3GPP TSG-RAN WG2 Meeting #119 electronic DRAFT\_R2-2208707

Online, August, 2022

Source: Session chair (Huawei)

Title: Report from MBS breakout session

Agenda Item: 9.7

# Email discussions

Kicked-off together with a meeting start:

* [AT119-e][600] Organizational - MBS session

Scope:

* + - Share plans and list of ongoing email discussions for MBS sessions
		- Share meetings notes and agreements for review and endorsement
* [AT119-e][601][MBS-R17] RRC corrections (Huawei)

Phase 1 scope: Gather comments on the RRC corrections summary

Phase 1 outcome: Updated RRC corrections summary:

* List of ‘easy’ proposals for agreement
* List of proposals that require online discussions
* List of proposals for further offline discussion

Deadline (Phase 1): Thursday 2022-08-18 0800 UTC, updated summary to be uploaded latest 1215 UTC

* [AT119-e][602][MBS-R17] CP other corrections (Mediatek)

Phase 1 scope: Gather comments on the Other CP corrections summary

Phase 1 outcome: Updated Other CP corrections summary:

* List of ‘easy’ proposals for agreement
* List of proposals that require online discussions
* List of proposals for further offline discussion

Deadline (Phase 1): Thursday 2022-08-18 0800 UTC, updated summary to be uploaded latest 1215 UTC

* [AT119-e][603][MBS-R17] UP corrections (Lenovo)

Phase 1 scope: Gather comments on the UP corrections summary

Phase 1 outcome: Updated Other CP corrections summary:

* List of ‘easy’ proposals for agreement
* List of proposals that require online discussions
* List of proposals for further offline discussion

Deadline (Phase 1): Thursday 2022-08-18 0800 UTC, updated summary to be uploaded latest 1215 UTC

Update 18 August 2022:

* [AT119-e][601][MBS-R17] RRC corrections (Huawei)

Phase 2 scope: Resolve remaining RRC issues, produce 38.331 CR

Phase 2 outcome: Report, 38.331 MBS corrections CR

Deadline (Phase 2): Report available: 2022-08-24 1200 UTC, agreeable CR: EOM

* [AT119-e][602][MBS-R17] CP other corrections (Mediatek)

Phase 2 scope: Resolve remaining Other CP issues

Phase 2 outcome: Report

Deadline (Phase 2): Report available: 2022-08-24 1200 UTC

* [AT119-e][603][MBS-R17] UP corrections (Lenovo)

Phase 2 scope: Resolve remaining UP issues

Phase 2 outcome: Report

Deadline (Phase 2): Report available: 2022-08-24 1200 UTC

* [AT119-e][604][MBS-R17] Stage-2 corrections and CR (CMCC)

Scope: Review the baseline Stage-2 CR and treat Stage-2 corrections from 6.1.1

Outcome: Report (if needed), 38.300 MBS corrections CR

Deadline: Agreeable CR available EOM, intermediate deadlines set by the rapporteur

* [AT119-e][605][MBS-R17] Reply LS to SA4 (Qualcomm)

Scope: Discuss the reply to SA4 LS in R2-2206977, i.e. what is needed in Rel-17, clarify what is not relevant in NR, can mention that we might consider additional info for Rel-18.

Outcome: Reply LS

Deadline: Agreeable LS available EOM

* [AT119-e][606][MBS-R17] 38.304 CR (CATT)

Scope: Review baseline 38.304 CR and update based on the agreements

Outcome: 38.304 MBS corrections CR

Deadline: Agreeable CR available EOM

* [AT119-e][607][MBS-R17] Capabilities CRs (Mediatek)

Scope: Prepare draft CRs for MBS capabilities based on the agreements

Outcome: Draft 38.331 and 38.306 CRs for MBS capabilities

Deadline: Agreeable CRs available EOM

* [AT119-e][608][MBS-R17] 38.321 CR (OPPO)

Scope: Prepare 38.321 CR based on the agreements

Outcome: 38.321 MBS corrections CR

Deadline: Agreeable CR available EOM

* [AT119-e][609][MBS-R17] 38.323 CR (Xiaomi)

Scope: Review baseline 38.304 CR and update based on the agreements

Outcome: 38.323 MBS corrections CR

Deadline: Agreeable CR available EOM

## 2.4 Instructions

Tdoc limitations (reminder)

Tdoc limitations doesn’t apply to Rapporteur Input, i.e.

- Assigned summary rapporteur input of the summary.

- Email / offline discussions outcomes by discussion rapporteur,

- WI rapporteurs input for WI planning etc,

- TS rapporteur input for TS maintenance

- Assigned Editor of Running CRs input to update the running CR and input of one tdoc to facilitate addressing of CR open issues.

- Contact Company of a LSin that triggers RAN2 action may submit one tdoc to facilitate the LS reply. This only applies to one of the contact companies in case there are several (default the first).

Tdoc limitations doesn’t apply to Input created at the meeting, revisions, assigned documents etc.

Tdoc limitations doesn’t apply to shadow / mirror CRs (Cat A).

Tdoc limitations applies to all other submitted tdocs.

Rel-18

For R2 119-e, no offline decision making for Rel-18, only online decisions. Any exception to this must be pre-agreed.

Rel-17 CR

General, all correction CRs / draft CRs:

1. Rapporteurs of Rel-17 WI CRs are asked to continue their volunteer responsibility, even if the WI is closed, at least for the durations of R2 119-e (later meetings TBD).
2. Unless otherwise explicitly agreed/indicated, max one Cat F CR per TS per WI shall be produced as outcome of the meeting. Exception: NBC aspects, if any, may need to be in a separate CR per WI (decided case by case). Note that Impact analysis is required per CR.
3. For smaller / editorial corrections, Companies are asked to coordinate directly with Rapporteurs of Rel-17 WI CRs, rather than submitting separate correction tdocs.
4. General: Please refer to TS contents, in order to illustrate issues and wanted corrections. Proposals that are vague and unspecific may be deprioritized / not treated.

Rel-17 UE capabilities

For R2 119-e, the intention is to finalize UE capabilities for Rel-17

There is no specific coordination for EUTRA UE capabilities.

For NR UE capabilities the following applies:

1: As previously, work on mega CRs (one mega CR for TS 38.306 and one for TS 38.331). This work is done under Agenda Item AI 6.0.2

2: Coordinate centrally incorporation in CRs of RAN1 / RAN4 features for all Rel17 WIs. This work is done under Agenda Item AI 6.0.2 and changes are done directly to the mega CRs. There could be exceptions, case by case, where RAN1 / RAN4 features are treated under a WI-specific Agenda Item instead.

3: RAN2 should only implement in the CRs the features / feature groups from the RAN1 and RAN4 feature list without any FFS that impacts ASN.1 (no highlighted yellow, [] and/or marked as FFS/TBD). Also UE Capabilities that are dependent on such FFS features should not be implemented.

4: R2 Features and capabilities developed only in R2, are developed and corrected individually per WI, under WI-specific Agenda Items. Draft CRs (running CRs) for 38.331 and 38.306 are produced. The 306 CRs shall include an annex containing the RAN2 determined UE capabilities in the feature list format (similar to annex containing RAN2 agreements) for easy compilation into the TR38.822 in the later stage.

5. At the end of R2 119-e, endorsed WI specific UE capability CRs will be merged into the mega CRs, and the mega CRs will be provided to TSG RAN. Any exception to this need to be decided case by case.

[R2-2206902](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2206902.doc) RAN2 Handbook 08-22 MCC discussion Late

# 6 NR Rel-17

## 6.1 NR Multicast

(NR\_MBS-Core; leading WG: RAN2; REL-17; WID: RP-201038)

Tdoc Limitation: 5 tdocs

It is encouraged to contribute with draft CRs or provide TP(s) for the affected specifications in the Annex of the contribution to facilitate the inclusion in the rapporteur CR.

### 6.1.1 Organizational and Stage-2

LS ins. CR Rapporteurs baseline correction CRs. For smaller corrections, text clarifications etc please contact CR Rapporteur before/instead of submitting a separate Tdoc.

Impact to stage-2 TS, and discussions on system level issues that need resolution, if any.

*LSins*

[R2-2206910](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2206910_R1-2205215.docx) Reply LS on HARQ process for MCCH and Broadcast MTCH(s) (R1-2205215; contact: BBC) RAN1 LS in Rel-17 NR\_MBS To:RAN2

* Noted (already discussed in [603])

[R2-2206912](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2206912_R1-2205369.docx) LS on TCI indication in multicast DCI (R1-2205369; contact: CMCC) RAN1 LS in Rel-17 NR\_MBS To:RAN2

* Noted (to be checked whether there is any impact on RRC specs, as part of [601])

[R2-2206977](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2206977_S4-220827.docx) Reply LS on the MBS broadcast service continuity and MBS session identification (S4-220827; contact: Qualcomm) SA4 LS in Rel-17 NR\_MBS-Core, 5MBP3 To:RAN2 Cc:RAN3, SA2

* CATT thinks SA4 did not confirm the question that RAN2 actually asked (Q1 in RAN2 LS). Xiaomi thinks SA4 specs already captures what RAN2 asked for. Samsung indicates SA4 refers to parameters which are not relevant for NR, so we can indicate this to them. Ericsson thinks some signalling can help. ZTE agrees with intention from SA4 to include additional parameters, but agree with Samsung that this may not be relevant in NR any more. ZTE suggests to leave this for R18 MBS. Huawei shares view with ZTE. QCM thinks we need to add at least frequency.
* Noted
* Discuss offline the reply to SA4 LS, i.e. what is needed in Rel-17, clarify what is not relevant in NR, can mention that we might consider additional info for Rel-18.
* We will reply to this LS. [offline QCM]

[R2-2207038](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207038%20Response%20to%20SA4%20LS%20for%20MBS%20user%20service%20parameters.docx) Response to SA4 LS for MBS user service parameters Samsung discussion Rel-17

[R2-2208635](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208635%20Discussion%20about%20SA4%20LS%20on%20USD%20content%20with%20draft%20LS%20back.doc) Discussion about SA4 LS on USD content with draft LS back ZTE, Sanechips discussion Rel-17 NR\_MBS-Core

* 2 papers above noted

*Rapporteur correction CRs*

[R2-2207590](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207590%20Rapporteur%20corrections%20on%20RRC.docx) Rapporteur corrections on RRC Huawei, CATT, HiSilicon CR Rel-17 38.331 17.1.0 3289 - F NR\_MBS-Core

[R2-2207813](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5C38323_CR0098_%28Rel-17%29_R2-2207813%20Miscellaneous%20corrections%20for%20MBS%2038.323.docx) Miscellaneous corrections for MBS 38.323 Xiaomi CR Rel-17 38.323 17.1.0 0098 - F NR\_MBS-Core

[R2-2208437](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208437%20Corrections%20on%20MBS.docx) Corrections on MBS CMCC, Huaiwei CR Rel-17 38.300 17.1.0 0540 - F NR\_MBS-Core

[R2-2207036](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207036%2038.304%20Corrections%20for%20MBS.docx) 38.304 Corrections for MBS CATT, Nokia, Huawei, HiSilicon, CBN CR Rel-17 38.304 17.1.0 0256 - F NR\_MBS-Core

*(moved from 6.1.3)*

* Take the above rapporteur CRs as baseline for further updates and discussion

*Stage-2 corrections*

[R2-2207031](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207031%20Miscellaneous%20corrections%20to%20TS%2038.300%20on%20NR%20MBS.docx) Miscellaneous corrections to TS 38.300 on NR MBS CATT CR Rel-17 38.300 17.1.0 0493 - F NR\_MBS-Core

[R2-2207222](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207222_CR0503_38300_Correction%20on%20MBS%20Interest%20Indication.docx) Correction on MBS Interest Indication vivo CR Rel-17 38.300 17.1.0 0503 - F NR\_MBS-Core

[R2-2207223](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207223_CR0504_38300_Correction%20on%20Layer%202%20Architecture%20for%20Broadcast.docx) Correction on Layer 2 Architecture for Broadcast vivo CR Rel-17 38.300 17.1.0 0504 - F NR\_MBS-Core

[R2-2208086](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208086%20Clarification%20of%20group%20paging.docx) Clarification of group paging Ericsson discussion Rel-17 NR\_MBS-Core

[R2-2208181](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208181%20CR%20MBS%20Stage2.docx) Stage2 corrections for NR MBS Nokia, Nokia Shanghai Bell CR Rel-17 38.300 17.1.0 0530 - F NR\_MBS-Core

### 6.1.2 RRC corrections

[R2-2208871](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208871%20%5BPre119%5D%5B601%5D%5BMBS-R17%5D%20Summary%20of%20A.I.%206.1.2%20%20RRC%20corrections%20%28Huawei%29.docx) Summary of A.I. 6.1.2 / RRC corrections (Huawei) Huawei, HiSilicon

DISCUSSION

* Intel has a concern on Easy07. Huawei think this makes specs clearer. CATT clarifies the UE can read MCCH from SCell or PCell, so it is better to make a clarification. Intel thinks there is no ambiguity. Nokia is OK with Easy07 and in general to clarify things.
* Easy08, Easy09: Huawei clarifies that PropModify means agree in principle, but the text needs to be refined.
* Adopt the corrections marked as PropAgree and PropModify, and merge them into the rapporteur RRC CR (i.e., Easy01, 03-04, 07-10, 12, 15-16, 17, 19). For PropModify, the intention is agreed, but the text needs to be modified per comments.
* Not pursue the issues/corrections marked as PropReject (i.e., Easy02, 05-06, 11, 13-14, 18).
* Discuss CTVS14 in [603] [MBS-R17] UP corrections:

CTVS14: The correction related to changing the condition “*SetupOnlyMRB*” for the resence of “*multicastHFN-AndRefSN-r17*”.

* Continue offline discussion on the issues/corrections marked as TBD. (i.e., CTVS01-13)

*Papers below treated as part of [AT119-e][601]*

[R2-2207032](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207032%20Corrections%20related%20to%20MBS%20Interest%20Indication.docx) Corrections related to MBS Interest Indication CATT CR Rel-17 38.331 17.1.0 3208 - F NR\_MBS-Core

[R2-2207033](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207033%20Corrections%20on%20Broadcast%20Configuration.docx) Corrections on Broadcast Configuration CATT, CBN CR Rel-17 38.331 17.1.0 3209 - F NR\_MBS-Core

[R2-2207034](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207034%20Corrections%20on%20multicast%20MRB%20handling.docx) Corrections on multicast MRB handling CATT CR Rel-17 38.331 17.1.0 3210 - F NR\_MBS-Core

[R2-2207035](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207035%20Miscellaneous%20Corrections%20to%20TS%2038.331.docx) Miscellaneous Corrections to TS 38.331 CATT CR Rel-17 38.331 17.1.0 3211 - F NR\_MBS-Core

[R2-2207039](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207039%20RRC%20Corrections%20for%20MBS.docx) RRC Corrections for MBS Samsung discussion Rel-17 38.331

[R2-2207225](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207225%20Clarification%20on%20LCH%20Reassociation.docx) Clarification on LCH Reassociation vivo discussion Rel-17 NR\_MBS-Core

[R2-2207555](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207555%20Draft%20CR%20%2038.331%20TMGI%20handling%20in%20paging%20%281%29.docx) TMGI handling Nokia, Nokia Shanghai Bell CR Rel-17 38.331 17.1.0 3287 - F NR\_MBS-Core

[R2-2207591](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207591%20Clarfication%20on%20the%20early%20configuration%20of%20%20MBS%20broadcast%20search%20space.docx) Clarfication on the early configuration of MBS broadcast search space Huawei, CBN, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2207592](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207592%20Discussion%20on%20coding%20of%20TMGI%20in%20MII.docx) Discussion on decoding of the TMGI in MII Huawei, CBN, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2208084](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208084%20Broadcast%20sessions%20with%20the%20same%20MRB%20configuration.docx) Broadcast sessions with the same MRB configuration Ericsson discussion Rel-17 NR\_MBS-Core

*(moved from 6.1.3)*

R2-2208088 MII signalling when SIB21 is absent Ericsson discussion Rel-17 NR\_MBS-Core

[R2-2208095](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208095.docx) Multicast-specific PUCCH-Config when multicast feedback is not configured with a priority value Qualcomm Incorporated CR Rel-17 38.331 17.1.0 3354 - F NR\_MBS-Core

[R2-2208589](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208589%20MBS%20Counter%20Check%20Procedure.docx) Counter Check Procedure for Multicast Samsung discussion Rel-17 NR\_MBS-Core

[R2-2208639](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208639%20Miscellaneous%20CR%20to%20TS%2038.331%20on%20NR%20MBS.docx) Miscellaneous CR to TS 38.331 on NR MBS ZTE, Sanechips CR Rel-17 38.331 17.1.0 3457 - F NR\_MBS-Core

### 6.1.3 Other CP corrections

Including corrections to TS 38.304, features / UE caps developed in RAN2 (complementary to AI 6.0.2).

[R2-2208872](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208872%20%5BPre119-e%5D%5B602%5D%5BMBS-R17%5DSummary%20of%20AI%206.1.3%20Other%20CP%20Corrections%20%28MediaTek%29.docx) Summary of Rel-17 MBS 6.1.3 Other CP corrections MediaTek Inc.

DISCUSSION P1-1:

* Rapporteur clarifies that according to RAN1 this should be changed to 8, but we can restrict in specifications.
* Restrict the configuration of the value of maxG-RNTI-r17 as 8 (previously it is assumed to be 16).

DISCUSSION P1-4:

* For MBS broadcast, the maximum number of ROHC context sessions is set to 4, which is also the number of mandatory capability for MBS broadcast UEs.

DISCUSSION P1-2:

* Rapporteur clarifies that according to offline discussion it would be better to separate these parameters into two. Nokia asks whether then it means that maximum number of RNTIs would be still 16? Mediatek clarifies this is for UE capability reporting, so the UE reports what it supports. Intel clarifies in RAN1 specs this is already separated, so for RAN2 this is just a signalling discussion. QCM agrees to split into two parameters with 8 as a value each. Huawei thinks that we can make it separate assuming this is done already in RAN1 specs.
* Replace IE maxNumberRNTIs-MBS-r17 by two separate IEs maxNumberG-RNTIs-r17 and maxNumberG-CS-RNTIs-r17 and set the values to 8. (This is NBC change but may be ok for UE capability)

DISCUSSION P1-3:

* Rapporteur clarifies some companies thought this should be discussed in RAN1. Xiaomi clarifies that we used to have to have two separate capabilities for partial and full overlapping cases. Xiaomi thinks this can be discussed in RAN2. vivo thinks that partial overlapping for TDM case can be handled by FDM capability. Huawei thinks this should be discussed in RAN1 and proponent should raise this in RAN1. Nokia, vivo, Samsung, CATT agrees. Nokia thinks this is not a simple scenario.
* Confirm the discussion on simultaneous PDSCH processing capability should be taken in RAN1, if needed.

DISCUSSION P1-6:

* QCM thinks according to RANP, RedCap can work with Rel-17, but whether changes are needed can be discussed. ZTE asks whether we should now analyse RedCap support for MBS. CATT thinks that acc to RANP there should be no spec effort for RedCap in Rel-17. Nokia agrees with CATT. Ericsson believes that it would be good to consider some additional cases to make it work better (or address the cases where the service cannot be received). Mediatek thinks there is no technical discussion in RANP and that we can make sure it works for RedCap UE. Huawei thinks we can discuss if we identify an essential issue, i.e. it does not work. Huawei does not think issues raised by Ericsson are essential.
* Discuss further offline on the issue raised in papers for this meeting for RedCap and MBS, e.g. whether they are essential.

*Papers below treated as part of [AT119-e][602]*

[R2-2207224](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207224%20Clarification%20on%20Group%20Paging%20for%20Inactive%20UE.docx) Clarification on Group Paging for Inactive UE vivo discussion Rel-17 NR\_MBS-Core

[R2-2207554](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207554%20CR%20to%2038.304%20%20Clarification%20to%20MBS%20prioritization%20with%20slice%20based%20reselection%20%281%29.docx) MBS prioritization with slice based reselection Nokia, Nokia Shanghai Bell CR Rel-17 38.304 17.1.0 0264 - F NR\_MBS-Core

*(moved from 6.1.2)*

[R2-2207562](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207562%20Discussion%20on%20the%20maximum%20G-RNTI%20for%20MBS.docx) Discussion on the maximum G-RNTI for MBS MediaTek inc. discussion Rel-17 NR\_MBS-Core

[R2-2207563](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207563%20Discussion%20and%20correction%20on%20UE%20capabilities%20for%20MBS.docx) Discussion and correction on UE capabilities for MBS MediaTek inc. discussion Rel-17 NR\_MBS-Core

[R2-2207564](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207564%20Corrections%20on%20the%20maximum%20G-RNTI%20for%20MBS.docx) Corrections on the maximum G-RNTI for MBS MediaTek inc. draftCR Rel-17 38.331 17.1.0 F NR\_MBS-Core

[R2-2207811](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207811%20Simultaneous%20PDSCH%20processing%20capability%20for%20MBS.docx) Simultaneous PDSCH processing capability for MBS Xiaomi discussion Rel-17 NR\_MBS-Core R2-2206114

[R2-2207814](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207814%20Correction%20on%20the%20G-RNTI%20and%20G-CS-RNTI%20configuration.docx) Correction on the G-RNTI and G-CS-RNTI configuration Xiaomi draftCR Rel-17 38.331 17.1.0 F NR\_MBS-Core

[R2-2208085](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208085%20Clarification%20of%20frequency%20prioritization%20for%20MBS%20broadcast.docx) Clarification of frequency prioritization for MBS broadcast Ericsson discussion Rel-17 NR\_MBS-Core

[R2-2208087](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208087%20MBS%20and%20RedCap.docx) MBS and RedCap Ericsson discussion Rel-17 NR\_MBS-Core

[R2-2208500](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208500.docx) Remaining MBS UE capability open issues Intel Corporation discussion Rel-17 NR\_MBS-Core

[R2-2208636](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208636%20On%20supported%20max%20number%20of%20G-RNTI%20on%20for%20MBS%20broadcast.doc) On supported max number of G-RNTI for MBS broadcast ZTE, Sanechips discussion Rel-17 NR\_MBS-Core

### 6.1.4 MAC corrections

[R2-2208873](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208873%20Summary%20of%20A.I.%206.1.4%20and%206.1.5%20%20UP%20corrections%20%28Lenovo%29.docx) Summary of A.I. 6.1.4 and 6.1.5 / UP corrections (Lenovo) Lenovo

DISCUSSION on P1, P5:

* Clarify Active Time for MBS multicast related to non-complete PDCCH monitoring [1].
* When describing the conditions of multicast DRX Active Time in CSI report, use“/” between conditions. [7]

DISCUSSION on P11, P13:

* Nokia thinks P13 is not needed and can be left to the UE without a note. Samsung, CATT agree with Nokia. QCM supports having a note. Xiaomi thinks it is useful for implementation people.
* RAN2 agrees that procedural texts on DL dynamic assignment related to NDI handling are not only for C-RNTI/Temporary C-RNTI/CS-RNTI but also for G-RNTI/G-CS-RNTI. [1][7]
* P13 is not agreed (the note stays as it was already)

DISCUSSION on P18, P19:

* ZTE thinks there is no need to change the name as it impacts multiple specs. Lenovo thinks RAN3 is also discussing to change the name and this is an omission from last meeting.
* multicastHFN-AndRefSN is renamed to initialRXDELIV and update the corresponding description to ‘Indicates an initial value of RX\_DELIV for multicast MRB PDCP window initialization as specified in TS 38.323 [5].’. [8] [9] [12]
* Add to section 16.10 (e.g. 16.10.5.3.2) in TS 38.300 a sentence saying: “For MRBs, PDCP can either be re-established or remain as it is.” [8]

*Papers below treated as part of [AT119-e][603]*

[R2-2207046](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207046%20MAC%20Corrections%20for%20MBS.docx) MAC Corrections for MBS Samsung discussion Rel-17 38.321

[R2-2207226](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207226_CR1310_38321_Clarification%20on%20pdsch-AggregationFactor%20in%20NR%20MBS.docx) Clarification on pdsch-AggregationFactor in NR MBS vivo CR Rel-17 38.321 17.1.0 1310 - F NR\_MBS-Core

[R2-2207470](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207470%2038.321%20CR%20Correction%20on%20the%20HARQ%20buffer%20flush%20for%20the%20MBS%20broadcast.docx) 38.321 CR Correction on the HARQ buffer flush for the MBS broadcast Beijing Xiaomi Software Tech draftCR Rel-17 38.321 17.1.0 F NR\_MBS-Core

[R2-2207593](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207593%20Clarification%20on%20retransmission%20and%20RTT%20timer%20maintenance.docx) Clarification on retransmission and RTT timer maintenance Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2207594](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207594%20Further%20consideration%20on%20inactivity%20timers%20for%20unicast%20and%20multicast.docx) Further consideration on inactivity timers for unicast and multicast Huawei, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2207812](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207812%20HARQ%20process%20for%20MCCH%20and%20Broadcast%20MTCH%28s%29.docx) HARQ process for MCCH and Broadcast MTCH(s) Xiaomi draftCR Rel-17 38.321 17.1.0 F NR\_MBS-Core

[R2-2208637](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208637%20Miscellaneous%20CR%20to%20TS%2038.321%20on%20NR%20MBS.docx) Miscellaneous CR to TS 38.321 on NR MBS ZTE, Sanechips CR Rel-17 38.321 17.1.0 1395 - F NR\_MBS-Core

### 6.1.5 Other UP Corrections

Including corrections to PDCP, RLC and SDAP.

*Papers below treated as part of [AT119-e][603]*

[R2-2207370](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207370%20MBS%20PDCP%20related%20corrections.docx) PDCP related corrections for MBS Nokia, Nokia Shanghai Bell discussion Rel-17 NR\_MBS-Core

[R2-2207565](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207565%20PDCP%20corrections%20for%20MBS.docx) PDCP corrections for MBS MediaTek inc. discussion Rel-17 NR\_MBS-Core

[R2-2207595](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207595%20PDCP%20state%20variables%20handling%20during%20multicast%20MRB%20suspend.docx) PDCP state variables handling during multicast MRB suspend Huawei, Xiaomi, CBN, HiSilicon discussion Rel-17 NR\_MBS-Core

[R2-2207692](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207692%20correction%20on%20HFN%20and%20SN.docx) Misalignment between RRC and PDCP specs regarding multicastHFN-AndRefSN Lenovo discussion Rel-17

[R2-2208590](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208590%20MBS%20Initial%20RX_DELIV.docx) Correction for Initial value of RX\_DELIV for Multicast Samsung discussion Rel-17 NR\_MBS-Core

[R2-2208638](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208638%20Miscellaneous%20CR%20to%20TS%2038.323%20on%20NR%20MBS.docx) Miscellaneous CR to TS 38.323 on NR MBS ZTE, Sanechips CR Rel-17 38.323 17.1.0 0099 - F NR\_MBS-Core

# 8 Rel-18

## 8.11 Enhancements of NR Multicast and Broadcast Services

(NR\_MBS\_enh-Core; leading WG: RAN2; REL-18; WID: RP-221458)

Time budget: 0.5 TU

Tdoc Limitation: 2 tdocs

### 8.11.1 Organizational

LS in, rapporteur input etc.

[R2-2206965](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2206965_S2-2203020.doc) UE capabilities for MBS (S2-2203020; contact: Qualcomm) SA2 LS in Rel-18 FS\_5MBS\_Ph2 To:RAN1 Cc:RAN, RAN2, RAN3

* Noted

[R2-2206973](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2206973_RP-221861.docx) Reply LS on UE capabilities for MBS (RP-221861; contact: Qualcomm) RAN LS in Rel-18 FS\_5MBS\_Ph2 To:SA2 Cc:RAN1, RAN2, RAN3

* Noted

[R2-2207770](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207770.docx) Rel-18 NR MBS enhancement workplan CATT Work Plan Rel-18 NR\_MBS\_enh-Core

* Noted

### 8.11.2 Multicast reception in RRC\_INACTIVE

Specify support of multicast reception by UEs in RRC\_INACTIVE state [RAN2, RAN3], PTM configuration for UEs receiving multicast in RRC\_INACTIVE state [RAN2]. Study the impact of mobility and state transition for UEs receiving multicast in RRC\_INACTIVE. (Seamless/lossless mobility is not required) [RAN2, RAN3]

*General assumptions, scenarios*

[R2-2207771](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207771.docx) Discussion on multicast reception in RRC\_INACTIVE CATT, CBN discussion Rel-18 NR\_MBS\_enh-Core

* In Rel-18, multicast reception for UEs in INACTIVE supports at least the following scenarios, with the assumption that the UE already has a valid PTM configuration:

- Scenario 1: a UE has been receiving multicast in CONNECTED, and it enters INACTIVE and continues the multicast reception.

- Scenario 2: a UE has joined a multicast session and has been directed to INACTIVE, the UE starts to receive the multicast session

**FFS for state changes, e.g. due to service being not provided in INACTIVE anymore etc.**

* P2: It is up to gNB to decide whether a multicast session may be received by UE(s) in INACTIVE. FFS what information gNB may be provided to form such decision (related to SA2 discussion).
* P3: It is supported that gNB transmit one multicast session to both UEs in CONNECTED and INACTIVE in the same cell. FFS how the gNB configures this.
* It is assumed the network can choose which UEs receive in RRC INACTIVE and which in RRC Connected and can move UEs between the states for Multicast service reception.

DISCUSSION P1:

* QCM asks if in scenario 2 we assume the UE already has a configuration? CATT confirms. Vivo wonders whether we can assume to have a unified solution for both S1 and S2. Ericsson we need to consider security concerns when providing MC config via MCCH, for dedicated configuration the concern is with updating the configuration when the UE is INACTIVE. OPPO is worried that S2 excludes dedicated configuration. CATT clarifies this is not an intention. Samsung indicates that we need to assume that the UE already has a valid configuration. OPPO asks for S1 what happens in case the session is deactivated in the meantime. ZTE thinks we need to focus on scenarios, not solutions for now. Mediatek think we can agree the initial config needs to be provided in RRC Connected.

DISCUSSION P2-3:

* QCM would like to capture that the network can selectively move UEs between the states for Multicast service reception. Ericsson agrees and indicates RAN should be in control of this. Apple thinks we need some clarification on UE behaviour. Thinks feature should be enabled per UE. OPPO think only low QoS services can be provided in INACTIVE.
* The following is taken as baseline: we assume the same PDCCH/PDSCH resources (e.g. resources used for MTCH) can be used for all UEs (including UEs in CONNECTED and/or INACTIVE states) for receiving the same multicast session. Different configuration/resources are not precluded as well. FFS what exactly can be common and what not (e.g. HARQ, SPS etc.) and what is needed in addition (to legacy PTM config).

DISCUSSION P4:

* Vivo asks whether we allow different resource to be used for Connected and for Inactive? Nokia thinks this makes sense but is not necessary, i.e. separate resources should be possible. ZTE would like to clarify we mean radio resources. Vivo would like to remove “(i.e. resources used for MTCH)”. Apple thinks there are some things we cannot reuse. OPPO indicates there might be also configurations that are needed for INACTIVE in particular.

*PTM configuration for RRC\_INACTIVE*

[R2-2208441](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208441%20Initial%20consideration%20on%20multicast%20reception%20in%20RRC_INACTIVE.docx) Initial consideration on multicast reception in RRC\_INACTIVE CMCC discussion Rel-18 NR\_MBS\_enh-Core

* P3: For PTM configuration delivery, RAN2 further investigates the following solutions:

Option 1: Dedicated signalling

Option 2: Solution based on SIB+MCCH

We do not preclude some “mix” of the options

DISCUSSION P3:

* Xiaomi thinks there is a security concern for O2 and O3 and we may need to discuss with SA3. OPPO has similar concern and prefer O1. OPPO wonders about the difference between O2 and MBS broadcast. QCM has similar questions. Samsung, QCM prefer O1. vivo would like to exclude O3. Huawei, Intel do not see security concerns. Samsung thinks O1 is simplest, does not think there will be frequent configuration changes. Does not think O3 is needed. TD Tech asks whether MCCH in O2 is configured per session or commonly for all sessions. Xiaomi MCCH configuration for the INACTIVE UE will be combined with the dedicated configuration provided in CONNECTED. If a fake gNB provides the MCCH configuration, the connection of the CONNECTED UE will fail. This is different from the Rel-17 broadcast mode.
* P5: HARQ feedback and PTP are not supported for multicast reception in RRC\_INACTIVE.

DISCUSSION P5:

* Mediatek thinks PTP is not supported, but wonders whether we can have an enhancement for HARQ. LG thinks we can reuse HARQ from Connected mode and would not like exclude this. CATT thinks HARQ was discussed in RAN plenary and was excluded due to no RAN1 Tus.

*Mobility support*

[R2-2208096](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208096-multicast-rrc-inactive.docx) Multicast reception by UEs in RRC\_INACTIVE state Qualcomm Incorporated discussion Rel-18 NR\_MBS\_enh-Core

Proposal 1. Multicast service continuity after cell reselection in RRC\_INACTIVE state (i.e. without resuming RRC connection) will be supported.

Proposal 4. Upon cell reselection to neighbour cells within the RNA during active multicast session, if MRB configuration of reselected cell is not provided for RRC\_INACTIVE state, then the UE is required to resume RRC connection to get the Multicast MRB configuration.

* P1: Multicast service continuity after cell reselection in RRC\_INACTIVE state (i.e. without resuming RRC connection) will be supported (if the configuration of the new cell is available for the UE). FFS whether there are cases where the UE needs to resume the connection. FFS RAN3 impacts due to inter-gNB mobility.
* P4: Upon cell reselection to neighbour cells during active multicast session, if the configuration of the session is not available for the new cell for UEs in INACTIVE, then the UE is required to resume RRC connection to get the Multicast MRB configuration.

DISCUSSION P1/P4:

* TD Tech supports both. Ericsson would like to have an option of using RRC resume, e.g. based on the threshold. We need to consider the network awareness of UEs receiving MC in INACTIVE. Samsung, OPPO support P1/P4. Ericsson thinks service continuity is left up to RAN3. CATT clarifies mobility will be discussed in both RAN2 and RAN3 (as per each WG’s expertise/area). Huawei would like to clarify fir P4, that it is configuration of the session which is not provided. LG thinks P4 is misleading and suggests to clarify that configuration is “not available”.

*State transitions and notifications*

[R2-2207699](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207699%20Mobility%20and%20state%20transition.docx) Mobility and state transition for multicast reception in RRC\_INACTIVE Lenovo discussion Rel-18

Proposal 4 NW can indicate that UE stays in RRC\_INACTIVE or enters RRC\_CONNECTED for receiving a multicast Session in paging message.

[R2-2208093](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208093%20MBS%20multicast%20reception%20in%20RRC_INACTIVE.docx) MBS multicast reception in RRC\_INACTIVE Ericsson discussion Rel-18 NR\_MBS\_enh-Core

Working assumption 12: When the UE receives multicast data in RRC\_INACTIVE the multicast session state can change (configured, active or inactive).

Proposal 4: The gNB uses RRCRelease with suspendConfig to enable the UE to receive multicast in RRC\_INACTIVE.

[R2-2207588](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207588%20Multicast%20reception%20in%20RRC_INACTIVE.docx) Multicast reception in RRC\_INACTIVE Huawei, HiSilicon discussion Rel-18 NR\_MBS\_enh-Core

Proposal 5: Reuse the existing RRC release message to transit the UE to RRC INACTIVE state for multicast service receiving.

Proposal 6a: Reuse legacy group paging to trigger UE to resume from RRC\_INACTIVE state to RRC CONNECTED state in case the network intends to stop providing multicast service for RRC INACTIVE UEs.

[R2-2206987](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2206987%20Discussion%20on%20supporting%20group%20scheduling%20for%20RRC_INACTIVE%20UEs_clean.docx) Discussion on supporting group scheduling for RRC\_INACTIVE UEs FGI discussion

[R2-2206988](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2206988.docx) Multicast reception in RRC\_INACTIVE state TD Tech Ltd discussion Rel-18

[R2-2206997](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2206997%20Discussion%20on%20multicast%20reception%20in%20RRC_INACTIVE%20state.doc) Discussion on multicast reception in RRC\_INACTIVE state OPPO discussion Rel-18 NR\_MBS\_enh

[R2-2207047](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207047%20Considerations%20for%20Multicast%20Reception%20in%20RRC_INACTIVE.docx) Considerations for Multicast Reception in RRC\_INACTIVE Samsung discussion Rel-18

[R2-2207191](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207191.doc) Discussion on RAN based Notification Area for Multicast Mobility in RRC Inactive State TCL Communication Ltd. discussion Rel-18

[R2-2207204](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207204%20Overview%20considerations%20on%20multicast%20in%20RRC_INACTIVE.docx) Overview considerations on Multicast reception in RRC\_INACTIVE NEC Europe Ltd discussion Rel-18 NR\_MBS\_enh-Core

[R2-2207227](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207227%20Supporting%20Multicast%20Reception%20in%20RRC_INACTIVE.docx) Supporting Multicast Reception in RRC\_INACTIVE vivo discussion Rel-18 NR\_MBS\_enh-Core

[R2-2207318](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207318%20-Discussion%20on%20possible%20approaches%20to%20support%20multicast%20for%20inactive%20UEs.doc) Discussion on possible approaches to support multicast for inactive UEs Futurewei discussion Rel-18 NR\_MBS\_enh-Core

[R2-2207412](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207412.docx) State transition for UEs receiving Multicast in RRC\_INACTIVE state TCL Communication Ltd. discussion

[R2-2207415](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207415.docx) PTM configuration for UEs receiving Multicast in RRC\_INACTIVE state TCL Communication Ltd. discussion

[R2-2207447](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207447_%20Multicast%20reception%20in%20RRC_INACTIVE%20state_v0.doc) Multicast reception in RRC\_INACTIVE state Apple discussion Rel-18 NR\_MBS\_enh-Core

[R2-2207481](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207481%20Considerations%20on%20the%20multicast%20reception%20in%20RRC_INACTIVE.docx) Considerations on the multicast reception in RRC\_INACTIVE Beijing Xiaomi Software Tech discussion Rel-18

[R2-2207557](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207557%20MBS%20Inactive%20Principles%20final.docx) MBS inactive principles Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_MBS\_enh-Core

[R2-2207566](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207566%20Discussion%20on%20multicast%20enhancement%20for%20RRC%20INACTIVE%20state.docx) Discussion on multicast enhancement for RRC INACTIVE state MediaTek inc. discussion Rel-18 NR\_MBS\_enh-Core

[R2-2207689](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207689.doc) Discussion on Multicast Reception in RRC\_INACTIVE Spreadtrum Communications discussion Rel-18

[R2-2207698](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207698%20PTM%20configuration.docx) PTM configuration for multicast reception in RRC\_INACTIVE Lenovo discussion Rel-18

[R2-2207720](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207720%20Mobility%20of%20UEs%20receiving%20multicast%20in%20RRC_INACTIVE%20State.docx) Mobility of UEs receiving multicast in RRC\_INACTIVE state CANON Research Centre France discussion Rel-18 NR\_MBS\_enh-Core

[R2-2207730](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207730%20%20PTM%20configuration%20for%20RRC_INACTIVE.docx) PTM Configuration in RRC\_INACTIVE SHARP Corporation discussion NR\_MBS\_enh-Core

[R2-2208289](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208289_eMBS_multicast-inactive.doc) Multicast reception in RRC INACTIVE Kyocera discussion Rel-18

[R2-2208312](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208312%20Multicast%20reception%20in%20RRC_INACTIVE.doc) Multicast reception in RRC\_INACTIVE LG Electronics Inc. discussion Rel-18

[R2-2208374](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208374_MBS%20support%20in%20RRC_INACTIVE.doc) MBS support in RRC\_INACTIVE InterDigital, Inc. discussion Rel-18 NR\_MBS\_enh-Core

[R2-2208499](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208499.docx) Multicast reception in RRC\_INACTIVE Intel Corporation discussion Rel-18 NR\_MBS\_enh-Core

[R2-2208520](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208520%20Discussion%20on%20user%20plane%20aspects%20for%20support%20of%20multicast%20in%20RRC_INACTIVE_v4.doc) Discussion on user plane aspects for support of multicast in RRC\_INACTIVE LG Electronics Inc. discussion Rel-18 NR\_MBS\_enh-Core

[R2-2208633](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208633%20Multicast%20reception%20in%20RRC_INACTIVE.doc) Multicast reception in RRC\_INACTIVE ZTE, Sanechips discussion Rel-18 NR\_MBS\_enh-Core

### 8.11.3 Shared processing for MBS broadcast and Unicast reception

Specify Uu signalling enhancements to allow a UE to use shared processing for MBS broadcast and unicast reception, i.e., ‎including UE capability and related assistance information reporting regarding simultaneous unicast reception in RRC\_CONNECTED and MBS broadcast reception from the same or different operators [RAN2]

*Assumptions and baseline solution*

[R2-2208182](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208182%20BroadcastSharedProcessing.docx) Shared processing for MBS broadcast and unicast reception Nokia, Nokia Shanghai Bell discussion Rel-18 NR\_MBS\_enh-Core

Proposal 1: RAN2 initially focuses on optimizations on devices with single RX/single TX or dual RX/single TX chains.

Proposal 2: RAN2 focuses either on introducing gaps that is specific for broadcast reception or work on mechanisms that utilize already existing gaps for limited capability UEs that can receive only from one cell at a time.

[R2-2208548](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208548.docx) Shared processing for simultaneous MBS broadcast and Unicast reception Intel Corporation discussion Rel-18 NR\_MBS\_enh-Core

Proposal 1: LTE solution on shared processing for broadcast and unicast reception is the baseline for NR, i.e. 1) new IE is added in system information to control whether MBSInterestIndication for shared processing can be sent or not; 2) MBSInterestIndication message content and related procedure is updated for shared processing.

Proposal 2: If Proposal 1 is agreed, new IE to control whether MBSInterestIndication for shared processing can be sent or not is added to SIB1.

Proposal 3: If Proposal 1 is agreed, in MBSInterestIndication, for each broadcast service that the UE is receiving or interested to receive, the following parameters are signalled: carrier frequency (ARFCN-ValueNR), subcarrier spacing, and bandwidth of the CFR.

Proposal 4: If Proposal 1 is agreed, shared processing for broadcast and unicast reception is an optional feature without UE capability signalling.

[R2-2206989](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2206989.docx) Simultaneous unicast reception and MBS broadcast reception TD Tech Ltd discussion Rel-18

[R2-2206990](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2206990.docx) A new MCCH transmission method Chengdu TD Tech, TD Tech discussion Rel-18

[R2-2206991](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2206991.docx) MBS reception interruption problem in LTE and NR TD Tech Ltd discussion Rel-18 Withdrawn

[R2-2206998](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2206998%20Discussion%20on%20support%20of%20FTA%20in%20NR.doc) Discussion on support of FTA in NR OPPO discussion Rel-18 NR\_MBS\_enh

[R2-2207014](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207014.docx) MBS reception interruption problem in LTE and NR Chengdu TD Tech, TD Tech discussion Rel-18

[R2-2207184](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207184.doc) Discussion on UE shared Processing for Broadcast and Unicast Services Reception TCL Communication Ltd. discussion Rel-18

[R2-2207228](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207228%20Supporting%20Shared%20Processing%20for%20MBS%20Broadcast%20and%20Unicast.docx) Supporting Shared Processing for MBS Broadcast and Unicast vivo discussion Rel-18 NR\_MBS\_enh-Core

[R2-2207448](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207448_%20Sharing%20processing%20of%20MBS%20broadcast%20and%20unicast%20reception_v0.doc) Sharing processing of MBS broadcast and unicast reception Apple discussion Rel-18 NR\_MBS\_enh-Core

[R2-2207567](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207567%20Discussion%20on%20broadcast%20coexistence%20and%20signaling%20enhancement.docx) Discussion on broadcast coexistence and signaling enhancement MediaTek inc. discussion Rel-18 NR\_MBS\_enh-Core

[R2-2207589](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207589%20Discussion%20on%20shared%20processing%20for%20MBS%20broadcast%20and%20unicast%20reception.docx) Discussion on shared processing for MBS broadcast and unicast reception Huawei, CBN, HiSilicon discussion Rel-18 NR\_MBS\_enh-Core

[R2-2207690](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207690.doc) Discussion on shared processing for MBS broadcast and Unicast Reception Spreadtrum Communications discussion Rel-18

[R2-2207772](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207772.docx) Discussions on shared processing for MBS broadcast and unicast reception CATT, CBN discussion Rel-18 NR\_MBS\_enh-Core

[R2-2207808](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2207808%20Discussion%20on%20shared%20processing%20for%20MBS%20broadcast%20and%20unicast%20reception.docx) Discussion on shared processing for MBS broadcast and unicast reception Xiaomi discussion Rel-18 NR\_MBS\_enh-Core

[R2-2208092](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208092%20MBS%20broadcast%20and%20unicast%20reception%20with%20shared%20resources.docx) MBS broadcast and unicast reception with shared resources Ericsson discussion Rel-18 NR\_MBS\_enh-Core

[R2-2208097](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208097-MBS-capability-sharing.docx) Shared processing for MBS broadcast and unicast reception Qualcomm Incorporated discussion Rel-18 NR\_MBS\_enh-Core

[R2-2208290](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208290_eMBS_shared-processing.doc) Shared processing for simultaneous reception of MBS and unicast Kyocera discussion Rel-18

[R2-2208442](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208442%20Discussion%20on%20shared%20processing%20for%20broadcast%20and%20unicast%20reception.docx) Discussion on shared processing for broadcast and unicast reception CMCC discussion Rel-18 NR\_MBS\_enh-Core

[R2-2208591](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208591%20MBS%20Uu%20Signaling.docx) Uu Signaling Enhancements for MBS Samsung discussion Rel-18 NR\_MBS\_enh-Core

[R2-2208634](file:///C%3A%5CUsers%5CDwx974486%5CDocuments%5C3GPP%5CExtracts%5CR2-2208634%20On%20shared%20processing%20for%20MBS%20broadcast%20and%20Unicast%20reception.doc) On shared processing for MBS broadcast and Unicast reception ZTE, Sanechips discussion Rel-18 NR\_MBS\_enh-Core