**3GPP TSG-WG SA4 Meeting #118E e-meeting *S4-220*424**

**Elbonia, April 6th – 14th, 2022**

Title: [DRAFT] LS Reply on QoS support with PDU Set granularity

Response to: LS (S2-2201803/S4-220XXX)

Release: Rel-18

Work Item: FS\_XRM

Source: SA4

To: SA2

Cc: RAN1, RAN2, RAN3

**Contact Person:**

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**Send any reply LS to: 3GPP Liaisons Coordinator,** [**mailto:3GPPLiaison@etsi.org**](mailto:3GPPLiaison@etsi.org)

**1. Overall Description:**

3GPP TSG SA WG4 (SA4) would like to thank 3GPP TSG SA WG2 (SA2) on the LS on QoS support with PDU Set granularity.

For your questions, SA4 would like to provide the answers as following.

1. *Any feedback/guidance on the definition of PDU Sets and video slices in the attached document S2-2201851.*

**Answer#1:** For definition of PDU Set, SA4 understands the PDU Sets represents the set of packets transmitted within the 5G system and defined to facilitate SA2 study on QoS enhancement. It is mainly a SA2 concept and SA4 has no comments about this.

About the video slice, there is detailed definition in the H.264/AVC and H.265/HEVC specs. It is not necessary to understand the media codec specific details of a video slices from SA2 perspective. SA2 should not define video slices as it is not a network concept. In addition, the definition in itself is misleading.

1. *Any input on traffic characteristics of typical media services that rely on e.g. PDU Sets, as necessary.*

**Answer#2:** From transmission perspective, the typical traffic characteristic related to PDU Sets is that the video frames are transmitted as bursts with a fixed periodicity corresponding to the FPS. In general, the size of a I frame is much larger than that of a P frame.

1. *Clarify what, if any, dependency there is between the IP packets that make up PDU Sets, e.g. a frame/”slice”.*

**Answer#3:** As stated in TR 26.926, once an IP packet for the slice is lost, the entire slice is lost. From the transmission requirement perspective, there is dependency between the IP packets carrying a video slice/frame .

1. *Clarify what, if any, dependency there is between PDU Sets that may carry, e.g. different frames/”slices”.*

**Answer#4:** In the video decoding phase, some frames/slices need to refer to other frames/slices based on the video coding configuration. From network transmission perspective, the PDU Sets carrying different frames/slices with reference relationship shall have dependency.

1. *Provide feedback about the detailed traffic characteristics of XR media services in “Annex X (informative): Traffic characteristics of XR and media services” in the attached document S2-2201807.*

**Answer#5:** SA4 has reviewed the Annex and agreed with the description about the periodicity, jitter, frame importance, PDU Set granularity and traffic correlation. SA4 will keep SA2 informed if any issue identified in the future SA4 study.

**2. Actions:**

**To SA2 group.**

**ACTION:** SA4 asks SA2 group to take the above reply into account and provide feedback if any.

**3. Date of Next TSG SA WG4 Meetings:**

SA4#119-e 11 – 20 May 2022 E-Meeting

SA4#120 22 – 26 August 2022 Malaga