**3GPP TSG-RAN2 Meeting #110-e *draft R2-200xxxx***

**eMeeting, 1st – 12th June, 2020**

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| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **38.306** | **CR** | **0318** | **rev** | **1** | **Current version:** | **16.0.0** |  |
|  |
| *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 |  | Core Network |  |

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|  |
| ***Title:***  | Missing "Optional features without UE radio access capability parameters" |
|  |  |
| ***Source to WG:*** | Ericsson |
| ***Source to TSG:*** | R2 |
|  |  |
| ***Work item code:*** | NR\_newRAT-Core |  | ***Date:*** | 2020-06-09 |
|  |  |  |  |  |
| ***Category:*** | **A** |  | ***Release:*** | Rel-16 |
|  | *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-12 (Release 12)**Rel-13 (Release 13)Rel-14 (Release 14)Rel-15 (Release 15)Rel-16 (Release 16)* |
|  |  |
| ***Reason for change:*** | Optional features without UE capability signalling are missing in clause 5. |
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| ***Summary of change:*** | The following features are added to clause 5:* CMAS
* ETWS
* KPAS
* EU-Alert
* RRC connection release with deprioritisation
* RRC connection establishment failure with temporary offset

**Impact analysis** Impacted functionality: UE capability  Inter-operability: * There is no interoperability issues of this CR.
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| ***Consequences if not approved:*** | For some features it remains ambiguous whether they are optional or mandatory. |
|  |  |
| ***Clauses affected:*** | 2, 5 |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  | TS/TR ... CR ... |
| ***affected:*** |  | **X** |  Test specifications | TS/TR ... CR ...  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications | TS/TR ... CR ...  |
|  |  |
| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** | This CR is an update of the in principle agreed CR R2-2003281, but some features were missing in that CR. |

**<Start of modified section>**

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 38.101-1: "NR; User Equipment (UE) radio transmission and reception Part 1: Range 1 Standalone".

[3] 3GPP TS 38.101-2: "NR; User Equipment (UE) radio transmission and reception Part 2: Range 2 Standalone".

[4] 3GPP TS 38.101-3: "NR; User Equipment (UE) radio transmission and reception Part 3: Range 1 and Range 2 Interworking operation with other radios".

[5] 3GPP TS 38.133: "NR; Requirements for support of radio resource management".

[6] 3GPP TS 38.211: "NR; Physical channels and modulation".

[7] 3GPP TS 37.340: "Evolved Universal Terrestrial Radio Access (E-UTRA) and NR Multi-connectivity".

[8] 3GPP TS 38.321: "NR; Medium Access Control (MAC) protocol specification".

[9] 3GPP TS 38.331: "NR; Radio Resource Control (RRC) protocol specification".

[10] 3GPP TS 38.212: "NR; Multiplexing and channel coding".

[11] 3GPP TS 38.213: "NR; Physical layer procedures for control".

[12] 3GPP TS 38.214: "NR; Physical layer procedures for data".

[13] 3GPP TS 38.215: "NR; Physical layer measurements".

[14] 3GPP TS 36.101: "Evolved Universal Terrestrial Radio Access (E-UTRA) radio transmission and reception".

[15] 3GPP TS 36.306: "Evolved Universal Terrestrial Radio Access (E-UTRA) User Equipment (UE) radio access capabilities".

[16] 3GPP TS 38.323: "NR; Packet Data Convergence Protocol (PDCP) specification".

[17] 3GPP TS 36.331: "Evolved Universal Terrestrial Radio Access (E-UTRA) Radio Resource Control (RRC); Protocol Specification".

[18] 3GPP TS 38.101-4: "NR; User Equipment (UE) radio transmission and reception Part 4: Performance requirements".

[19] 3GPP TS 36.213: "Evolved Universal Terrestrial Radio Access (E-UTRA); Physical layer procedures".

[20] 3GPP TS 25.306: "UE radio access capabilities".

[xx] 3GPP TS 38.304: "User Equipment (UE) procedures in Idle mode and RRC Inactive state".

**<End of modified section>**

**<Start of modified section>**

# 5 Optional features without UE radio access capability parameters

## 5.1 PWS features

| Definitions for feature |
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| **CMAS**It is optional for UE to support CMAS reception as specified in TS 38.331 [9]. It is optional for a CMAS-capable UE to support Geofencing information (*warningAreaCoordinates*) as specified in TS 38.331 [9]. |
| **ETWS**It is optional for UE to support ETWS reception as specified in TS 38.331 [9]. |
| **KPAS**It is optional for UE to support Korean Public Alert System (KPAS) reception as specified in TS 38.331 [9]. KPAS uses the same AS mechanisms as defined for CMAS. Therefore a KPAS-capable UE shall support all behaviour that is included in TS 38.331 [9] and TS 38.304 [xx] for a CMAS-capable UE. |
| **EU-Alert**It is optional for UE to support EU-Alert reception as specified in TS 38.331 [9]. EU-Alert uses the same AS mechanisms as defined for CMAS. Therefore a EU-Alert-capable UE shall support all behaviour that is included in TS 38.331 [9] and TS 38.304 [xx] for a CMAS-capable UE. |

## 5.2 UE receiver features

| Definitions for feature |
| --- |
| **SU-MIMO Interference Mitigation advanced receiver**- R-ML (reduced complexity ML) receivers with enhanced inter-stream interference suppression for SU-MIMO transmissions with rank 2 with 2 RX antennas- R-ML (reduced complexity ML) receivers with enhanced inter-stream interference suppression for SU-MIMO transmissions with rank 2, 3, and 4 with 4 RX antennasUE supporting the feature is required to meet the Enhanced Receiver Type requirements in TS 38.101-4 [18]. |

## 5.3 RRC connection

| Definitions for feature |
| --- |
| **RRC connection release with deprioritisation**It is optional for UE to support *RRCRelease* with *deprioritisationReq* as specified in TS 38.331 [9]. |
| **RRC connection establishment failure with temporary offset**It is optional for UE to support RRC connection establishment failure with temporary offset (*Qoffsettemp*) as specified in TS 38.331 [9]. |

**<End of modified section>**