**3GPP TSG-SA5 Meeting #131-e *S5-203022***

**Online, 25th May 2020 - 3rd Jun 2020**

|  |
| --- |
| *CR-Form-v12.0* |
| **CHANGE REQUEST** |
|  |
|  | **32.422** | **CR** |  | **rev** |  | **Current version:** | **16.1.0** |  |
|  |
| *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)*.* |
|  |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network | **X** | Core Network |  |

|  |
| --- |
|  |
| ***Title:***  |  |
|  |  |
| ***Source to WG:*** | China Telecommunications, Huawei |
| ***Source to TSG:*** | S5 |
|  |  |
| ***Work item code:*** | TEI16 |  | ***Date:*** | 2020-05-12 |
|  |  |  |  |  |
| ***Category:*** | **F** |  | ***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:*** | MDT data are of great importance for RF optimization, and SINR which represents the signalling quality is commonly used in network optimization in LTE. However, in clause 5.10.3, the SINR measurement in M1 for Immediate MDT is absent in LTE. And from another perspective, corresponding measurements are included in M1 in UMTS and NR (see TS 32.422 clause 5.10.3). It is better to align with UMTS and NR.It is therefore proposed to add SINR measurement in M1 for Immediate MDT in LTE. |
|  |  |
| ***Summary of change:*** | Update the M1 measurement for LTE by adding SINR in clause 5.10.3. |
|  |  |
| ***Consequences if not approved:*** | Misaligned and insufficient measurements cause confusion and low network optimization efficiency. |
|  |  |
| ***Clauses affected:*** | 5.10.3 |
|  |  |
|  | **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:*** |  |

|  |
| --- |
| **Start of changes** |

### 5.10.3 List of measurements

This parameter is mandatory if the Job type is configured for Immediate MDT or combined Immediate MDT and Trace. This parameter defines the measurements that shall be collected. For further details see also 3GPP TS 37.320 [30]. The parameter is 4 octet long bitmap with the following values in UMTS:

- M1: CPICH RSCP and CPICH Ec/No measurement by UE with Periodic or event 1F as reporting triggers.

- M2: For 1.28 Mcps TDD, P-CCPCH RSCP and Timeslot ISCP measurement by UE with event 1I as reporting triggers.

- M3: SIR and SIR error (FDD) by NodeB

- M4: UE power headroom (UPH) by the UE, applicable for E-DCH transport channels.

- M5: Received total wideband power (RTWP) by Node B

- M6: Data Volume measurement, separately for DL and UL, by RNC.

- M7: Throughput measurement, separately for DL and UL, per RAB and per UE, by RNC.

- Any combination of the above

The parameter can have the following values in LTE:

- M1: RSRP, RSRQ and SINR measurement by UE with Periodic, event A2 as reporting triggers

- M2: Power Headroom (PH) measurement by UE
NOTE: Available from MAC layer

- M3: Received Interference Power measurement by eNB

- M4: Data Volume measurement separately for DL and UL by eNB

- M5: Scheduled IP Throughput measurement separately for DL and UL, per RAB per UE and per UE for the DL, per UE for the UL, by eNB

- M6: Packet Delay measurement, separately for DL and UL, per QCI per UE, UL PDCP Delay, by the UE, and Packet Delay in the DL per QCI, by the eNB

- M7: Packet Loss rate measurement, separately for DL and UL per QCI per UE, by the eNB

- M8: RSSI measurement by UE for WLAN and Bluetooth®

- M9: RTT measurement by UE only for WLAN

- And any combination of above

The parameter can have the following values in NR:

 - M1: DL signal quantities measurement results for the serving cell and for intra-frequency/Inter-frequency/inter-RAT neighbour cells, including cell/beam level measurement.

- M2: Power headroom (PH) measurement by UE

- M3 is not supported by this release

- M4: Data volume measurement separately for DL and UL

- M5: Average UE throughput measurement separately for DL and UL

- M6: Packet delay measurement, separately for DL and UL

- M7: Packet loss rate measurement, separately for DL and UL

- M8: RSSI measurement by UE for WLAN and Bluetooth®

- M9: RTT measurement by UE for WLAN

Detailed information for M4, M5, M6, M7 is defined 3GPP TS 36.314 [35], for M1, M8, M9 in 3GPP TS 38.331[43], for M2 in TS 38.321[51].

|  |
| --- |
| LTE |
| Bit 8 | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 |
| M7 | M6 | logging of M1 from event triggered measurement reports according to existing RRM configuration |  M5 | M4 | M3 | M2 | M1 |
| spare |
| UMTS |
| Bit 8 | Bit 7 | Bit 6 | Bit 5 | Bit 4 | Bit 3 | Bit 2 | Bit 1 |
| M7 for DL  | M6 for UL | M6 for DL | M5 | M4 | M3 | M2 | M1 |
| spare | M7 for UL |

|  |
| --- |
| **end of changes** |