3GPP TSG-WG SA2 Meeting #149E e-meeting *S2-220xxxx*

Elbonia, February 14th – 25th, 2022 (revision of S2-220xxxx)

**Source: CATT**

**Title: New Key Issue: Exposure of 5GS QoS information and network conditions to the AF**

**Document for: Approval**

**Agenda Item: 9.19**

**Work Item / Release: FS\_XRM / Rel-18**

*Abstract: Proposes a new key issue to study exposure of 5GS QoS information and network conditions to the Application to enable quick codec/rate adaptation in help to provide desired QoE (e.g. such as assist in alleviating 5GS congestion) for the WT#2.2.*

# 1. Introduction

In 3GPP, network information exposure has been defined in different TSs for difference purposes, e.g. the NEF-based network exposure architecture is defined in TS23.501, and the CAPIF-based network exposure is defined in TS23.222. QoS sustainability exposure is defined in TS23.288. The low latency QoS information exposure is defined in TS 23.548.

XR services are characterized by high data rate and low latency. XR services bring more chances or more quickly to the RAN congestion. XR AF normally has the capability to adjust its data rate based on the network conditions, but the XR AF needs to get the 5G network condition timely. If there is data congestion in the RAN, the XR media units can be dropped by the RAN. Also the RAN can provide QoS capability, congestion degree and the future time to enter/leave the congestion status. In such cases, the 5GS can provide its QoS capability and network (congestion) information to the AF timely and quickly, and the AF can quickly change the bit rate of the media and the AF even can mark the different priority/importance of the DL media units, the RAN can drop the least important packets to quickly recover the congestion state.

# 2. Text Proposal

It is proposed to capture the following changes vs. TR 23.700-60.

\* \* \* \* First change (all new texts)\* \* \* \*

## 6.x Key Issue #x - Exposure of 5GS QoS information and network conditions to the AF

### 6.x.1 Description

In 3GPP, network information exposure has been defined in different TS for difference purpose, e.g. the NEF-based network exposure architecture is defined in TS23.501, and the CAPIF-based network exposure is defined in TS23.222. QoS sustainability exposure is defined in TS23.288. The low latency QoS information exposure is defined in TS 23.548.

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This key issue proposes to study exposure of 5GS QoS information and network conditions to the Application to enable quick codec/rate adaptation help to provide desired QoE (e.g. such as assist in alleviating 5GS congestion) . The key issue includes the following aspects:

- What 5GS QoS Information are exposed to the AF?

- What the network conditions are exposed to the AF?

- How the 5GS QoS information and/or network conditions are exposed to the AF?

- How the 5GS QoS information and/or network conditions information to be continually exposed to the AF when the RAN or network node or the AF are relocated?

- How to activate/deactivate the 5G QoS information and/or network conditions to the AF?

- How to control the rate or the volume of the exposure procedures to minimize the impact to the 5GS?

Note1: The AF can be in the trusted domain or outside the trusted domain.