TSG-RAN Working Group 4 (Radio) meeting #102-eR4-2206914

Electronic Meeting, February 21 – 3 March, 2022

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **38.133** | **CR** | **DraftCR** | **rev** | **1** | **Current version:** | **17.4.0** |  |
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| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network | **X** | Core Network |  |

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| ***Title:***  | Draft CR to TS 38.133: Applicability of relaxed BFD requirements |
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| ***Source to WG:*** | Ericsson, MediaTek Inc. |
| ***Source to TSG:*** | R4 |
|  |  |
| ***Work item code:*** | NR\_UE\_pow\_sav\_enh-Core |  | ***Date:*** | 2022-02-21 |
|  |  |  |  |  |
| ***Category:*** | **B** |  | ***Release:*** | Rel-17 |
|  | *Use one of the following categories:****F*** *(correction)****A*** *(mirror corresponding to a change in an earlier release)****B*** *(addition of feature),* ***C*** *(functional modification of feature)****D*** *(editorial modification)*Detailed explanations of the above categories canbe found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | *Use one of the following releases:Rel-8 (Release 8)Rel-9 (Release 9)Rel-10 (Release 10)Rel-11 (Release 11)…Rel-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)* *Rel-19 (Release 19)* |
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| ***Reason for change:*** | Introducing applicabiliyt of relaxed BFD requirements |
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| ***Summary of change:*** | According to the agreed worksplit in R4-2120313, the general applicability requrements for relaxed BFD are introduced in this CR. Changes also include following agreements related to the applicability: Agreement from R4-2115348:* *“When BFD measurements are configured on SCell*
	+ *For intra-band CA with CSI-RS based RLM on SpCell and CSI-RS based BFD in SCell, the UE is allowed the operate in relaxed mode for RLM and/or BFD if UE has fulfilled the relaxation criteria for both RLM and BFD.*
	+ *For intra-band CA with CSI-RS based RLM on SpCell and CSI-RS based BFD in SCell, if UE has failed to fulfil the relaxation criteria for any of RLM and BFD, then the UE is not allowed to operate in relaxed mode in RLM and BFD in any of the cells.*
	+ *Note: This can be revisited upon clarification on the SCell BFD requirements in R16 eMIMO maintenance.*
* *When BFD measurements are configured on SpCell*
	+ *For intra-band CA, whether to allow RLM/BFD relaxation depends upon whether both RLM and BFD measurements on SpCell fulfil the relaxation criterion.”*
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| ***Consequences if not approved:*** | The applicability of relaxed BFD requirements in connected mode power saving are missing. |
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| ***Clauses affected:*** | New section introduced: 8.5.1.x |
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|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ...  |
| ***affected:*** | **X** |  |  Test specifications | TS 38.533 |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

### [Start of Changes]

## 8.5.1.x Introduction for Relaxed Link Recovery Procedures for UE configured with relaxed measurement criteria

The relaxed beam failure detection procedures specified in this clause apply provided for the UE supports [connected mode power saving] and configured with dedicated signaling [TBD]:

* when the UE is not performing intra-band carrier aggregation configured with CSI-RS based RLM on SpCell and CSI-RS based BFD on SCell provided that:
* UE is configured with relaxed measurement criterion for the UE with low mobility defined in clause 8.5.x.y and UE has fulfilled that criterion, and
* UE is configured with relaxed measurement criterion for the UE with good serving cell quality defined in 8.5.x.z and UE has fulfilled that criterion.
* when the UE is performing intra-band carrier aggregation configured with CSI-RS based RLM on SpCell and CSI-RS based BFD on SCell provided that:
* UE is configured with relaxed measurement criterion for the UE with low mobility defined in clause 8.5.x.y, and
* UE is configured with relaxed measurement criterion for the UE with good serving cell quality defined in 8.5.x.z and
* The UE has fulfilled the relaxed measurement criterion for low mobility and good serving cell quality for CSI-RS based RLM on SpCell and for CSI-RS based BFD on a serving cell

The scenario and RS resource configurations in the set  defined in section 8.5.1 apply for this section.

The UE is allowed to apply the relaxed requirements defined in clause 8.5.X.2 for SSB based beam failure detection and the relaxed requirements defined in clause 8.5.X.3 for CSI-RS based beam failure detection; otherwise, UE shall apply the requirements defined in clause 8.5.5 for SSB based beam failure detection and the requirements defined in clause 8.5.3 for CSI-RS based beam failure detection.

The UE is not allowed to apply the relaxed link recovery procedures provided that at least one of the following conditions is met:

* The UE sends a beam failure instance indication to the higher layers,
* The UE has triggered T310 timer.

### [End of Changes]