**SA WG2 Meeting #140 S2-2005740**

**19 August - 02 September 2020**

**Source: Nokia, Nokia Shanghai Bell**

**Title: KI #3A: Evaluation and conclusion**

**Document for: Discussion/Approval**

**Agenda Item: 8.5**

**Work Item / Release: FS\_IIoT / Rel-17**

*Abstract of the contribution: This contribution gives the evaluations for the solutions of KI#3A and proposes the conclusion for KI#3A.*

# 1 Discussion

This contribution proposes conclusions and way forward for Key Issue #3A Exposure of deterministic QoS

# 2 Proposal

The following change is proposed for TR 23.700-20.

\* \* \* \* First change \* \* \* \*

## 7.X Key Issue #3A: Exposure of deterministic QoS

For Key Issue 3A:

*Any AF that has knowledge of deterministic application requirements should be able to request TSC services from the 5GS and as authorized, be notified of pertinent network events. This key issue is intended to support in the 5GS, requirements from TS 22.104 [4] where a TSN bridged network may not be needed and requirements from TS 22.263 [5] for Video, Imaging and Audio for Professional Applications (VIAPA). Applications provide those requirements to 5GS for any type of PDU Session.*

Five solutions were proposed for Key Issue #3A.

1. Solution #5 supports:
   1. AF requests for QoS where:
      1. Requests may be sent via the NEF where the requests supply requirements via TSC specific parameters and TSCAI.
      2. The 5GS sets TSCAI according to information received from the AF (for use in RAN scheduling as in Rel. 16).
      3. Burst Spread is provided as part of TSCAI (for use in RAN scheduling).
      4. Hold and Forward buffers in the UE/DS-TT or UPF/NW-TT can be configured via 5GS parameters rather than IEEE 802.1Q managed objects
   2. The AF can request that the 5GS expose Deterministic QoS capability information to aid the AF in formulating a request for TSC QoS that will be acceptable to the 5GS
   3. TSC Connectivity Monitoring can be preformed
2. Solution #6 proposed a call flow for communication without a TSN network. It was merged with Solution #5
3. Solution #13 proposes a mechanism for AF to request a jitter requirement and receive jitter estimates from the PCF. The PCF determines the jitter based on R16 QoS monitoring mechanisms that provide E2E packet delay measurements (between UE and PSA UPF).
4. Solution #14 proposes using NWDAF Observed Service Experience analytics to decide if QoS parameters fulfil the QoS requirements

\* \* \* \* Second change \* \* \* \*

## 8.X Key Issue #3A: Exposure of deterministic QoS

The following is concluded for Key Issue #3A:

1. Solution #5 is adopted as the basis for normative work for Release 17.
2. Solution #13 is adopted for monitoring and reporting jitter for TSC. Jitter constitutes the new “TSC connectivity monitoring” described in Solution #5.

\* \* \* \* End of changes \* \* \* \*