3GPP TSG-RAN WG2 #114-e electronic R2-210xxxx

Electronic, 16 – 27 August 2021

Agenda Item: 6.1.4.1.5 Other

Source: Ericsson

Title: [AT115-e][027][NR16] CP Other & LTE (Ericsson)

Document for: Discussion, Decision

# 1 Introduction

This contribution summarizes the following discussion:

* [AT115-e][027][NR16] CP Other & LTE (Ericsson)

 Scope: Determine agreeable parts and agree CRs, For [R2-2107285](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107285.zip)-7288 await on-line treat remaining part if needed, Treat [R2-2108291](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108291.zip), [R2-2107129](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107129.zip), [R2-2107482](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107482.zip), [R2-2106911](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2106911.zip), [R2-2108268](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108268.zip), [R2-2107485](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107485.zip), [R2-2106996](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2106996.zip), [R2-2108434](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108434.zip), [R2-2108275](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108275.zip), [R2-2108189](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108189.zip), [R2-2108190](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108190.zip), [R2-2108569](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108569.zip), [R2-2108679](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108679.zip),

 Intended outcome: Report, Agreed CRs.

 **Deadline: A first round with Deadline for comments Thursday Aug 19 1200 UTC**

**CandidateBeamRSList**

[R2-2107285](file:///D%3A%5CDocuments%5C3GPP%5Ctsg_ran%5CWG2%5CTSGR2_115-e%5CDocs%5CR2-2107285.zip) Report of email discussion [Post114-e][071][NR16] CandidateBeamRSList set to release (MediaTek) MediaTek Inc. discussion Rel-16 NR\_eMIMO-Core Late

[R2-2107286](file:///D%3A/Documents/3GPP/tsg_ran/WG2/RAN2/2108_R2_115-e/Docs/R2-2107286.zip) Handling of candidateBeamRSListExt-v1610 (option A1) MediaTek Inc. draftCR Rel-16 38.331 16.5.0 F NR\_eMIMO-Core Late

[R2-2107287](file:///D%3A/Documents/3GPP/tsg_ran/WG2/RAN2/2108_R2_115-e/Docs/R2-2107287.zip) Handling of candidateBeamRSListExt-v1610 (option B) MediaTek Inc. draftCR Rel-16 38.331 16.5.0 F NR\_eMIMO-Core Late

[R2-2107288](file:///D%3A/Documents/3GPP/tsg_ran/WG2/RAN2/2108_R2_115-e/Docs/R2-2107288.zip) Handling of candidateBeamRSListExt-v1610 (option C) MediaTek Inc. draftCR Rel-16 38.331 16.5.0 F NR\_eMIMO-Core Late

Misc Corrections

[R2-2108291](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108291.zip) Miscellaneous non-controversial corrections Set XI Ericsson CR Rel-16 38.331 16.5.0 2763 - F NR\_newRAT-Core, TEI16

[R2-2108587](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108587.zip) Correction on RRC multiplicity and type constraint definitions Huawei, HiSilicon        CR       Rel-16           38.331 16.5.0  2782    -           F          NR\_newRAT-Core

**eCall over IMS**

[R2-2107129](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107129.zip) Early implementation of eCall over IMS in NR Qualcomm Incorporated, Ericsson, Vodafone CR Rel-16 38.331 16.5.0 2714 - F TEI16

NR-U

[R2-2107482](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107482.zip) Correction on description of lbt-FailureInstanceMaxCount in LBT-FailureRecoveryConfig ZTE Corporation, Sanechips CR Rel-16 38.331 16.5.0 2727 - F NR\_unlic-Core

2-step RACH

[R2-2106911](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2106911.zip) LS on the description of RRC parameter p0-AlphaSets ([R1-2106168](http://www.3gpp.org/ftp/tsg_ran/WG1_RL1//TSGR1_105-e/Docs//R1-2106168.zip); contact: ZTE) RAN1 LS in Rel-16 NR\_2step\_RACH-Core To:RAN2

[R2-2108268](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108268.zip) Correction to 38.331 on field description of the MsgA-TransMax ZTE Corporation, vivo, LG Electronic, OPPO, Samsung CR Rel-16 38.331 16.5.0 2760 - F NR\_2step\_RACH-Core

[R2-2107485](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107485.zip) Correction to description of po-AlfphaSets ZTE Corporation, Sanechips CR Rel-16 38.331 16.5.0 2728 - F NR\_2step\_RACH-Core

[R2-2106996](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2106996.zip) Correction on msg1-SubcarrierSpacing and msgA-SubcarrierSpacing vivo CR Rel-16 38.331 16.5.0 2707 - F NR\_2step\_RACH-Core

Moved from 6.1.4.1.1

Redirection with MPS indication

[R2-2108434](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108434.zip) Correction on Redirection with MPS Indication Peraton Labs, CISA ECD, T-Mobile US, Ericsson , Qualcomm, NTT DoCoMo, AT&T, Verizon CR Rel-16 36.331 16.5.0 4714 - F NR\_newRAT-Core, TEI16

LTE changes - Mobility

[R2-2108375](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108375.zip) Correction on ULInformationTransferMRDC(R16) ZTE Corporation, Sanechips CR Rel-16 36.331 16.5.0 4713 - F TEI16

LTE changes - ASN.1 on SCG Failure report

[R2-2108189](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108189.zip) ASN.1 misalignment for the SCGFailureInformationNR message Ericsson CR Rel-16 36.331 16.5.0 4709 - F LTE\_NR\_DC\_CA\_enh-Core, NR\_unlic-Core, NR\_IAB-Core, NR\_Mob\_enh-Core

Moved from 6.1.4.1.1

[R2-2108190](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108190.zip) ASN.1 misalignment for the SCGFailureInformationNR message Ericsson CR Rel-16 38.331 16.5.0 2758 - F LTE\_NR\_DC\_CA\_enh-Core, NR\_unlic-Core, NR\_IAB-Core, NR\_Mob\_enh-Core

Moved from 6.1.4.1.1

[R2-2108569](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108569.zip) Discussion on compatibility issue and solutions for Rel-15 failure type definition Huawei, HiSilicon discussion Rel-16 TEI16

[R2-2108679](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108679.zip) Discussion on compatibility issue on failure type for NR SCG failure CATT discussion Rel-15

Contact person(s) for each participating company:

|  |  |
| --- | --- |
| Company | Contact Name, Email |
| Ericsson | hakan.l.palm@ericsson.com |
| MediaTek | nathan.tenny@mediatek.com |
|  |  |

# 2 Discussion

## 2.1 Phase 1: Intended to determine agreeable parts

### 2.1.1 CandidateBeamRSList

[R2-2107285](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107285.zip) Report of email discussion [Post114-e][071][NR16] CandidateBeamRSList set to release (MediaTek) MediaTek Inc. discussion Rel-16 NR\_eMIMO-Core Late

[R2-2107286](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107286.zip) Handling of candidateBeamRSListExt-v1610 (option A1) MediaTek Inc. draftCR Rel-16 38.331 16.5.0 F NR\_eMIMO-Core Late

[R2-2107287](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107287.zip) Handling of candidateBeamRSListExt-v1610 (option B) MediaTek Inc. draftCR Rel-16 38.331 16.5.0 F NR\_eMIMO-Core Late

[R2-2107288](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107288.zip) Handling of candidateBeamRSListExt-v1610 (option C) MediaTek Inc. draftCR Rel-16 38.331 16.5.0 F NR\_eMIMO-Core Late

This topic was discussed at Monday online session. The following conclusions were captured in the chair’s notes:

* We go for option A1 (for this and future rel)

- MTK wonder if this is now the principle for the future (for other fields). Samsung think it is only for this case and current principle in RRC can be kept. Ericsson think we just discuss case by case, right now we don’ t need to discuss the future. Chair: seems that the interest to change/discuss principle is limited. Can disucss at later time, if found to be a general issue.

* CRs by email

**Q1. Companies are asked to provide their comments on the draft CR in** [R2-2107285](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107285.zip) (option A1).

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| --- | --- |
| **Company** | **Comments** |
| MediaTek | The unchanged sections in annex A can be deleted (they were provided in case we wanted to make modifications to capture the general case). |
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### 2.1.2 Misc Corrections

[R2-2108291](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108291.zip) Miscellaneous non-controversial corrections Set XI Ericsson CR Rel-16 38.331 16.5.0 2763 - F NR\_newRAT-Core, TEI16

**Q2. Companies are asked to provide their comments on the proposed changes in the draft CR, and provide further findings on typos etc.**

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| --- | --- |
| **Company** | **Comments** |
| MediaTek | One additional typo: in section 5.3.13.2, third level 3 bullet, „resumeCause“ and „mps-PriorityAccess“ should be in italics. |
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[R2-2108587](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108587.zip) Correction on RRC multiplicity and type constraint definitions Huawei, HiSilicon        CR       Rel-16           38.331 16.5.0  2782    -           F          NR\_newRAT-Core

**Q3. Companies are asked to provide their view on the need of the draft CR, and comments on the changes in the draft CR.**

|  |  |  |
| --- | --- | --- |
| **Company** | **CR needed?** | **Comments** |
| MediaTek | Yes | The CR has no normative impact, but it’s good to have from a spec cleanliness perspective. We should normalise on one convention or the other (-1-r16 or -r16-1). |
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### 2.1.3 eCall over IMS

[R2-2107129](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107129.zip) Early implementation of eCall over IMS in NR Qualcomm Incorporated, Ericsson, Vodafone CR Rel-16 38.331 16.5.0 2714 - F TEI16

**Q4. Companies are asked to provide their view on the need of the draft CR, and comments on the changes in the draft CR.**

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| --- | --- | --- |
| **Company** | **CR needed?** | **Comments** |
| MediaTek | Y |  |
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### 2.1.4 NR-U

[R2-2107482](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107482.zip) Correction on description of lbt-FailureInstanceMaxCount in LBT-FailureRecoveryConfig ZTE Corporation, Sanechips CR Rel-16 38.331 16.5.0 2727 - F NR\_unlic-Core

**Q5. Companies are asked to provide their view on the need of the draft CR, and comments on the changes in the draft CR.**

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| --- | --- | --- |
| **Company** | **CR needed?** | **Comments** |
| MediaTek | Y | We understand this aligns with the MAC spec. |
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### 2.1.5 2-step RACH

[R2-2106911](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2106911.zip) LS on the description of RRC parameter p0-AlphaSets ([R1-2106168](http://www.3gpp.org/ftp/tsg_ran/WG1_RL1//TSGR1_105-e/Docs//R1-2106168.zip); contact: ZTE) RAN1 LS in Rel-16 NR\_2step\_RACH-Core To:RAN2

[R2-2107485](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2107485.zip) Correction to description of po-AlfphaSets ZTE Corporation, Sanechips CR Rel-16 38.331 16.5.0 2728 - F NR\_2step\_RACH-Core

**Q6. Companies are asked to provide comments/questions on the RAN1 LS, their view on the need of the draft CR, and comments on the changes in the draft CR.**

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| --- | --- | --- |
| **Company** | **CR needed?** | **Comments** |
| MediaTek | Y |  |
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[R2-2108268](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108268.zip) Correction to 38.331 on field description of the MsgA-TransMax ZTE Corporation, vivo, LG Electronic, OPPO, Samsung CR Rel-16 38.331 16.5.0 2760 - F NR\_2step\_RACH-Core

**Q7. Companies are asked to provide their view on the need of the draft CR, and comments on the changes in the draft CR.**

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| --- | --- | --- |
| **Company** | **CR needed?** | **Comments** |
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[R2-2106996](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2106996.zip) Correction on msg1-SubcarrierSpacing and msgA-SubcarrierSpacing vivo CR Rel-16 38.331 16.5.0 2707 - F NR\_2step\_RACH-Core

Moved from 6.1.4.1.1

**Q8. Companies are asked to provide their view on the need of the draft CR, and comments on the changes in the draft CR.**

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| **Company** | **CR needed?** | **Comments** |
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### 2.1.6 Redirection with MPS indication

[R2-2108434](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108434.zip) Correction on Redirection with MPS Indication Peraton Labs, CISA ECD, T-Mobile US, Ericsson , Qualcomm, NTT DoCoMo, AT&T, Verizon CR Rel-16 36.331 16.5.0 4714 - F NR\_newRAT-Core, TEI16

**Q9. Companies are asked to provide their view on the need of the draft CR, and comments on the changes in the draft CR.**

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| --- | --- | --- |
| **Company** | **CR needed?** | **Comments** |
| MediaTek | Y | We are not sure the CR exactly matches the problem. In our reading, the access attempt for MPS redirection will be allowed if \*any one\* of the ACs 12..14 is not barred, even if the actually assigned AC is barred. So in order to effectively bar access for MPS redirection, it seems that the network needs to bar all of ACs 12..14. We understand this may be unavoidable since the UE does not know what the assigned AC is, but it is still a bit counterintuitive and should perhaps be captured in a NOTE. |
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### 2.1.7 LTE changes - Mobility

[R2-2108375](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108375.zip) Correction on ULInformationTransferMRDC(R16) ZTE Corporation, Sanechips CR Rel-16 36.331 16.5.0 4713 - F TEI16

**Q10. Companies are asked to provide their view on the need of the draft CR, and comments on the changes in the draft CR.**

|  |  |  |
| --- | --- | --- |
| **Company** | **CR needed?** | **Comments** |
| MediaTek | Maybe | We think the intention is fine. I guess we can just remove the word „only“ here as below. NR *RRCReconfigurationComplete* (transmitted upon CPC execution if ~~only~~ SRB1 is configured and the UE is operating in EN-DC) messages. Note 1 - WI code should be LTE\_feMob-Core as it is mainly CR for CPC.Note 2 – There is typo „SBR1“ in the proposed text. Should be SRB1. |
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### 2.1.8 LTE changes - ASN.1 on SCG Failure report

[R2-2108189](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108189.zip) ASN.1 misalignment for the SCGFailureInformationNR message Ericsson CR Rel-16 36.331 16.5.0 4709 - F LTE\_NR\_DC\_CA\_enh-Core, NR\_unlic-Core, NR\_IAB-Core, NR\_Mob\_enh-Core

Moved from 6.1.4.1.1

[R2-2108190](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108190.zip) ASN.1 misalignment for the SCGFailureInformationNR message Ericsson CR Rel-16 38.331 16.5.0 2758 - F LTE\_NR\_DC\_CA\_enh-Core, NR\_unlic-Core, NR\_IAB-Core, NR\_Mob\_enh-Core

Moved from 6.1.4.1.1

[R2-2108569](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108569.zip) Discussion on compatibility issue and solutions for Rel-15 failure type definition Huawei, HiSilicon discussion Rel-16 TEI16

[R2-2108679](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108679.zip) Discussion on compatibility issue on failure type for NR SCG failure CATT discussion Rel-15

The above-listed documents deal with an issue postponed at RAN2#114e

**– SCGFailureInformationNR**

FailureReportSCG-NR-r15 ::= SEQUENCE {

 failureType-r15 ENUMERATED {

 t310-Expiry, randomAccessProblem,

 rlc-MaxNumRetx,

 synchReconfigFailureSCG, scg-reconfigFailure,

 srb3-IntegrityFailure, other-r16},

 measResultFreqListNR-r15 MeasResultFreqListFailNR-r15 OPTIONAL,

 measResultSCG-r15 OCTET STRING OPTIONAL,

 ...,

 [[ locationInfo-r16 LocationInfo-r10 OPTIONAL,

 logMeasResultListBT-r16 LogMeasResultListBT-r15 OPTIONAL,

 logMeasResultListWLAN-r16 LogMeasResultListWLAN-r15 OPTIONAL,

 failureType-v1610 ENUMERATED {t312-Expiry, scg-lbtFailure,

 beamFailureRecoveryFailure, bh-RLF-r16, spare4,

 spare3, spare2, spare1} OPTIONAL

 ]]

}

The rapporteurs understanding is that the code point *other-16* does not exist in in 36.331 Rel-15 (not even as a spare value), and will result in a transfer syntax error if received by eNb based on Rel-15 ASN.1.

In the following, the rapporteur tried (based on [R2-2108679](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108679.zip)) to list the proposed solutions (sourcing companies are asked to verify and add/correct where needed).

Solution 1-1
Add a new code point into the *failureType-r15* field in 36.331 Rel-15 SCGFailureInformationNR, e.g. “reserved”.
Further, add a code point into the *failureTyp-15* field within the TS 38.331 *CG-ConfigInfo* structure, e.g. “reserved”.

Solution 1-2:

Add a new code point into the *failureType-r15* field in 36.331 Rel-15 SCGFailureInformationNR, e.g. “reserved”.

*CG-ConfigInfo* is not updated, an hence MeNB should instead trigger a release of SCG.

Solution 2-1:
The value *other-r16* should not be used for any case. The UE should always include a “similar” r15 failure type. There are two variants.

1. Setting of failureType-r15 is specified in 38.331 procedure text.
2. Setting of failureType-r15 is left to UE impl. This solution is covered in [R2-2108569](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108569.zip).

Solution 2-2:
For the case of BFR failure, the Rel-16 UE should set the value failureType-r15 to *randomAccessProblem* Other cases are prevented by network implementation (“prevent Rel-16 UEs from encountering T312 expires, LBT failures and BH RLFs when connecting to a Rel-15 MeNB “).

Solution 3
Introduce a new field *failureTypeOther* in 36.331 Rel-16 SCGFailureInformationNR message, and dummify existing *other-r16* code-point. Corresponding procedure text changes in 38.331 Rel-16. (This solution is covered by draft CRs in [R2-2108189](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108189.zip)/[R2-2108190](http://www.3gpp.org/ftp/tsg_ran/WG2_RL2//TSGR2_115-e/Docs//R2-2108190.zip)).

In this Phase 1, companies are asked to provide their views on preferred solution alternatives. In a Phase 2, we can discuss CR details.

**Q11. Companies are asked to provide their view on preferred solution alternative.**

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| **Company** | **Preferred Solution**  | **Comments** |
| MediaTek | See comment | This is an unfortunate bug in R16 ASN.1. We should never add new UL enum value in legacy field. We recognize this is a real problem and there is no backward compatible way to solve. Our Suggestion* Dummify the *other-r16* code-point (The R16 UE shall never use it, note that it is NBC)
* No need to add new *failureTypeOther-r16* as proposed in solution 3. The existing *failureType-v1610* will provide enough information to R16 eNB.
* The UE set failureType-r15 to any legacy code-point (or some predefined code-point, e.g. *randomAccessProblem,* no strong view) while including the R16 field *failureType-v1610.*

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# 3 Conclusion

- To be updated after discussion on Phase 1 -