**SA WG2 Meeting #149eS2-220xxxx**

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

**Source: Nokia, Nokia Shanghai Bell**

**Title:**  **Exposure of 5GS QoS capabilities and network conditions**

**Document for: Approval**

**Agenda Item: 9.19**

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

*Abstract of the contribution: This paper proposes a KI to address Work Task #2.2*

# Discussion

The FS\_XRM SID contains the following Work Task:

WT#2: Enhancements of network exposure to support interaction between 5GS and application:

* WT#2.1: Study whether and how interaction between AF and 5GS is needed for application synchronization and QoS policy coordination among multiple UEs or between multiple QoS flows per UE.
* WT#2.2: Study exposure of 5GS QoS information (e.g., QoS capabilities) 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).

NOTE1: Parameters for exposure may coordinate with RAN and SA4.

WT#2.2 addresses the scenario where QoS capabilities and network conditions are exposed to the application to allow the application to quickly react on changes by, e.g., codec or rate adaptation to provide the desired QoE. The exposure is especially relevant for media services which have large traffic bursts.

# 2 Proposal

**It is proposed to update TR 23.700-60** **as follows**

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

## x.1 Key Issue #X: Exposure of 5GS QoS and network conditions to the application

x.1.1 Description

The objective of this Key Issue is to study on how to enhance the network exposure to enable a close interaction between the 5GS and the application. This includes the exposure of QoS information such as QoS capabilities as well as network conditions. Study exposure of 5GS QoS information (e.g., QoS capabilities) and network conditions to the application.

The QoS information and network conditions can be used by the application to perform, e.g., the following tasks:

* Rate adaptations
* Codec adjustments
* Processing allocation between service endpoints
* Scheduling of burst transmission

For this Key Issue, the following areas should be studied:

* Identification of information that reflect 5GS QoS information (e.g., QoS capabilities) and the enhancements needed in 5GS to expose 5GS QoS capabilities to the application.
* Identification of information that reflect network conditions and the enhancements needed in 5GS to expose network conditions to the application.
* When and how are the network conditions and QoS capabilities exposed to the application?
  + Initial exposure during e.g., PDU session establishment procedure
  + Request-response exposure upon Request from the Application
  + Event-triggered exposure, e.g., after changes to network conditions and/or QoS capabilities
  + Continuous exposure of network conditions and/or QoS capabilities