**Source: InterDigital France R&D, SAS**

**Title: [FS\_5G\_RTP\_Ph2] KI #X: Identifying multiplexed media stream data flows**

**Agenda Item: 10.8**

**Document for: Agreement**

# 1 Background

The new SA4 Rel-19 study item on “5G Real-time Transport Protocol Configurations, Phase 2” (5G\_RTP\_PH2) has been approved in [SP-240523](https://www.3gpp.org/ftp/TSG_SA/TSG_SA/TSGS_103_Maastricht_2024-03/Docs/SP-240523.zip) [1]. The study item lists thirteen distinct key issues to improve 5G RTP as defined in TS 26.522. In this document we propose to discuss a new key issue related to traffic detection in multiplexed media stream data flows.

# 2 Proposed Changes

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| **First Change** |

Issue description for KI #14

1. **Traffic detection and QoS flow mapping for multiplexed media stream data flows.**

RTP allows different delivery options for multiple media streams. The media streams can be transmitted as multiple RTP streams in a single RTP session, in multiple RTP sessions, or in some cases, multiplexed media can be carried in a single RTP stream. Hence, in some cases, a media stream may be split into multiple QoS flows or multiple media streams may be multiplexed into a single QoS flow. It is therefore important to study how the UPF and RAN nodes can identify the PDU sets belonging to a specific media stream in a PDU session in the case of multiplexed media streams.

In RTP, different streams typically use different multiplexing methods for the delivery of the media streams. Given that a QoS flow is composed of PDUs from multiple media streams, the traffic over one QoS flow will be a mix of traffic from different media streams. PDU sets arriving at the UPF and RAN nodes are from different streams, and the RAN nodes needs to identify the respective media streams to which they belong.

In addition, some mappings of streams to QoS flows, may result in media streams that are split across one or more QoS flows. When media stream data is split across multiple QoS flows, then some PDU sets of the stream may go over one QoS flow and some may go over other QoS flow. Therefore, the UPF and RAN nodes needs to handle PDUs arriving at the UPF and NG RAN with missing PDU sets in a specific QoS flow. For example, the RAN nodes need to deal with gaps in the PDU set sequence number (PSSN) for a stream in a QoS flow.

It is proposed to:

- study and document the issues arising due to multiplexing multiple media streams into a single QoS flow or splitting a media stream across multiple QoS flows.- Determine benefits for identifying the PDU sets belonging to a media stream split over multiple QoS flows.

- provide solutions on how to identify different PDU sets from the individual streams at UPF and RAN nodes.

Editor’s NOTE: Splitting a media stream into multiple QoS flows is under SA2 study and a recommendation for normative work has not been agreed yet.

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| **End of First Change** |

# 3 Proposal

It is proposed to agree and incorporate the clause 2 of this document as the basic description for KI#14 in TR 26.822 and to the objectives of the FS\_5G\_RTP\_Ph2 study item description.

# 4 References

[1] S4-240523 - "Study of 5G Real-time Transport Protocol Configurations, Phase 2".