**3GPP TSG-SA WG1 Meeting #96-e S1-21xxxx**

**Electronic Meeting, xxxx 2021** *(revision of S1-21xxxx)*

**Source: China Mobile, Huawei, InterDigital, Futurewei, LG ?, Xiaomi ?…**

**Title: FS\_TACMM discussion on consolidation of potential requirements**

**Spec: 3GPP TR 22.847 V18.0.0**

**Agenda item: xx**

**Document for: Discussion**

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*Abstract: Taking into account the discussions captured in S1-213334, this document discusses the way forward to consolidate the potential functional requirements captured in TR22.847, and provides a pCR accordingly.*

NOTE: The FFS in the following PRs will be discussed and solved in other CRs.

**1. Discussion**

There are several potential requirements and KPIs captured in TR22.847. The potential consolidation of the requirements is summarized below.

QoS policy related:

Receiving QoS policy from a 3rd party --

[PR 5.2.6-2] The 5G system shall support a mechanism to allow an authorized 3rd party to provide QoS policy for flows of multiple UEs associated with an application. The policy may contain e.g. the expected 5GS handling and the associated triggering event.

[PR 5.3.6-2] The 5G system shall support a mechanism to allow an authorized 3rd party to provide QoS policy for coordination between flows of multiple UEs associated with an application. The policy may contain e.g. the set of UEs and data flows, the expected 5GS QoS handling(s) and associated triggering events, expected coordination assistance provided by 5G system between those multiple flows for different traffic types (e.g., haptic, audio and video).

[PR 5.5.6-1] The 5G network shall support a mechanism to allow an authorized 3rd party to provide QoS policy for flows of multiple UEs associated with an application. The policy may contain e.g. the expected 5GS handling and the associated triggering event.

[PR 5.6.6-1] The 5G system shall support a mechanism to allow an authorized 3rd party to provide QoS policy for flows of multiple UEs associated with an application. The policy may contain e.g. the expected 5GS handling and the associated triggering event.

[PR 5.7.6-2] The 5G system shall support a mechanism for a 3rd party application server to provide real-time feedback on the traffic characteristics and service requirements of the multiple streams of a multi-modal communication session.

[PR 5.8.6-1] 5G system shall be able to support the interaction with applications on UEs or data flows grouping information within one tactile and multi-modality communication service.

Synchronization threshold related:

[PR 5.1.6-2] The 5G system shall enable means to meet a synchronization threshold for flows of multiple UEs associated with an application based on input received from an authorized 3rd party.

[PR 5.3.6-3] The 5G system shall enable means to meet a synchronization threshold for flows of multiple UEs associated with an application based on input received from an authorized 3rd party.

**Proposal:**

**[CPR-1]** The 5G system shall enable an authorized 3rd party to provide QoS policy for flows associated with an application. The policy may contain e.g. the set of UEs and data flows, the expected QoS handling and the associated triggering events., synchronization thresholds.

**Proposal:**

**(consider this part as a NOTE) Synchronization thresholds are an aspect of QoS that can be contained in the QoS policy provided by the application. The sync threshold only needs to be considered when it is lower than the e2e latency needed for the application – if the sync threshold is higher, it will de facto be met by meeting the e2e latency requirements – which is the case in most of the use cases in the TR.**

**[CPR-2]** The 5G system shall support a means to assist a 3rd party application to coordinate the transmission of multiple UEs’ flows (e.g., haptic, audio and video) of a multi-modal communication session to enable presenting the related tactile and multi-modal data to the user within a certain time.

General:

[PR 5.7.6-1] The 5G system shall support a mechanism to ensure users’ QoE of the multi-modal communication service involving one or multiple devices at either end of the communication. QoE refers to the difference of the physical interaction across the 5G network and the same manipulation carried out locally.

Applying QoS policy from a 3rd party --

[PR 5.5.6-2] The 5G system shall support a mechanism to apply QoS policy for flows of multiple UEs associated with an application received from an authorized 3rd party.

[PR 5.6.6-2] The 5G system shall support a mechanism to apply QoS policy for flows of multiple UEs associated with an application received from an authorized 3rd party.

Applying sync threshold

[PR 5.7.6-3] The 5G system shall support a mechanism to assist the synchronisation between the multiple streams (e.g., haptic, audio and video) of a multi-modal communication session in order to avoid the negative impact on the user experience.

[PR 5.8.6-2] 5G system shall be able to provide a dynamic mechanism to transfer different data flows with different latency to achieve a certain transmission time difference within one tactile and multi-modality communication service.

**Proposal:**

**[CPR-3]** The 5G system shall apply 3rd party provided QoS policy for multiple flows associated with an application..

**2. Proposal**

It is proposed to agree the related CR on consolidated requirements to 3GPP TR22.847.