3GPP TSG-RAN WG2 Meeting #121bis R2-22XXXXX

Elbonia, 17 – 26 Apr 2023

**Agenda item: 6.1.3.1**

**Source: ZTE Corporation (Rapporteur)**

**Title: Report of [AT121bis-e][009][NR17] RRC Misc Corrections (ZTE)**

**WID/SID: RRC Misc Corrections**

**Document for: Discussion and Decision**

# 1 Introduction

This document is the report of the following email discussion:

* [AT121bis-e][009][NR17] RRC Misc Corrections (ZTE)

 Scope: Treat R2-2303021, R2-2303346, R2-2302457, R2-2303679, R2-2303814, R2-2304087
Ph1: Determine agreeable parts. Ph2: For agreeable parts, if any, reflect these in agreeable CRs.

 Intended outcome: Report, If applicable: In-Principle-Agreed CRs

 Deadline: Schedule 1

A **first round** with **Deadline for comments W1 Friday August 19th 1900 UTC** to settle scope what is agreeable etc

# 2 Contact Points

Respondents to the email discussion are kindly asked to fill in the following table.

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| --- | --- | --- |
| Company | Name | Email Address |
| Xiaomi | Yumin Wu | wuyumin@xiaomi.com |
| Huawei, HiSilicon | Dawid Koziol | dawid.koziol@huawei.com |
| Lenovo | Hyung-Nam Choi | hchoi5@lenovo.com |
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# 3 Discussion

## 3.1 Enhanced BFR MAC CE

[R2-2303021](file:///C%3A%5CUsers%5Cmtk65284%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_121bis-e%5CDocs%5CR2-2303021.zip) Clarification to TS 38.331 on Enhanced BFR MAC CE for feMIMO CATT CR Rel-17 38.331 17.4.0 3977 - F NR\_FeMIMO-Core

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| --- |
| **Issue 1:**According to TS 38.321, if CBRA is triggered for SpCell beam failure recovery and spCell-BFR-CBRA with value true is configured, UE will send the Enhanced BFR MAC CE to the gNB provided that at least one Serving Cell of the MAC entity is configured with two BFD-RS sets, i.e. the spCell-BFR-CBRA is also used to control whether the Enhanced BFR MAC CE can be sent to the gNB in the CBRA procedure. While the field description of spCell-BFR-CBRA in TS 38.331 only covers the control of sending the BFR MAC CE for SpCell BFR by this field, which does not aligns with TS 38.321.**Issue 2:**According to TS 38.321, the decision of the Candidate RS ID in the Enhanced BFR MAC CE is also based on the RRC parameter rsrp-ThresholdBFR configured by BeamFailureRecoveryRSConfig. But in the field description of rsrp-ThresholdBFR, it only mentions that the rsrp-ThresholdBFR is used to determine the candidate beam included in the BFR MAC CE, which does not align with TS 38.321. |

**Question 1: Do companies think the issue mentioned in R2-2303021 is valid?**

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| --- | --- | --- |
| Company | Yes/No | Comments |
| Xiaomi | Yes |  |
| Huawei, HiSilicon | Yes | The CR is OK, but this is nearly an editorial correction, it could be merged to any other CR. |
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If the issue is valid, companies are invited to provide the comments on the change:

1. For issue 1:

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| ***spCell-BFR-CBRA***Indicates that UE is configured to send BFR MAC CE or Enhanced BFR MAC CE for SpCell BFR as specified in TS38.321 [3]. |

1. For issue 2:

***rsrp-ThresholdBFR***

L1-RSRP threshold used for determining whether a candidate beam may be included by the UE in BFR MAC CE or Enhanced BFR MAC CE (see TS 38.213 [13], clause 6). The network always configures this parameter in every instance of this IE.

**Question 2: If companies think the issue is valid, do companies agree with above change suggested in R2-2303021?**

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| Company | Yes/No | Comments |
| Xiaomi | Yes |  |
| Huawei, HiSilicon | Yes | See above |
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## 3.2 R17 TCI-State

[R2-2303346](file:///C%3A%5CUsers%5Cmtk65284%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_121bis-e%5CDocs%5CR2-2303346.zip) Corrections on the unified TCI-state configuration for 38.331 Xiaomi CR Rel-17 38.331 17.4.0 4008 - F NR\_FeMIMO-Core

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| **Description of the issue:**The current RRC specification has the following issues while configuring the Rel-17 unified TCI-state:Issue: SCellActivationRS-Config cannot be configured together with dl-OrJointTCI-StateList. |

**Question 3: Do companies agree with the above issue observed in above?**

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| --- | --- | --- |
| Company | Yes/No | Comments |
| Xiaomi | Yes | We are the proponent. This issue was discussed in the last RAN2 meeting of RAN2#121, and it seems that companies did not find any problem with this correction. However, some companies raised concerns that they may need more time to double check with their RAN1 colleagues.After some internal double-checking with our RAN1 colleagues, the correction has no extra RAN1 specification impacts, and is just to remove unnecessary restriction from the RRC specification. |
| Huawei, HiSilicon | No | We have already discussed this and rejected it because RAN1 never discussed this, so we have no clue whether it would actually work. |
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If companies think the issue is valid, please provide the comments on the change:

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| *SCellActivationRS-Config* information element-- ASN1START-- TAG-SCELLACTIVATIONRS-CONFIG-STARTSCellActivationRS-Config-r17 ::= SEQUENCE { scellActivationRS-Id-r17 SCellActivationRS-ConfigId-r17, resourceSet-r17 NZP-CSI-RS-ResourceSetId, gapBetweenBursts-r17 INTEGER (2..31) OPTIONAL, -- Need R qcl-Info-r17 TCI-StateId, ...}-- TAG-SCELLACTIVATIONRS-CONFIG-STOP-- ASN1STOP***qcl-Info***Reference to TCI-State for providing the QCL source and QCL type for each *NZP-CSI-RS-Resource* listed in *nzp-CSI-RS-Resources* of the *NZP-CSI-RS-ResourceSet* indicated by *resourceSet* (see TS 38.214 [19], clause 5.1.6.1.1.1). *TCI-StateId* refers to the *TCI-State* which has this value for *tci-StateId* and is defined in *tci-StatesToAddModList* or *dl-OrJointTCI-StateList* in the *PDSCH-Config* included in the *BWP-Downlink* of this serving cell indicated by *firstActiveDownlinkBWP-Id* in the *ServingCellConfig* in which this IE is included. |

**Question 4: If companies think the issue is valid, do companies agree with above change suggested in R2-2303346?**

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| Company | Yes/No | Comments |
| Xiaomi | Yes | We are the proponent. |
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## 3.3 QoE

In QoE part, one LS in from RAN3 (i.e. R2-2302457) have been received in which R3 answered the question about the RVQoE raised by RAN2, the contents in the LS is shown as below:

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| RAN3 has further discussed the following question raised by RAN2, and would like to provide the answers as shown below:Question 3: What is the motivation for specifying that RAN visible QoE reports should be sent together with the legacy QoE reports? Is the requirement that RAN visible QoE reports should be sent together with the legacy QoE reports intended for the application layer or AS layer? If for AS layer, could the reporting periodicity for RAN visible QoE reports be considered mandatory because AS layer is not aware of when the legacy QoE reports will be triggered?*Answer to Question 3:** *The motivation for specifying that RAN visible QoE reports should be sent together with the legacy QoE reports is to achieve a simple and straightforward legacy QoE and RAN visible QoE reporting mechanism.*
* *When the RAN visible QoE reporting periodicity is not explicitly configured, the requirement that RAN visible QoE reports should be sent together with the legacy QoE reports is intended for the application layer.*
* *When the RAN visible QoE reporting periodicity is not explicitly configured, RAN visible QoE reports are sent together with the legacy QoE reports over the air interface, except in the case of RAN overload (when legacy QoE reports are stored but RVQoE reports continue to be reported with the reporting periodicity configured for legacy QoE reporting).*
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Regrading the above LS, companies are invited to provide opinions on this LS :

**Question 5: In this meeting, what we should do for this LS, just “noted” or an online discussion is needed to visit it?**

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| Company | Noted/Online | Comments |
| Huawei, HiSilicon | Noted | This LS has already been discussed last meeting and all the necessary changes were done. |
| Lenovo | No action | Was already treated in RAN2#121 and noted, see R2-2300030. Due to this the reply LS was marked as “withdrawn” in the RAN2#121bis-e skeleton report v4. |
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[R2-2303679](file:///C%3A%5CUsers%5Cmtk65284%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_121bis-e%5CDocs%5CR2-2303679.zip) Correction CR for QoE measurements in NR Ericsson CR Rel-17 38.331 17.4.0 4022 - F NR\_QoE-Core

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| **Issue:**The naming of MeasurementReportAppLayer and “application layer measurement report containers” in the reporting suspend procedure is inconsistent, which may lead to confusion that MeasurementReportAppLayer messages are not sent when pauseReporting is set to true. However, the MeasurementReportAppLayer messages can still be sent, but contain only RVQoE measurement results and session start/stop indications, as only the transmission of QoE report container is stopped when the reporting is paused. Similarly, for the reporting resume procedure, it reads as if the QoE container is to be sent to the lower layers without generating a MeasurementReportAppLayer message first. |

**Question 6: Do companies think the issue raised by R2-2303679 is valid?**

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| --- | --- | --- |
| Company | Yes/No | Technical Comments |
| Huawei, HiSilicon | Yes |  |
| Lenovo | No | We see no need for the changes in 5.3.5.13d since from the reporting procedure in 5.7.16.2 it is clear that MeasurementReportAppLayer messages can still be sent during pause phase. |
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If above issue is confirmed, companies are invited to provide the comments on the suggested solution in R2-2303679:

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| 5.3.5.13d Application layer measurement configuration**/\*Omit for short\*/**3> if *pauseReporting* is set to *true*:4> if at least one segment, but not all segments, of a segmented *MeasurementReportAppLayer* message containing an application layer measurement report associated with the *measConfigAppLayerId* has been submitted to lower layers for transmission:5> submit the remaining segments of the *MeasurementReportAppLayer* message to lower layers for transmission;4> for the application layer measurement configuration associated with the *measConfigAppLayerId* suspend setting the *measReportAppLayerContainer* in the *MeasurementReportAppLayer* messages that are submitted to lower layers for transmission;4> store any previously or subsequently received application layer measurement report containers associated with the *measConfigAppLayerId* for which no segment, or full message, has been submitted to lower layers for transmission;3> else if *pauseReporting* is set to *false* and if transmission of application layer measurement report containers has previously been suspended for the application layer measurement configuration associated with the *measConfigAppLayerId*:4> submit stored application layer measurement report containers to lower layers, if any, for the application layer measurements configuration associated with the *measConfigAppLayerId;*4> for the application layer measurement configuration associated with the *measConfigAppLayerId*, resume setting the *measReportAppLayerContainer* in the *MeasurementReportAppLayer* messages that are submitted to lower layers for transmission;**/\*Omit for short\*/** |

**Question 7: If the issue is confirmed, do companies agree with above change provided in R2-2303679?**

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| Company | Yes/No | Comments |
| Huawei, HiSilicon | Yes, but | There is some text in the CR which does not use revision marks (at least one “,”). This needs to be corrected. |
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[R2-2303814](file:///C%3A%5CUsers%5Cmtk65284%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_121bis-e%5CDocs%5CR2-2303814.zip) Correction on application layer measurement configuration resume Google CR Rel-17 38.331 17.4.0 4028 - F NR\_QoE-Core

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| **Issue:**After receiving an RRCResume message, a UE should restore the application layer measurement configuration from the UE Inactive AS context before it discards the UE Inactive AS context. |

**Question 8: Do companies think the issue raised by R2-2303814 is valid?**

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| Company | Yes/No | Comments |
| Huawei, HiSilicon | No | We already have the following in section 5.3.13.3:1> restore the RRC configuration, RoHC state, the EHC context(s), the UDC state, the stored QoS flow to DRB mapping rules and the KgNB and KRRCint keys from the stored UE Inactive AS context except for the following:- masterCellGroup;- mrdc-SecondaryCellGroup, if stored; and- pdcp-Config;[Lenovo] The way we specified the storing of the application layer measurement configuration in clause 5.3.8.3 (“Reception of the RRCRelease by the UE”) it can be interpreted that the application layer measurement configuration is not part of the RRC configuration.3> store in the UE Inactive AS Context the *nextHopChainingCount* received in the *RRCRelease* message*,* the current KgNB and KRRCint keys, the ROHC state, the EHC context(s), the UDC state, the stored QoS flow to DRB mapping rules, the application layer measurement configuration, the C-RNTI used in the source PCell, the *cellIdentity* and the physical cell identity of the source PCell, the *spCellConfigCommon* within *ReconfigurationWithSync* of the NR PSCell (if configured) and all other parameters configured except for: |
| Lenovo | Yes but | To be aligned with legacy behaviour the UE should restore the application layer measurement configuration from the UE Inactive AS context after the transmission of RRCResumeRequest or RRCResumeRequest1 message. |
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If above issue is confirmed, companies are invited to provide the comments on the suggested solution in R2-2303814:

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| 5.3.13.4 Reception of the *RRCResume* by the UEThe UE shall:1> stop timer T319, if running;1> stop timer T319a, if running and consider SDT procedure is not ongoing;1> stop timer T380, if running;1> if T331 is running:2> stop timer T331;2> perform the actions as specified in 5.7.8.3;1> if the *RRCResume* includes the *fullConfig*:2> perform the full configuration procedure as specified in 5.3.5.11;1> else:2> if the *RRCResume* does not include the *restoreMCG-SCells*:3> release the MCG SCell(s) from the UE Inactive AS context, if stored;2> if the *RRCResume* does not include the *restoreSCG*:3> release the MR-DC related configurations (i.e., as specified in 5.3.5.10) from the UE Inactive AS context, if stored;2> restore the *masterCellGroup, mrdc-SecondaryCellGroup*, if stored, and *pdcp-Config* from the UE Inactive AS context;2> configure lower layers to consider the restored MCG and SCG SCell(s) (if any) to be in deactivated state;1> restore the application layer measurement configuration from the UE Inactive AS context, if stored;**/\***omit for short\*/ |

**Question 9: If the issue is confirmed, do companies agree with above change in R2-2303814**

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| Company | Yes/No | Comments |
| Lenovo |  | To be aligned with legacy behaviour as specified in 5.3.13.3 (“Actions related to transmission of RRCResumeRequest or RRCResumeRequest1 message”) we suggest to add “the application layer measurement configuration” in the action below:1> restore the RRC configuration, RoHC state, the EHC context(s), the UDC state, the stored QoS flow to DRB mapping rules, the application layer measurement configuration, and the KgNB and KRRCint keys from the stored UE Inactive AS context except for the following:- masterCellGroup;- mrdc-SecondaryCellGroup, if stored; and- pdcp-Config; |
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## 3.4 SI Request

[R2-2304087](file:///C%3A%5CUsers%5Cmtk65284%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2_RL2%5CTSGR2_121bis-e%5CDocs%5CR2-2304087.zip) Corrections to on-demand SI request ZTE Corporation, Sanechips CR Rel-17 38.331 17.4.0 4050 - F TEI17

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| **Issue:**In spec 38.331, the fields presence condition of posSI-RequestConfig-r16, posSI-RequestConfigSUL-r16 and posSI-RequestConfigRedCap-r17 are incomplete, since it doesn’t consider the new SI-message containing type2 SIB configured in schedulingInfoList2-r17. Specifically, for the field posSI-RequestConfig-r16, if si-BroadcastStatus is set to notBroadcasting for any SI-message containing type2 SIB included in SchedulingInfo2, this field is also optionally present, Need R. Similarly, the fields presence condition of si-RequestConfig, si-RequestConfigSUL and si-RequestConfigRedCap-r17 are incomplete, since it doesn’t consider the new SI-message containing type1 SIB configured in schedulingInfoList2-r17. |

**Question 10: Do companies agree with the above issue observed in above?**

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| Company | Yes/No | Comments |
| Xiaomi | Yes |  |
| Huawei, HiSilicon | Yes |  |
| Lenovo | Yes |  |
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If above issue is valid, companies are invited to provide the comments on the suggested change in R2-2304087:

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| 6.3.1a Positioning System information blocks<Text omitted>– *PosSI-SchedulingInfo*-- ASN1START-- TAG-POSSI-SCHEDULINGINFO-STARTPosSI-SchedulingInfo-r16 ::= SEQUENCE { posSchedulingInfoList-r16 SEQUENCE (SIZE (1..maxSI-Message)) OF PosSchedulingInfo-r16, posSI-RequestConfig-r16 SI-RequestConfig OPTIONAL, -- Cond MSG-1 posSI-RequestConfigSUL-r16 SI-RequestConfig OPTIONAL, -- Cond SUL-MSG-1 ..., [[ posSI-RequestConfigRedCap-r17 SI-RequestConfig OPTIONAL -- Cond REDCAP-MSG-1 ]]}PosSchedulingInfo-r16 ::= SEQUENCE { offsetToSI-Used-r16 ENUMERATED {true} OPTIONAL, -- Need R posSI-Periodicity-r16 ENUMERATED {rf8, rf16, rf32, rf64, rf128, rf256, rf512}, posSI-BroadcastStatus-r16 ENUMERATED {broadcasting, notBroadcasting}, posSIB-MappingInfo-r16 PosSIB-MappingInfo-r16, ...}PosSIB-MappingInfo-r16 ::= SEQUENCE (SIZE (1..maxSIB)) OF PosSIB-Type-r16PosSIB-Type-r16 ::= SEQUENCE { encrypted-r16 ENUMERATED { true } OPTIONAL, -- Need R gnss-id-r16 GNSS-ID-r16 OPTIONAL, -- Need R sbas-id-r16 SBAS-ID-r16 OPTIONAL, -- Cond GNSS-ID-SBAS posSibType-r16 ENUMERATED { posSibType1-1, posSibType1-2, posSibType1-3, posSibType1-4, posSibType1-5, posSibType1-6, posSibType1-7, posSibType1-8, posSibType2-1, posSibType2-2, posSibType2-3, posSibType2-4, posSibType2-5, posSibType2-6, posSibType2-7, posSibType2-8, posSibType2-9, posSibType2-10, posSibType2-11, posSibType2-12, posSibType2-13, posSibType2-14, posSibType2-15, posSibType2-16, posSibType2-17, posSibType2-18, posSibType2-19, posSibType2-20, posSibType2-21, posSibType2-22, posSibType2-23, posSibType3-1, posSibType4-1, posSibType5-1,posSibType6-1, posSibType6-2, posSibType6-3,... }, areaScope-r16 ENUMERATED {true} OPTIONAL -- Need S}GNSS-ID-r16 ::= SEQUENCE { gnss-id-r16 ENUMERATED{gps, sbas, qzss, galileo, glonass, bds, ...}, ...}SBAS-ID-r16 ::= SEQUENCE { sbas-id-r16 ENUMERATED { waas, egnos, msas, gagan, ...}, ...}-- TAG-POSSI-SCHEDULINGINFO-STOP-- ASN1STOP |

| Conditional presence | Explanation |
| --- | --- |
| *GNSS-ID-SBAS* | The field is mandatory present if *gnss-id* is set to *sbas*. It is absent otherwise. |
| *MSG-1* | The field is optionally present, Need R, if *posSI-BroadcastStatus* is set to *notBroadcasting* for any SI-message included in *PosSchedulingInfo* or if *si-BroadcastStatus* is set to *notBroadcasting* for any SI-message containing type2 SIB included in *SchedulingInfo2*. It is absent otherwise. |
| *SUL-MSG-1* | The field is optionally present, Need R, if *supplementaryUplink* is configured in *ServingCellConfigCommonSIB,* and if *posSI-BroadcastStatus* is set to *notBroadcasting* for any SI-message included in *PosSchedulingInfo* or if *si-BroadcastStatus* is set to *notBroadcasting* for anySI-message containing type2 SIB included in *SchedulingInfo2*. It is absent otherwise. |
| *REDCAP-MSG-1* | The field is optionally present, Need R, if *initialUplinkBWP-RedCap* is configured in *UplinkConfigCommonSIB,* and if *posSI-BroadcastStatu* is set to *notBroadcasting* for any SI-message included in *PosSchedulingInfo* or if *si-BroadcastStatus* is set to *notBroadcasting* for anySI-message containing type2 SIB included in *SchedulingInfo2*. It is absent otherwise. |

**Question 11: If the issue is valid, do companies agree with above changes in R2-2304087**

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| --- | --- | --- |
| Company | Yes/No | Comments |
| Xiaomi | Yes |  |
| Huawei, HiSilicon | Yes | The changes look OK. We could consider merging them into the rapporteur CR as these are rather editorial corrections. |
| Lenovo |  | On the changes for the conditions in both PosSI-SchedulingInfo and SI-SchedulingInfo:The “or” should be replaced by “and” and “if configured” should be added to “SchedulingInfo2”, see below. Otherwise, it may imply that SI request resources can be configured only for the new SIBs which are scheduled via “SchedulingInfo2” what is not a valid scenario.The field is optionally present, Need R, if *posSI-BroadcastStatus* is set to *notBroadcasting* for any SI-message included in *PosSchedulingInfo* and if *si-BroadcastStatus* is set to *notBroadcasting* for any SI-message containing type2 SIB included in *SchedulingInfo2* (if configured). It is absent otherwise.The field is optionally present, Need R, if *si-BroadcastStatus* is set to *notBroadcasting* for any SI-message included in *SchedulingInfo* andanySI-message containing type1 SIB included in *SchedulingInfo2* (if configured). It is absent otherwise. |
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# 4 Conclusion

TBD.