**3GPP TSG-RAN2 Meeting #117-e *R2-220xxxx***

**E-Meeting, 21 February – 3 March 2022**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
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|  | **36.331** | **CR** | XXXX | **rev** | **-** | **Current version:** | **15.16.0** |  |
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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:*** | Correction to application layer measurement and reporting | | | | | | | | | |
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| ***Source to WG:*** | Google Inc. | | | | | | | | | |
| ***Source to TSG:*** | R2 | | | | | | | | | |
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| ***Work item code:*** | LTE\_QMC\_Streaming-Core | | | | |  | ***Date:*** | | | 2022-02-24 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***Release:*** | | | Rel-15 |
|  | *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 can be 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)* | |
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| ***Reason for change:*** | | The following agreement was made during the online dicussion on proposal 3 of email disucsion [AT117-e][202][LTE].  When full config is used, NW includes QoE config if it wants the measurements to continue. Otherwise UE releases and notifies the upper layers (which needs specification change). | | | | | | | | |
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| ***Summary of change:*** | | If the *measConfigAppLayer* in the current UE configuration is released as a result of the full configuration and the *RRCConnectionReconfiguration* message does not include *measConfigAppLayer*, the UE performs actions as if *measConfigAppLayer* is received and set to release, as specified in 5.3.10.9.  **Impact analysis**  Impacted functionality:  Application layer measurement and reporting  Interoperability:  If the UE is implemented in accordance with the CR and the network is not, no interoperability issue between the UE and network is foreseen.  If the network is implemented according to CR and the UE is not, the application layer of the UE may continue to perform measurements after the full configuration, in the case where the network does not include a QoE configuration in the *RRCConnectionReconfiguration* message configuring the full configuration. | | | | | | | | |
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| ***Consequences if not approved:*** | | The UE may unnecessarily continue to perform application layer measurement after the full configuration. | | | | | | | | |
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| ***Clauses affected:*** | | 5.3.5.8 | | | | | | | | |
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|  | | **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:*** | |  | | | | | | | | |

#### 5.3.5.8 Radio Configuration involving full configuration option

The UE shall:

1> if the UE is connected to EPC:

2> release/ clear all current dedicated radio configurations except for the following:

- the MCG C-RNTI,

- the MCG security configuration,

- the PDCP, RLC, logical channel configurations for the RBs,

- the logged measurement configuration;

1> else if the UE is connected to 5GC:

2> release/ clear all current dedicated radio configurations except for the following:

- the MCG C-RNTI,

- the MCG security configuration,

- the configurations (SDAP if configured, PDCP, RLC and logical channel) for the RBs;

NOTE 1: Radio configuration is not just the resource configuration but includes other configurations like *MeasConfig* and *OtherConfig*. In case (NG)EN-DC is configured, this also includes the entire NR SCG configuration. Such NR SCG configuration does not include the DRB configuration as configured by *nr-RadioBearerConfig1* and nr-*RadioBearerConfig2*).

1> if the *measConfigAppLayer* in the current UE configuration is released for a *serviceType* as a result of the full configuration and the *RRCConnectionReconfiguration* message does not include *measConfigAppLayer* for the same *serviceType*:

2> perform actions as if *measConfigAppLayer* is received and set to release, as specified in 5.3.10.9;

1> if the *RRCConnectionReconfiguration* message includes the *mobilityControlInfo*:

2> release/ clear all current common radio configurations;

2> use the default values specified in 9.2.5 for timer T310, T311 and constant N310, N311;

1> else:

2> use values for timers T301, T310, T311 and constants N310, N311, as included in *ue-TimersAndConstants* received in *SystemInformationBlockType2* (or *SystemInformationBlockType2-NB* in NB-IoT);

1> apply the default physical channel configuration as specified in 9.2.4;

1> apply the default semi-persistent scheduling configuration as specified in 9.2.3;

1> apply the default MAC main configuration as specified in 9.2.2;

1> if the UE is a NB-IoT UE; or

1> for each *srb-Identity* value included in the *srb-ToAddModList* (SRB reconfiguration):

2> apply the specified configuration defined in 9.1.2 for the corresponding SRB;

2> apply the corresponding default RLC configuration for the SRB specified in 9.2.1.1 for SRB1 or in 9.2.1.2 for SRB2;

2> apply the corresponding default logical channel configuration for the SRB as specified in 9.2.1.1 for SRB1 or in 9.2.1.2 for SRB2;

2> if the corresponding SRB was configured with NR PDCP and the UE is connected to EPC:

3> release the NR PDCP entity and establish it with an E-UTRA PDCP entity and with the current (MCG) security configuration;

NOTE 1a: The UE applies the LTE ciphering and integrity protection algorithms that are equivalent to the previously configured NR security algorithms.

3> associate the RLC bearer of this SRB with the established PDCP entity;

NOTE 2: This is to get the SRBs (SRB1 and SRB2 for handover and SRB2 for reconfiguration after reestablishment) to a known state from which the reconfiguration message can do further configuration.

2> else if the UE is connected to 5GC:

3> apply the corresponding default PDCP configuration for the SRB as specified in TS 38.331 [82], clause 9.2.1;

1> for each *srb-Identity* value which was configured in the *srb-ToAddModListExt* but is not added in the RRC message configuring the full configuration:

2> release the RLC entity or entities;

2> release the DCCH logical channel;

2> release the PDCP entity;

1> if the UE is connected to EPC:

2> for each *eps-BearerIdentity* value included in the *drb-ToAddModList* or *nr-RadioBearerConfig1 or nr-RadioBearerConfig2* that is part of the current E-UTRA and NR UE configuration:

3> release the E-UTRA or NR PDCP entity;

3> release the RLC entity or entities;

3> release the DTCH logical channel;

3> release the *drb-identity*;

NOTE 3: This will retain the *eps-bearerIdentity* but remove the DRBs including *drb-identity* of these bearers from the current UE configuration and trigger the setup of the DRBs within the AS in clause 5.3.10.3 using the new configuration. The *eps-bearerIdentity* acts as the anchor for associating the released and re-setup DRB. In the AS the DRB re-setup is equivalent with a new DRB setup (including new PDCP and logical channel configurations).

2> for each *eps-BearerIdentity* value that is part of the current E-UTRA and NR UE configuration but not added with same *eps-BearerIdentity* in *drb-ToAddModList* nor in *nr-RadioBearerConfig1* nor in *nr-RadioBearerConfig2*:

3> perform DRB release as specified in 5.3.10.2;

1> if the UE is connected to 5GC:

2> for each *pdu-Session* that is part of the current NR UE configuration:

3> release the SDAP entity (clause 5.1.2 in TS 37.324 [97]);

3> release the NR PDCP entity for each DRB associated to the *pdu-Session*;

3> release the RLC entity or entities for each DRB associated to the *pdu-Session*;

3> release the DTCH logical channel for each DRB associated to the *pdu-Session*;

3> release the *drb-identity* for each DRB associated to the *pdu-Session*;

NOTE 4: This will retain the *pdu-Session* but remove the DRBs including *drb-identity* of these bearers from the current NR UE configuration and trigger the setup of the DRBs within the AS in clause 5.3.10.3 using the new configuration. The *pdu-Session* acts as the anchor for associating the released and re-setup DRB. In the AS the DRB re-setup is equivalent with a new DRB setup (including new PDCP and logical channel configurations).

2> for each *pdu-Session* that is part of the current NR UE configuration but not added with same *pdu-Session* in *nr-RadioBearerConfig1* nor in *nr-RadioBearerConfig2*:

3> if the procedure was triggered due to handover:

4> indicate the release of the user plane resources for the *pdu-Session* to upper layers after successful handover;

3> else:

4> indicate the release of the user plane resources for the *pdu-Session* to upper layers immediately;

// ===== The following is for information only and will be removed after the changes above are finalized. =========/

#### 5.3.10.9 Other configuration

The UE shall:

1> if the received *otherConfig* includes the *reportProximityConfig*:

2> if *proximityIndicationEUTRA* is set to *enabled*:

3> consider itself to be configured to provide proximity indications for E-UTRA frequencies in accordance with 5.3.14;

2> else:

3> consider itself not to be configured to provide proximity indications for E-UTRA frequencies;

2> if *proximityIndicationUTRA* is set to *enabled*:

3> consider itself to be configured to provide proximity indications for UTRA frequencies in accordance with 5.3.14;

2> else:

3> consider itself not to be configured to provide proximity indications for UTRA frequencies;

1> if the received *otherConfig* includes the *obtainLocation*:

2> attempt to have detailed location information available for any subsequent measurement report;

NOTE 1: The UE is requested to attempt to have valid detailed location information available whenever sending a measurement report for which it is configured to include available detailed location information. The UE may not succeed e.g. because the user manually disabled the GPS hardware, due to no/poor satellite coverage. Further details, e.g. regarding when to activate GNSS, are up to UE implementation.

1> if the received *otherConfig* includes the *bt-NameListConfig*:

2> if *bt-NameListConfig* is set to *setup*, attempt to have Bluetooth measurement results available for subsequent measurement report;

1> if the received *otherConfig* includes the *wlan-NameListConfig*:

2> if *wlan-NameListConfig* is set to *setup*, attempt to have WLAN measurement results available for subsequent measurement report;

NOTE 2: The UE is requested to attempt to have valid Bluetooth measurements and WLAN measurements whenever sending a measurement report for which it is configured to include these measurements. The UE may not succeed e.g. because the user manually disabled the WLAN or Bluetooth hardware. Further details, e.g. regarding when to activate WLAN or Bluetooth, are up to UE implementation.

1> if the received *otherConfig* includes the *idc-Config*:

2> if *idc-Indication* is included (i.e. set to *setup*):

3> consider itself to be configured to provide IDC indications in accordance with 5.6.9;

3> if *idc-Indication-UL-CA* is included (i.e. set to *setup*):

4> consider itself to be configured to indicate UL CA related information in IDC indications in accordance with 5.6.9;

3> if *idc-HardwareSharingIndication* is included (i.e. set to setup):

4> consider itself to be configured to indicate IDC hardware sharing problem indications in IDC indications in accordance with 5.6.9;

3> if *idc-Indication-MRDC* is included (i.e. set to *setup*):

4> consider itself to be configured to provide IDC indications for MR-DC in accordance with 5.6.9;

2> else:

3> consider itself not to be configured to provide IDC indications;

2> if *autonomousDenialParameters* is included:

3> consider itself to be allowed to deny any transmission in a particular UL subframe if during the number of subframes indicated by *autonomousDenialValidity*, preceeding and including this particular subframe, it autonomously denied fewer UL subframes than indicated by *autonomousDenialSubframes*;

2> else:

3> consider itself not to be allowed to deny any UL transmission;

1> if the received *otherConfig* includes the *powerPrefIndicationConfig*:

2> if *powerPrefIndicationConfig* is set to *setup*:

3> consider itself to be configured to provide power preference indications in accordance with 5.6.10;

2> else:

3> consider itself not to be configured to provide power preference indications;

1> if the received *otherConfig* includes the sps-*AssistanceInfoReport*:

2> if *sps-AssistanceInfoReport* is set to TRUE:

3> consider itself to be configured to provide SPS assistance information in accordance with 5.6.10;

2> else

3> consider itself not to be configured to provide SPS assistance information;

1> if the received *otherConfig* includes the *bw-PreferenceIndicationTimer*:

2> consider itself to be configured to provide maximum PDSCH/PUSCH bandwidth preference indication in accordance with 5.6.10;

1> else:

2> consider itself not to be configured to provide maximum PDSCH/PUSCH bandwidth indication preference;

1> if the received *otherConfig* includes the *delayBudgetReportingConfig*:

2> if *delayBudgetReportingConfig* is set to *setup*:

3> consider itself to be configured to send delay budget reports in accordance with 5.6.10;

2> else:

3> consider itself not to be configured to send delay budget reports and stop timer T342, if running;

1> if the received *otherConfig* includes the *overheatingAssistanceConfig*:

2> if *overheatingAssistanceConfig* is set to *setup*:

3> consider itself to be configured to provide overheating assistance information in accordance with 5.6.10;

2> else:

3> consider itself not to be configured to provide overheating assistance information and stop timer T345, if running;

1> for BL UEs or UEs in CE, if the received *otherConfig* includes the *rlm-ReportConfig*:

2> if *rlm-ReportConfig* is set to *setup*:

3> consider itself to be configured to detect "early-out-of-sync" and "early-in-sync" RLM events as specified in 5.3.11;

3> if *rlmReportRep-MPDCCH* is set to *setup*:

4> consider itself to be configured to report *rlmReportRep-MPDCCH* in accordance with 5.6.10;

2> else:

3> consider itself not to be configured to detect "early-out-of-sync" and "early-in-sync" RLM events and stop timer T343, timer T344, timer T314 and timer T315 if running;

1> if the received *otherConfig* includes the *measConfigAppLayer*:

2> if *measConfigAppLayer* is set to setup:

3> forward *measConfigAppLayerContainer* to upper layers considering the *serviceType*;

3> consider itself to be configured to send application layer measurement report in accordance with 5.6.19;

2> else:

3> inform upper layers to clear the stored application layer measurement configuration;

3> discard received application layer measurement report information from upper layers;

3> consider itself not to be configured to send application layer measurement report.

1> if the received *otherConfig* includes the *ailc-BitConfig*:

2> if *ailc-BitConfig* is set to TRUE:

3> consider itself to be configured to provide assistance information bit for local cache as specified in TS 36.323 [8], clause 6.2.3;

2> else:

3> consider itself not to be configured to provide assistance information bit for local cache;