**3GPP TSG-SA5 Meeting #156 *S5-244601***

**Maastricht, The Netherlands 19 - 23 August** 2024

**Source: China Mobile**

**Title: Rel-19 pCR TR28.9xx Add use case of AI emulation**

**Document for: Approval**

**Agenda Item: 6.19.1**

# 1 Decision/action requested

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

# 2 References

[1] S5-243522 3GPP Draft TR 28.858 Study on AIML management phase 2 v0.1.0

# 3 Rationale

The WT-1 in R19 of AIML\_MGT is to study on AI/ML emulation. Therefore, it is necessary to add the use case related with AI/ML emulation..

This contribution is to add the use case and potential requirements for management aspects of AI/ML emulation.

# 4 Detailed proposal

It proposes to make the following changes to TR 28.858 Study on AIML management phase 2.

|  |
| --- |
| **1st modified section** |

# 5 AI/ML management use cases and requirements

### 5.3 AI/ML inference emulation

#### 5.3.1.1 Description

A trained ML model can be used for inference within the stated scope e.g. on a managed function or in a management function. Accordingly, there may be an AI/ML inference MnS producer that is responsible for executing the inference.

#### 5.3.1.2 Use cases

##### 5.3.1.2.x Configuration management for ML emulation

Although a ML model is well trained, the performance of the ML model in the production network is difficult to determine and guarantee because the training environment and production network are not exactly the same. If a trained or tested ML model is directly applied to the production network, it may have a negative impact on the production network.

ML emulation means that the ML model is applied in an emulation environment to check whether the performance of ML model meets the expected inference characteristics. The MnS inference consumer may want to receive results of ML emulation to decide whether to use the ML model.

The management system should have the capability to enable an MnS consumer to select the emulation environment, as well as provide the configuration information related to the emulation environment. The configuration information may include determining the simulation scope, simulation time, etc.

#### 5.3.1.3 Potential requirements

**REQ-EMUL-x:** The MnS producer for AI/ML inference emulation should have a capability enabling an authorized MnS consumer to select the emulation environment.

|  |
| --- |
| **End of modified sections** |