**3GPP TSG-RAN WG2 Meeting #129 *R2-2500xxx***

 **Athens, Greece, February 17th – 21st, 2025**

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| *CR-Form-v12.3* |
| **CHANGE REQUEST** |
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|  | **38.331** | **CR** | **5225** | **rev** | **1** | **Current version:** | **18.4.0** |  |
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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:***  | Miscellaneous corrections for QoE report |
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| ***Source to WG:*** | ZTE Corporation, Sanechips |
| ***Source to TSG:*** |  |
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| ***Work item code:*** | NR\_QoE\_enh-Core |  | ***Date:*** | 2025-02-27 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***Release:*** | Rel-18 |
|  | *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-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19) Rel-20 (Release 20)* |
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| ***Reason for change:*** | 1. For the below two cases, the UE submits RAN visible application layer measurement report and encapsulated QoE into two separate *MeasurementReportAppLayer* message. These cases are missing in the current procedure text. * Case 1: reportingSRB is absent (based on existing specifications, the UE by default considers to use SRB4), and ran-VisibleReportingSRB indicates SRB5
* Case 2: reportingSRB indicates SRB5 and ran-VisibleReportingSRB is absent (the UE by default considers SRB4 based on existing specifications)
1. Additionally, according to the specifications, if the *ran-VisibleReportingSRB* is not configured for standalone QoE, the RAN visible application layer measurement reports are always reported via SRB4. In this case, if SRB4 is not available, UE shall discard the RAN visible application layer measurement report, which is not captured in below Note 2.

------------------------------------------------38.331-----------------------------------------1> for each encoded *MeasurementReportAppLayer* message generated above which contains only RAN visible application layer measurement reports:2> if *ran-VisibleReportingSRB* is not configured for the *measConfigAppLayerId*:3> submit the *MeasurementReportAppLayer* message to lower layers for transmission via SRB4;2> else if *ran-VisibleReportingSRB* is configured for the *measConfigAppLayerId*:3> submit the *MeasurementReportAppLayer* message to lower layers for transmission via the SRB indicated in the field *ran-VisibleReportingSRB* in *MeasConfigAppLayer*.NOTE 1: If the SRB indicated by *reportingSRB* is not available or if *reportingSRB* is absent and SRB4 is not available, the UE may store application layer measurement report containers until the SRB is available. The UE may discard reports when the memory reserved for storing application layer measurement report containers becomes full. Reports with lower *appLayerMeasPriority* are discarded first. If equal or no *appLayerMeasPriority* is configured, older reports are discarded first.NOTE 2: If the SRB indicated by *ran-VisibleReportingSRB* is not available, the UE discards RAN visible application layer measurement reports.------------------------------------------------38.331------------------------------------------ |
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| ***Summary of change:*** | 1. Update procedure text in 5.7.16.2 to capture UE QoE report when reportingSRB is absent and ran-VisibleReportingSRB indicates SRB5, or when reportingSRB indicates SRB5 and ran-VisibleReportingSRB is absent.
2. In NOTE 2 of subclause 5.7.16.2, it is added that when the *ran-VisibleReportingSRB* is not configured and SRB4 is not available, the UE discards the RAN-visible application layer measurement reports.

**Impact analysis**Impacted ArchitectureNR SA, NR-DCImpacted functionality:Application layer measurement reportInter-operability:* If the network is implemented according to the CR but the UE is not, there will be misunderstanding between UE and NW on which leg the QoE measurements shall be sumitted to.
* If the UE is implemented according to the CR but the network is not, there will be misunderstanding between UE and NW on which leg the QoE measurements shall be sumitted to.
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| ***Consequences if not approved:*** | There may be a misunderstanding between the UE and the NW regarding which leg the QoE measurements are submitted to. Additionally, the UE may not discard RAN visible application layer measurement reports when SRB4 is not available. |
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| ***Clauses affected:*** | 5.7.16.2 |
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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 ...  |
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| ***Other comments:*** |  |
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| ***This CR's revision history:*** |  |

*CHANGE STARTS*

5.7.16.2 Initiation

A UE capable of application layer measurement reporting in RRC\_CONNECTED may initiate the procedure when configured with application layer measurement and reporting, i.e. whenat least one *measConfigAppLayer* and SRB4 and/or SRB5 have been configured by the network.

Upon initiating the procedure, the UE shall:

1> for each stored application layer measurement configuration with *appLayerIdleInactiveConfig* configured and for which *appLayerIdleInactiveConfig* has not been transmitted since the UE received the *RRCSetup* message*:*

2> set the parameters in *appLayerIdleInactiveConfig* in the *MeasurementReportAppLayer* message to the values stored in the UE variable *VarAppLayerIdleConfig*;

2> if the *transmissionOfSessionStartStop* is set to *true*:

3> if a session start or stop indication has been received from upper layers:

4> set the *appLayerSessionStatus* in the *MeasurementReportAppLayer* message to the value of the latest received session start or stop indication;

3> else:

4> set the *appLayerSessionStatus* in the *MeasurementReportAppLayer* message to *stop*;

1> for each *measConfigAppLayerId* with an application layer measurement report container which has not been transmitted since the UE received the *RRCSetup* message:

2> if the application layer measurement reporting has not been suspended for the *measConfigAppLayerId* associated with the application layer measurement report container according to clause 5.3.5.13d:

3> set the *measConfigAppLayerId* in a *MeasReportAppLayer* in the *MeasurementReportAppLayer* message(s) to the value of the *measConfigAppLayerId* received together with the application layer measurement report container;

3> for each application measurement report container stored for that *measConfigAppLayerId*:

4> set the *measReportAppLayerContainerList* in the *MeasurementReportAppLayer* message(s) to the stored value of the application layer measurement report container;

NOTE 0: If the application layer measurement configurations and reports exceed the size of an RRC message, the UE includes the *appLayerIdleInactiveConfig* and corresponding *appLayerSessionStatus* in the first *MeasurementReportAppLayer* message after the UE received the *RRCSetup* message, and transmits application layer measurement report containers in subsequent *MeasurementReportAppLayer* messages.

1> for each *measConfigAppLayerId* received from upper layers:

2> if the UE AS has received application layer measurement report container from upper layers which has not been transmitted; and

2> if the application layer measurement reporting has not been suspended for the *measConfigAppLayerId* associated with the application layer measurement report container according to clause 5.3.5.13d:

3> set the *measReportAppLayerContainer* in the *MeasurementReportAppLayer* message to the received value in the application layer measurement report container;

2> set the *measConfigAppLayerId* in the *MeasurementReportAppLayer* message to the value of the *measConfigAppLayerId* received together with application layer measurement report information;

2> if session start or stop information has been received from upper layers for the *measConfigAppLayerId*:

3> set the *appLayerSessionStatus* in the *MeasurementReportAppLayer* message to the latest received value of session start or stop information;

2> if a RAN visible application layer measurement report has been received from upper layers:

3> for each *appLayerBufferLevel* value in the received RAN visible application layer measurement report:

4> set the *appLayerBufferLevel* values in the *appLayerBufferLevelList* in the *MeasurementReportAppLayer* message to the buffer level values received from the upper layer in the order with the first *appLayerBufferLevel* value set to the newest received buffer level value, the second *appLayerBufferLevel* value set to the second newest received buffer level value, and so on until all the buffer level values received from the upper layer have been assigned or the maximum number of values have been set according to *appLayerBufferLevel*, if configured;

3> set the *playoutDelayForMediaStartup* in the *MeasurementReportAppLayer* message to the received value of playout delay for media startup in the RAN visible application layer measurement report, if any;

3> for each PDU session ID value indicated in the received RAN visible application layer measurement report, if any:

4> set the *PDU-SessionID* in the *pdu-SessionIdList* in the *MeasurementReportAppLayer* message to the indicated PDU session ID value;

4> for each QoS Flow ID value indicated in the received RAN visible application layer measurement report associated with the PDU Session ID, if any:

5> set the *QFI* associated with the PDU session ID to the indicated QoS Flow ID value.

1> if *reportingSRB* (or SRB4 if *reportingSRB* is absent) and *ran-VisibleReportingSRB* (or SRB4 if *ran-VisibleReportingSRB* is absent) indicates different SRBs for the *measConfigAppLayerId*:

2> include *measReportAppLayerContainer* and *appLayerSessionStatus* in a separate *MeasurementReportAppLayer* message than *ran-VisibleMeasurements*;

1> for each encoded *MeasurementReportAppLayer* message generated above which contains either only encapsulated application layer measurement reports or both encapsulated application layer measurement reports and RAN visible application layer measurement reports:

2> if *reportingSRB* is not configured for the *measConfigAppLayerId*:

3> if the encoded RRC message is larger than the maximum supported size of one PDCP SDU specified in TS 38.323 [5]:

4> if the RRC message segmentation is enabled based on the field *rrc-SegAllowedSRB4* received in *appLayerMeasConfig*:

5> initiate the UL message segment transfer procedure as specified in clause 5.7.7 for transmission via SRB4;

4> else:

5> discard the RRC message;

3> else:

4> submit the *MeasurementReportAppLayer* message to lower layers for transmission via SRB4.

2> else if *reportingSRB* is configured for the *measConfigAppLayerId*:

3> if the encoded RRC message is larger than the maximum supported size of one PDCP SDU specified in TS 38.323 [5]:

4> if the RRC message segmentation is enabled based on the field *rrc-SegAllowedSRB4* received in *appLayerMeasConfig* and the *reportingSRB* is SRB4, or

4> if RRC message segmentation is enabled based on the field *rrc-SegAllowedSRB5* received in *appLayerMeasConfig* and the *reportingSRB* is SRB5:

5> initiate the UL message segment transfer procedure as specified in clause 5.7.7 for transmission via the SRB indicated in the field *reportingSRB* in *MeasConfigAppLayer*;

4> else:

5> discard the RRC message;

3> else:

4> submit the *MeasurementReportAppLayer* message to lower layers for transmission via the SRB indicated in the field *reportingSRB* in *MeasConfigAppLayer*.

1> for each encoded *MeasurementReportAppLayer* message generated above which contains only RAN visible application layer measurement reports:

2> if *ran-VisibleReportingSRB* is not configured for the *measConfigAppLayerId*:

3> submit the *MeasurementReportAppLayer* message to lower layers for transmission via SRB4;

2> else if *ran-VisibleReportingSRB* is configured for the *measConfigAppLayerId*:

3> submit the *MeasurementReportAppLayer* message to lower layers for transmission via the SRB indicated in the field *ran-VisibleReportingSRB* in *MeasConfigAppLayer*.

NOTE 1: If the SRB indicated by *reportingSRB* is not available or if *reportingSRB* is absent and SRB4 is not available, the UE may store application layer measurement report containers until the SRB is available. The UE may discard reports when the memory reserved for storing application layer measurement report containers becomes full. Reports with lower *appLayerMeasPriority* are discarded first. If equal or no *appLayerMeasPriority* is configured, older reports are discarded first.

NOTE 2: If the SRB indicated by *ran-VisibleReportingSRB* is not available or if *ran-VisibleReportingSRB* is absent and SRB4 is not available, the UE discards RAN visible application layer measurement reports.

*CHANGE ENDS*