**3GPP TSG-SA5 Meeting #144-e *S5-224046***

**e-meeting, 27 June - 1 July 2022**

**Source: Huawei, China Mobile**

**Title: pCR TR 28.909 Add key issues for KEI of autonomous network levels evaluation for radio network optimization**

**Document for: approval**

**Agenda Item: 6.7.2.2**

# 1 Decision/action requested

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

# 2 References

[1] 3GPP draft TR 28.909: “Management and orchestration; Study on evaluation of autonomous network levels v0.2.0”.

# 3 Rationale

This contribution proposes to add key issues for KEI of autonomous network levels evaluation for radio network optimization based on concept of KEI in clause 4.1.3.

# 4 Detailed proposal

It proposes to make the following changes to TR 28.909[1].

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| **1st Change** |

## 5.X Key Issue# 5.X: KEI of autonomous network levels evaluation for radio network optimization

### 5.X.1 Description

Regarding the radio network optimization (e.g. radio network coverage optimization), following aspects described the effect for introducing autonomy capability for radio network optimization.

- Autonomous optimization effect aspect, the autonomous optimization effect for corresponding tasks of radio network optimization by introducing autonomy capability. One example, telecom system A with autonomy capability can analysis the root cause for 90% coverage issue cells (the root cause of other 10% coverage issue cell still needs to be analysed by human), however, telecom system B with autonomy capability only analysis the 10% coverage issue cells (the root cause of other 90% coverage issue cell still needs to be analysed by human). The effect of introducing root cause autonomy capability for telecom system A and telecom system B is different. Another example, telecom system A take one day to optimize the radio network by introducing the autonomy capability for corresponding tasks, however, telecom system B take 5 days to optimize the radio network by introducing the autonomy capability for corresponding tasks. In this case, the effect of introducing autonomy capability for telecom system A and telecom system B is different.

- Network performance improvement effect aspect, the performance improvement by introducing autonomy capability for radio network optimization. For example, telecom system A improve the 30% coverage performance by introducing the autonomy capability for corresponding tasks, however, telecom system B only improve 5% coverage performance by introducing the autonomy capability for corresponding tasks. In this case, the effect of introducing autonomy capability for telecom system A and telecom system B is different.

### 5.X.2 Potential Solution

Based on the description in clause 5.X.1, following are the potential examples for KEIs for radio network optimization:

- Autonomy ratio of optimization, including the autonomy ratio for corresponding network optimization tasks (including task of network issue demarcation analysis, task of network issue root cause analysis, task of network adjustment solution analysis, task of network adjustment solution evaluation and determination, etc.). For example, coverage issue root cause analysis autonomy ratio represents the proportion of the number of the coverage issue cells whose root cause can be analysed by the telecom system to the total number of coverage issue cells.

- Optimization period, which means the time period that the telecom system take for the network optimization. For example, one hour, one day or one week.

- Network performance gain, this is used to measure the network performance improvement ratio by introducing autonomy capability for radio network optimization. The network performance can be coverage performance, capacity performance, throughput performance and other performance. For example, the coverage performance gain can be proportion of the reduced number of weak coverage cells (e.g. RSRP < -110dB) by introducing the autonomy capability for network optimization to the total number of weak coverage cells before introducing the autonomy capability for network optimization.

Editor's Note: Above solution needs to be revisited based on further discussion.

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| **End of Changes** |