meeting. They need to be updated to be based on the lastest version of the specification.

#### 6.20.1.1 Open / ongoing proposals

## 6.21 On demand SI in connected

On demand SI reception in RRC\_CONNECTED may be relevant to several Rel-16 WIs (e.g. V2X, positioning, IIoT, etc). This agenda item is for the discussion of the generic procedure for on demand SI in RRC\_CONNECTED; WI specific details of the SI content should be discussed within the appropriate AI for that WI.

Tdoc Limitation: 1 tdoc

## 6.22 Physical layer enhancements for NR ultra-reliable and low latency case (URLLC)

(NR\_L1enh\_URLLC-Core; leading WG: RAN1; REL-16; target; Mar 20; WID: [RP-1915](file:///C%3A%5CData%5C3GPP%5CTSGR%5CTSGR_84%5Cdocs%5CRP-191563.zip)84). Treated together with IIOT, AI 6.7. UL intra-UE prioritization and enhanced UL CG transmission should be discussed and addressed under RAN2 IIOT WI (do not submit under this AI), while the other objectives should be discussed under RAN2 eURLLC WI. This AI.

Time budget: 1 TU, will be treated together with IIOT.

Tdoc Limitation: 3 tdocs (for AI 6.22, or for 6.7 in addition to the tdoc limitation listed for 6.7)

### 6.22.1 Organizational

Running CRs etc

### 6.22.2 Control Plane

### 6.22.3 User Plane

# 7 Rel-16 LTE Work Items

Documents in these agenda items will be handled in break out sessions

## 7.1 Additional MTC enhancements for LTE

(LTE\_eMTC5-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 20; WID: [RP-191356](file:///C%3A%5CData%5C3GPP%5CTSGR%5CTSGR_84%5Cdocs%5CRP-191356.zip))

Time budget: 2.5 TU

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

Some sub-items in 7.1 and 7.2 may be treated jointly.

### 7.1.1 Organisational

Including incoming LSs, rapporteur inputs, running CRs

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

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

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

UE-group wake-up signal (WUS) for MTC is treated jointly with NB-IoT under AI 7.2.3. Do not use this AI for any item that can be discussed jointly.

### 7.1.4 Transmission in preconfigured resources

Transmission in preconfigured resources for MTC is treated jointly with NB-IoT under AI 7.2.4. Do not use this AI for any item that can be discussed jointly.

### 7.1.5 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.

### 7.1.6 Quality report in Msg3

### 7.1.7 MPDCCH performance improvement using CRS

### 7.1.8 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”

### 7.1.9 Stand-alone deployment

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

### 7.1.10 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

### 7.1.11 Coexistence with NR

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

### 7.1.12 Connection to 5GC (eDRX, EDT, UP optimisation, RRC\_INACTIVE and other MTC specific topics)

Support of eDRX in CM-IDLE, UP optimisation, and EDT for MTC and NB-IoT are treated jointly under this AI.

### 7.1.13 Other

## 7.2 Additional enhancements for NB-IoT

(NB\_IOTenh3-Core; leading WG: RAN1; REL-16; started: Jun 18; target; Mar 20; WID: RP-192313)

Time budget: 2.5 TU

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

Some sub-items in 7.1 and 7.2 may be treated jointly.

### 7.2.1 Organisational

Including incoming LSs, draft TS, rapporteur inputs, etc

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

Mobile-terminated Early Data transmission for NB-IoT is treated jointly with MTC under AI 7.1.2. Do not use this AI for any item that can be discussed jointly.

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

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

### 7.2.4 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.

### 7.2.5 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 7.1.5. Do not use this AI for any item that can be discussed jointly.

### 7.2.6 Network management tool enhancement

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

### 7.2.7 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.

### 7.2.8 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

### 7.2.9 Coexistence with NR

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

### 7.2.10 Connection to 5GC (Other common aspects, NB-IoT specific aspects)

Common aspects for MTC and NB-IoT not listed in 7.1.12 are treated jointly under this AI.

### 7.2.11 UE specific DRX

Specify support of UE specific DRX and consider expanding the current DRX range

### 7.2.12 Other

Others

## 7.3 Even further mobility enhancement in E-UTRAN

(LTE\_feMob-Core; leading WG: RAN2; REL-16; started: Jun 18; target; Mar 20; WID: [RP-190921](file:///C%3A%5CData%5C3GPP%5CTSGR%5CTSGR_84%5Cdocs%5CRP-190921.zip))

Tdoc Limitation: see 6.9 above.

### 7.3.1 Organizational

Including incoming LSs, running CR proposals and rapporteur inputs (if any)

Note that the running Stage-2 CR was endorsed as outcome of email discussion [108#XX][LTE MobE] Updated Stage-2 running CR LTE mobility (China Telecom) in [R2-191xxxx](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_107bis%5CR2-191xxxx.zip).

Note that the running Stage-2 CR was endorsed as outcome of email discussion [108#XX][LTE MobE] Updated RRC running CR for LTE mobility (Ericsson) in [R2-191xxxx](file:///C%3A%5CUsers%5Cterhentt%5CDocuments%5CTdocs%5CRAN2%5CRAN2_107bis%5CR2-191xxxx.zip).

### 7.3.2 Reduction in user data interruption for dual active protocol stack (DAPS) handover

DAPS handovers for LTE and NR are treated jointly in under this AI.

No documents should be submitted to 7.3.2. Please submit to 7.3.2.x.

#### 7.3.2.1 User plane aspects of DAPS HO

No documents should be submitted to 7.3.2.1. Please submit to 7.3.2.1.x.

##### 7.3.2.1.1 PDCP/RLC aspects of DAPS HO

DAPS impacts to PDCP/RLC for LTE and NR are treated jointly under this AI. SDAP-specific aspects should be submitted to 6.9.2. Including bearer handling, data forwarding, exact PDCP impacts, handling of RoHC, RLC impacts (including TPs with details on the WA for RLC UM support)

##### 7.3.2.1.2 MAC and UL transmission aspects of DAPS HO

*Note: Handling the FFS on Msg.B details to be done when the 2-step RACH has progressed more.*

#### 7.3.2.2 Control plane aspects of DAPS HO

*No documents should be submitted to 7.3.2.2. Please submit to 7.3.2.2.x.*

##### 7.3.2.2.1 RRC procedures during DAPS HO

*Including any remaining RRC configuration and procedural details, e.g. SRB handling, failure handling details, source cell configuration during DAPS HO (e.g. 1 or 2 messages), impacts of WA on per DRB DAPS configuration.*

##### 7.3.2.2.2 UE capabilities for DAPS HO

*Companies should provide their views to the email discussion and contributions submitted to this agenda items should focus on aspects that were not covered by the email.*

#### 7.3.2.3 Other aspects of DAPS HO

*Including any other open aspects of DAPS HO not covered by the other agenda items (for both LTE and NR).*

### 7.3.3 Conditional handover

*Contributions on conditional handover for LTE and NR are treated jointly in under 6.9.3. Do not use this AI for any item that can be discussed jointly.*

## 7.4 Further performance enhancement for LTE in high speed scenario

(LTE\_high\_speed\_enh2-Core; leading WG: RAN4; REL-16; started: Jun 18; target; Sep 19; WID: RP-181482)

Time budget: 0 TU. Final CR agreements.

## 7.5 Other LTE Rel-16 WIs

This agenda item is to be used for LSs and 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) or for which there is no allocated RAN2 time.

Including discussion on enhancements for Rel-15 QMC functionality as per discussion in RAN2#107bis

## 7.6 LTE TEI16 enhancements

Small Technical Enhancements to LTE. TEI should be predominantly within a single WG and fully completed within the same quarter in all affected WGs. RAN2 impact of RAN1/4-led TEI shall be limited to RRC signalling of configuration parameters and UE capabilities (no MAC impact, no RRC procedural impact, etc). Please also see RP-191602 endorsed at RAN#84.

Time budget: 1 TU

### 7.6.0 In-principle-agreed CRs

CRs in-principle agreed at previous meeting(s) need to be submitted at this meeting. They need to be updated to be based on the lastest version of the specification.

### 7.6.1 Other

## 7.7 Support of Indian Navigation Satellite System (NavIC)

(LCS\_NAVIC; leading WG: RAN2; REL-16; started: Sept 19; target; March-20; WID: RP-192350)

Time budget: 0 TU Final agreement of CRs is expected

## 7.8 DL MIMO efficiency enhancements for LTE

(LTE\_DL\_MIMO\_EE-Core; leading WG: RAN1; REL-16;target; March-20; WID: RP-182901)

Time budget: 0.5 TU

## 7.9 LTE-based 5G Terrestrial Broadcast

(LTE\_terr\_bcast-Core; leading WG: RAN1; REL-16; target; March-20; WID: RP-182924)

Time budget: 0.5 TU.

# Breakout session reports

No documents shall be submitted to this AI or its sub-AIs. It is only for at-meeting-generated contents.

### 8.8.1 Report from session on LTE legacy, LTE TEI16 and NR/LTE Rel-16 Mobility

### 8.8.2 Report from session on SRVCC, CLI, PRN, eMIMO, RACS

### 8.8.3 Report from session on eMTC

### 8.8.4 Report from session on NR-U, Power Savings, NTN and 2-step RACH

### 8.8.5 Report from session on Rel-15 and 16 LTE and NR positioning

### 8.8.6 Report from session on SON/MDT

### 8.8.7 Report from session on NB-IoT

### 8.8.8 Report from session on LTE V2X and NR V2X

# Appendix - Additional Guidance

This subclause is not an Agenda Item. Including WI codes for Agenda Items with multiple WIs.

# EUTRA corrections Rel-15 and earlier

## NB-IoT corrections Rel-15 and earlier

Includes NB-IoT corrections, related to the following WIs:

(NB\_IOT-Core; leading WG: RAN1; REL-13; started: Sep. 15; target: Jun. 16; WID: [RP-152284](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-152284.docx))

(NB\_IOTenh-Core; leading WG: RAN1; REL-14; started: June 16; closed: Jun. 17; WID: [RP-171060](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-171060.doc))

(NB\_IOTenh2-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Sep. 18: WID: [RP-182114](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_81%5CDocs%5CRP-182114.zip))

## eMTC corrections Rel-15 and earlier

Includes MTC, eMTC and Coverage Enhancement corrections, related to the following WIs:

(LC\_MTC\_LTE-Core, leading WG: RAN1, REL-12, started: Jun 13, closed: Dec 14, WID: [RP-140522](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-140522.doc))

(Cov\_Enh\_LTE-Core, leading WG: RAN1, REL-12, started: Jun.13, closed: Jun.14, WID: [RP-130833](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_60%5CDocs%5CRP-130833.zip))

(MTCe\_RAN-Core, leading WG: RAN2, REL-12, started: Dec.13, closed: Sep.14, WID: [RP-132053](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_62%5CDocs%5CRP-132053.zip))

(LTE\_MTCe2\_L1-Core, leading WG: RAN1, REL-13; started: Sep. 14, closed: Mar. 16, WID: [RP-150492](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-150492.doc))

(LTE\_feMTC-Core; leading WG: RAN1; REL-14; started: June 16; closed: Jun. 17; WID: [RP-170532](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-170532%20Revised%20WID%20for%20Further%20Enhanced%20MTC.doc))

(LTE\_eMTC4-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Dec. 18: WID: [RP-172811](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-172811%20Revised%20WID%20on%20Even%20further%20enhanced%20MTC%20for%20LTE.doc))

## V2X and Sidelink corrections Rel-15 and earlier

Includes V2X, D2D and Sidelink corrections, related to the following WIs:

(LTE\_D2D\_Prox-Core, leading WG: RAN1, REL-12, started: Mar.14, closed: Mar.15, WID: [RP-142043](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-142043%20LTE%20Device%20to%20Device%20Proximity%20Services%20-%20Work%20Item.doc))

(LTE\_eD2D\_Prox-Core, leading WG: RAN2, REL-13; started: Dec. 14, closed: Mar. 16, WID: [RP-150441](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-150441%20Revised%20WID%20Enhanced%20LTE%20Device%20to%20Device%20Proximity%20Services.doc))

(LTE\_SL\_V2V-Core; leading WG: RAN1; started: Dec. 15; closed: Sept 16; WID: [RP-161603](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_73%5CDocs%5CRP-161603.zip))

(LTE\_V2X-Core, leading WG: RAN1; REL-14; started: June 16; closed: Mar. 17; WID: [RP-162519](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_74%5CDocs%5CRP-162519.zip))

(LTE\_eV2X-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Sep. 18: WID: [RP-171740](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-171740%20Revision%20of%20V2X%20phase%202%20WID.doc))

## Positioning corrections Rel-15 and earlier

Includes positioning corrections, e.g. related to the following WIs:

(UTRA\_LTE\_iPos\_enh-Core; leading WG: RAN2; REL-13; started: Sep. 15; closed: Dec 15; WID: [RP-152251](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-152251%20%28revision%20of%20RP-152008%29%20Revised%20work%20item%20proposal%20Positioning%20enhancements%20for%20UTRA%20and%20LTE.doc))

(UTRA\_LTE\_iPos\_enh2-Core; leading WG: RAN2; REL-14; started: Mar. 16; closed: Dec. 16; WID: [RP-162026](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-162026_Revised%20Work%20Item_Further%20Indoor%20Positioning%20enhancements.doc))

(LCS\_LTE\_acc\_enh-Core; leading WG: RAN2; REL-15; started: Mar. 17; closed: Sep. 18: WID: [RP-181298](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-181298%20Update%20of%20WI%20in%20RP-172313.doc))

## Other LTE corrections Rel-15 and earlier

Includes corrections to the following WIs:

LTE WIs Rel-14 and earlier:

(LTE-L23, leading WG: RAN2, REL-8, started: Sep. 06, closed: Dec. 08, WID: [RP-080747](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-080747%20Revised%20LTE%20WID.doc))

(LTE\_CA-Core, leading WG: RAN1, REL-10, started: Dec. 09, closed: June 11, WID: [RP-100661](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_48%5CDocs%5CRP-100661.zip))

(LTE\_UL\_MIMO-Core, leading WG: RAN1, REL-10, started: Dec.09, closed: June 11, WID: [RP-100959](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_49%5CDocs%5CRP-100959.zip))

(LTE\_eDL\_MIMO-Core, leading WG: RAN1, REL-10, started: Dec.09, closed: March 11, WID: [RP-100196](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_47%5CDocs%5CRP-100196.zip))

(LTE\_Relay-Core, leading WG: RAN1, REL-10, started: Dec. 09, closed: June 11, WID: [RP-110911](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_52%5CDocs%5CRP-110911.zip))

(MBMS\_LTE\_enh-Core, leading WG: RAN2, REL-10, started: June 10, closed: March 11, WID: [RP-101244](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_50%5CDocs%5CRP-101244.zip))

(MDT\_UMTSLTE-Core, leading WG: RAN2, REL-10, started: Dec. 09, closed: June 11, WID: [RP-100360](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-100360.doc))

(eICIC\_LTE-Core, leading WG: RAN1, REL-10, started: March 10, closed: June 11, WID: [RP-100383](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_47%5CDocs%5CRP-100383.zip))

(SONenh\_LTE-Core, leading WG: RAN3, REL-10, started: March 10, closed: June 11, WID: [RP-101004](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_49%5CDocs%5CRP-101004.zip))

(LTE\_CA\_enh-Core, leading WG: RAN1, REL-11, started: March 11, closed: Mar.13, WID: [RP-121999](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_58%5CDocs%5CRP-121999.zip))

(MBMS\_LTE\_SC-Core, leading WG: RAN2, REL-11, started: June 10, closed: Sep.12, WID: [RP-120258](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_55%5CDocs%5CRP-120258.zip))

(LTE\_eDDA-Core, leading WG: RAN2, REL-11, started: March 11, closed: Dec.12, WID: [RP-120256](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_55%5CDocs%5CRP-120256.zip))

(LCS\_LTE-NBPS-Core, leading WG: RAN2, REL-11, started: March 09, closed: June. 13, WID: [RP-131259](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_61%5CDocs%5CRP-131259.zip))

(eICIC\_enh\_LTE-Core, leading WG: RAN1, REL-11, started: March 11, closed: Dec. 12, WID: [RP-120860](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_56%5CDocs%5CRP-120860.zip))

(SPIA\_IDC\_LTE-Core, leading WG: RAN2, REL-11, started: Sep.11, closed: Dec. 12, WID: [RP-111355](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_53%5CDocs%5CRP-111355.zip))

(COMP\_LTE\_DL-Core, leading WG: RAN1, REL-11, started: Sep.11, closed: Dec.12, WID: [RP-111365](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_53%5CDocs%5CRP-111365.zip))

(COMP\_LTE\_UL-Core, leading WG: RAN1, REL-11, started: Sep.11, closed: Dec.12, WID: [RP-111365](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_53%5CDocs%5CRP-111365.zip))

(LTE\_TDD\_add\_subframe, leading WG: RAN1, REL-11, started: March 12; closed: Sep. 12, WID: [RP-120384](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_55%5CDocs%5CRP-120384.zip))

(FS\_HetNet\_eMOB\_LTE, leading WG: RAN2, REL-11, started: March 11, closed: Sep. 12, WID: [RP-110709](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-110709.doc))

(LTE\_enh\_dl\_ctrl-Core, leading WG: RAN1, REL-11, started: Dec. 11, closed: Dec. 12, WID: [RP-120871](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_56%5CDocs%5CRP-120871.zip))

(LTE\_SC\_enh\_dualC-Core, leading WG: RAN2, REL-12, started: Dec.13, closed: Dec.14, WID: [RP-141797](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_66%5CDocs%5CRP-141797.zip))

(LTE\_SC\_enh\_L1-Core, leading WG: RAN1, REL-12, started: Dec.13, closed: Dec.14, WID: [RP-132073](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_62%5CDocs%5CRP-132073.zip))

(MBMS\_LTE\_OS-Core, leading WG: RAN2, REL-12, started: Sep.13, closed: Dec.14, WID: [RP-140282](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-140282_RevWID_MBMS_MDT.doc))

(LTE\_NAICS-Core, leading WG: RAN1, Rel-12, started: Mar 14, closed: Dec.14, WID: [RP-140519](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-140519.doc))

(GCSE\_LTE-MBMS\_CM-Core, leading WG: RAN3, started: Sep. 14, closed: Mar. 2015, WID: [RP-141035](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-141035.doc))

(LTE\_CA\_TDD\_FDD-Core, leading WG: RAN1, REL-12, started: Jun 13, closed: Jun 14, WID: [RP-140465](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-140465%20Revised%20WID%20TDD-FDD%20joint%20operation%20including%20CA.doc))

(LCS\_BDS-LTE-Core, leading WG: RAN2, REL-12, started: Mar 13, closed: Dec 13, WID: [RP-130416](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_59%5CDocs%5CRP-130416.zip))

(LTE\_eDL\_MIMO\_enh-Core, leading WG: RAN1, REL-12, started: Sep 12, closed: June 14, WID: [RP-121416](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_57%5CDocs%5CRP-121416.zip))

(HetNet\_eMOB\_LTE-Core, leading WG: RAN2, REL-12, started: Dec.12, , closed: Sep 14, WID: [RP-122007](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_58%5CDocs%5CRP-122007.zip))

(LTE\_TDD\_eIMTA-Core, leading WG: RAN1, REL-12, started: Dec 12, closed: Jun.14, WID: [RP-121772](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_58%5CDocs%5CRP-121772.zip))

(SCM\_LTE-Core, leading WG: RAN2, REL-12, started: Mar.14, closed: Sep.14, WID: [RP-140434](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-140434_SCM%20WID.doc))

(LTE\_LAA-Core, leading WG: RAN1, REL-13; started: June 15, closed: Dec. 15, WID: [RP-151045](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-151045.doc))

(LTE\_CA\_enh\_b5C-Core, leading WG: RAN1, REL-13; started: Dec. 14, closed: Dec. 15, WID: [RP-151984](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-151984.doc))

(LTE\_SC\_PTM-Core, leading WG: RAN2, REL-13; started: June 15, closed: Dec. 15, WID: [RP-151110](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-151110%20New%20WI%20proposal%20on%20SC-PTM%20v3.doc))

(LTE\_MC\_load-Core, leading WG: RAN2, started: Mar. 15, closed: Dec. 15, WID: [RP-152181](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-152181%20Revised%20WI%20Multicarrier%20Load%20Distribution%20of%20UEs%20in%20LTE.doc))

(LTE\_dualC\_enh-Core, leading WG: RAN2, started: Mar. 15, closed: Dec. 15, WID: [RP-151739](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_70%5CDocs%5CRP-151739.zip))

(LTE\_extDRX-Core; leading WG: RAN2; started: Mar. 15; closed: Mar. 16; WID: [RP-150493](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-150493-WID_Extended-DRX.doc))

(LTE\_EBF\_FDMIMO-Core; leading WG: RAN1; started: June. 15; closed: Dec. 15; WID: [RP-151085](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-151085%20WID_EBF_FD-MIMO.doc))

(LTE\_eMDT2-Core; leading WG: RAN2; started: Sep. 15; closed: Dec 15; WID: [RP-151611](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-151611.docx))

(LTE\_WLAN\_radio-Core, leading WG: RAN2, started: Mar. 15, closed: Mar. 16, WID: [RP-152213](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-152213%20Revised-LTE-WIFI-WI-RAN-70-v2.doc))

(LTE\_WLAN\_radio\_legacy-Core; leading WG: RAN2; started: Sep. 15; closed: Mar 15; WID: [RP-151615](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_69%5CDocs%5CRP-151615.zip))

(LTE\_eLAA-Core; leading WG: RAN1; REL-14; started: Dec. 15; closed: Mar. 17; WID:[RP-162229](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_74%5CDocs%5CRP-162229.zip))

(LTE\_WLAN\_aggr-Core; leading WG: RAN2; REL-14; started: Mar. 16; closed: Mar. 17; WID: [RP-160923](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-160923%20eLWA-WID.doc))

(LTE\_eMob-Core; leading WG: RAN2; REL-14; started: Mar. 16; closed: Mar. 17; WID:[RP-162503](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-162503%20Revised%20WID%20Mobility%20enhancements%20for%20LTE.docx))

(LTE\_LATRED\_L2-Core; leading WG: RAN2; REL-14; started: Mar. 16; closed: Sep. 16; WID: [RP-160667](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-160667%20L2%20New%20WID%20for%20L2%20latency%20reduction%20techniques%20for%20LTE.doc))

(MBMS\_LTE\_enh2-Core; leading WG: RAN1; REL-14; started: Mar. 16; closed: Sep. 17; WID:[RP-162231](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-162231%20updated%20WID%20eMBMS%20enhancements%20for%20LTE.doc)) (LTE\_SRS\_switch; leading WG: RAN1; REL-14; started: Mar.16: closed: Dec. 16; WID: [RP-160935](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-160935%20WI%20on%20SRS%20carrier%20switching.doc))

(LTE\_meas\_gap\_enh-Core; leading WG: RAN4; REL-14; started: Mar. 16; closed: Jun. 17; WID: [RP-160912](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-160912.doc))

(LTE\_high\_speed-Core; leading WG: RAN4; REL-14; started: Dec. 15. 16; closed: Dec. 16; WID: [RP-160172](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_71%5CDocs%5CRP-160172.zip))

(LTE\_VoLTE\_ViLTE\_enh; leading WG: RAN2; REL-14; started: Sep. 16; closed: Mar. 17: WID: [RP-161856](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_73%5CDocs%5CRP-161856.zip))

(LTE\_UE\_cat\_1Rx-Core; leading WG: RAN4; REL-14; started: Sep. 16; closed: Jun. 17: WID: [RP-171149](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_76%5CDocs%5CRP-171149.zip))

(LTE\_UL\_CAP\_enh-Core; leading WG: RAN1; REL-14; started: Mar. 16; closed: Mar. 17: WID: [RP-162488](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-162488%20WID.doc))

(LTE\_eFDMIMO-Core; leading WG: RAN1; REL-14; started: Mar. 2016; closed: Mar. 17: WID: [RP-160623](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-160623%20WID_eFD-MIMO.doc))

(LTE\_MUST-Core; leading WG: RAN1; REL-14; started: Mar. 16; closed: Dec. 16: WID: [RP-161019](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_72%5CDocs%5CRP-161019.zip))

(eDECOR-UTRA\_LTE-Core; leading WG: RAN3; REL-14; started: Dec. 16; closed: Mar. 17: WID: [RP-162543](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_74%5CDocs%5CRP-162543.zip))

Joint UMTS/LTE WIs Rel-14 and earlier:

(SIMTC-RAN\_OC-Core, leading WG: RAN2, REL-11, started: Sep.11, closed: Sep. 12, WID: [RP-111373](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_53%5CDocs%5CRP-111373.zip))

(eMDT\_UMTSLTE-Core, leading WG: RAN2, REL-11, started: Sep.11, closed: Dec.12, WID: [RP-121204](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_57%5CDocs%5CRP-121204.zip))

(SONenh2\_LTE\_UTRA-Core, leading WG: RAN3, REL-11, started: Sep.11, closed: Dec.12, WID: [RP-120314](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_55%5CDocs%5CRP-120314.zip))

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

(EHNB\_enh3-Core, leading WG: RAN3, REL-12, started: Sep.12, closed: Dec 13, WID: [RP-130741](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_60%5CDocs%5CRP-130741.zip))

(UTRA\_LTE\_WLAN\_interw-Core, leading WG: RAN2, REL-12, started: Dec.13, closed: Sep.14, WID: [RP-132101](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_62%5CDocs%5CRP-132101.zip))

(LTE\_UTRA\_IncMon-Core, leading: RAN4, REL-12, started: Dec.13, closed: Dec. 14, WID: [RP-132061](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_62%5CDocs%5CRP-132061.zip))

(ACDC-RAN-Core; leading WG: RAN2; REL-13; started: Mar. 15; closed: Dec. 15; [RP-150662](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-150662%20RAN%20ACDC%20WID%20Rev.doc))

LTE Rel-15:

(LTE\_STTIandPT-core; leading WG: RAN1; REL-15; started: June 16; closed: Sep. 18; WID: [RP-171468](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_76%5CDocs%5CRP-171468.zip))

(LTE\_ViLTE\_enh2-Core; leading WG: RAN2; REL-15; started: Mar. 17; closed: Sep. 18: WID: [RP-181746](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_81%5CDocs%5CRP-181746.zip))

(LTE\_QMC\_Streaming; leading WG: RAN2; REL-15; started: Mar. 17; closed: Sep 18: WID: [RP-181640](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_81%5CDocs%5CRP-181640.zip))

(LTE\_5GCN\_connect-Core; leading WG: RAN2; REL-15; started: Mar. 17; closed: Sep. 18: WID: [RP-181680](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-181680%20Revision%20of%20WID%20LTE-5GC.doc))

(LTE\_euCA-Core; leading WG: RAN2; REL-15; started: Mar. 17; closed: Sep. 18: WID: [RP-180561](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_79%5CDocs%5CRP-180561.zip))

(LTE\_1024QAM\_DL-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Mar. 18: WID: [RP-181670](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-181670%20Revised%20WI%20-%20LTE_HCS_RAN%2381.doc))

(LTE\_unlic-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Jun. 18: WID: [RP-180402](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_79%5CDocs%5CRP-180402.zip))

(LTE\_HRLLC-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Sep. 18: WID: [RP-181259](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_80%5CDocs%5CRP-181259.zip))

(LTE\_UDC-Core; leading WG: RAN2; Rel-15; started Sep 17; closed: Sep 18; WID [RP-180914](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-180914-revised%20WID_on%20UDC.doc))

(feCOMP\_LTE-Core; leading WG: RAN1; REL-15; started: Mar. 17; closed: Sep. 18: WID: [RP-182004](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_81%5CDocs%5CRP-182004.zip))

(LTE\_Aerial-Core;leading WG: RAN2; REL-15; started: Dec. 17; closed: Sep. 18: WID:[RP-181310](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_80%5CDocs%5CRP-181310.zip))

(LTE\_MDT\_BT\_WLAN-Core; leading WG: RAN2; REL-15; started: Dec. 17; closed: Sep. 18: WID: [RP-181743](file:///C%3A%5CData%5C3GPP%5Carchive%5CTSGR%5CTSGR_81%5CDocs%5CRP-181743.zip))

(INOBEARRAN-Core ; leading WG: RAN2; REL-15; started: Dec. 17; closed: Sep. 18: WID: [RP-182133](file:///C%3A%5CData%5C3GPP%5CExtracts%5CRP-182133_INOBEARRAN_WID_v05.doc))