**3GPP TSG-SA5 Meeting #148e *S5-233409***

Electronic meeting, Online, 17 -25 April 2023

**Source: China Mobile, Huawei, ZTE, AsiaInfo, China Unicom, CATT**

**Title: pCR TR 28.910 Add gap analysis and recommendation for key issue#5.1b RAN UE throughput optimization**

**Document for: approval**

**Agenda Item: 6.7.1.2**

# 1 Decision/action requested

***The group is asked to discuss and approval.***

# 2 References

[1] 3GPP draft TR 28.910: “Study on enhancement of autonomous network levels v0.4.0”.

# 3 Rationale

Regarding the Key Issue# 5.1b: Analysis on the solution for MnS requirements of autonomous network level for RAN UE throughput optimization, only solution for **REQ-ANL-NetOpt-Level\_1-MnS** and **REQ-ANL-NetOpt-Level\_4-MnS** are described. The solution description for **REQ-ANL-NetOpt-Level\_2-MnS** and **REQ-ANL-NetOpt-Level\_3-MnS** are missing. This contribution proposes to add corresponding gap analysis and recommendation.

# 4 Detailed proposal

It proposes to make the following changes to TR 28.910[1].

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| **1st Change** |

## 5.1b Key Issue# 5.1b: Analysis on the solution for MnS requirements of autonomous network level for RAN UE throughput optimization

### 5.1b.1 Description

Autonomous network level for RAN UE throughput optimization is documented in clause A.2 in TS 28.100[4]. In TS 28.100[4], corresponding workflow and classification of autonomous network level for RAN UE throughput optimization is defined, however it is not clear whether the solution for generic MnS requirements of autonomous network level for RAN UE optimization is well defined. So it is necessary to analyse the solutions for corresponding MnS requirements.

### 5.1b.2 Potential solutions

Based on the existing generic MnS requirements of Level 1-Level 3 for the generic network optimization in TS 28.100 [4] and additional MnS requirements for Level 4 for the generic network optimization in clause 5.1, following are the solution descriptions to be added in TS 28.100[4] which can be used to satisfy MnS requirements of autonomous network level for RAN UE throughput optimization.

* Regarding the **REQ-ANL-NetOpt-Level\_1-MnS-1, 2, 3,** NR NRM (e.g. NRCellCU, NRCellRelation, NRCellDU) defined in TS 28.541[8] are used to represent network adjustment solution. The UE throughput measurements (e.g. Average DL UE throughput in gNB, Distribution of DL UE throughput in gNB) defined in TS 28.552 [10] and RAN UE Throughput KPIs (e.g. DL RAN UE throughput for a sub-network, DL RAN UE throughput for a NRCellDU) defined in TS 28.554 [X] are used to represent the network related information.

Regarding the **REQ-ANL-NetOpt-Level\_4-MnS-1, 2,** the attribute"aveULRANUEThptTarget", "aveDLRANUEthptTarget","lowULRANUEThptRatioTarget" and "lowDLRANUEThptRatioTarget" of RadioNetworkExpectation in intent information model in TS 28.312[5] as expectation targets for RAN UE throughput assurance.

Following are the gap analysis for the solutions to Level 1-Level 4 MnS requirements for RAN UE throughput optimization.

Gap: No existing solutions can be used to support additional MnS requirements to support autonomous network level 2 and 3. The mechanism to allow MnS consumer to obtain the RAN UE throughput issue identification, demarcation and root cause analysis result is missing.

Solution: MDA feature (TS 28.104 [6]) is developed to identify ongoing issues impacting the performance of the network and services, and help to identify in advance potential issues that may cause potential failure and/or performance degradation. MDA feature can be enhanced to provide the capabilities for MnS requirements to support autonomous network level 2 and 3 for RAN UE throughput optimization, which means an MDA capability for RAN UE throughput problem analysis needs to be defined to provide RAN UE throughput analytic output including information related to RAN UE throughput issue identification, demarcation and root cause analysis result.

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| **2nd Change** |

# 7 Conclusion and recommendation

*Editor's note: this clause will be used to document the conclusions and recommendation of the study.*

## 7.X Analysis on the solution for MnS requirements of autonomous network level for RAN UE throughput optimization

According to the potential solutions described in clause 5.1b.2, there are existing solutions can be used to satisfy the MnS requirements to support autonomous network level 1 and 4. So it is recommended to add solution description for MnS requirements of autonomous network level 1 and 4 for RAN UE throughput optimization in TS 28.100 [4].

According to the potential solutions described in clause 5.1b.2, MDA capability for RAN UE throughput problem analysis needs to be defined to support MnS requirements of autonomous network level 2 and 3 for RAN UE throughput optimization. So it is recommended to add MDA capability for RAN UE throughput problem analysis in TS 28.104 [6].

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| **End of Changes** |