**3GPP TSG-WG SA2 Meeting #149E e-meeting *S2-2201041r28***

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

**Source: ZTE, Nokia, Nokia Shanghai Bell, Intel, Huawei, Hisilicon,OPPO**

**Title: FS\_XRM: Media Unit definition**

**Document for: Approval**

**Agenda Item: 9.19**

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

*Abstract: propose definition of media unit.*

# 1. Introduction

In **SP-211646** the following objectives are approved to better support advanced media services, e.g., High Data Rate Low Latency (HDRLL) services, AR/VR/XR services, and tactile/multi-modality communication services, including the following working tasks(WT):

*WT#1: Enhancements for supporting multi-modality service:*

*- Study whether and how to enable delivery of related tactile and multi-modal data (e.g., audio, video and haptic data related to a specific time) with an application to the user at a similar time, focusing on the need for policy control enhancements (e.g. QoS policy coordination).*

*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#3: Study whether and how the following QoS and policy enhancements for XR service and media service transmission are performed:*

*WT#3.1: Study the traffic characteristics of media service enabling improved network resources usage and QoE.*

*WT#3.2: Enhance QoS framework to support media units granularity (e.g., video/audio frame/tile, Application Data Unit, control information),* *where media units consist of PDUs that have the same QoS requirements.*

*WT#3.3: Support differentiated QoS handling considering different importance of media units. e.g., eligible drop packets belong to less important media units to reduce the resource wasting.*

*NOTE2: Coordination with RAN WGs may be needed for the above bullets.*

*WT#3.4: Whether and how to support uplink-downlink transmission coordination to meet RTT (Round-Trip Time) latency requirements between UE and N6 termination point at the UPF.*

*WT#3.5: Potential policy enhancements to minimize the jitter, focusing on i.e. requirement provisioning from AF, extension of PCC rule.*

*WT#4: Study potential enhancements of power management considering traffic pattern of media services:*

*WT 4.1: Void.*

*WT 4.2: Power saving enhancement e.g. support trade-off of throughput/latency/reliability considering device battery life, whether and how to enhance CDRX, considering XR/media traffic pattern.*

*WT#5: Void.*

*NOTE3: Whether to define a network slice type supporting media services can be determined during normative phase.*

In order to start the study, it would be good to agree the following definition

**Media Unit:** Group of packets that have the same QoS requirements and have to be delivered as single packet in 5GS.

**Group of Media Unit:** Group of media units that have different priority or importance and need to be coordinated when delivered in 5GS.

# 1. Text Proposal

It is proposed to capture the proposals as work assumption in TR 23.700-60.

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

## 3.1 Terms

For the purposes of the present document, the terms given in 3GPP TR 21.905 [1] and the following apply. A term defined in the present document takes precedence over the definition of the same term, if any, in 3GPP TR 21.905 [1].

**Video Slice:** A spatially distinct region of a video frame that is encoded separately from other regions in the same frame.

Editor's Note: The Video Slice definition above is taken from Wikipedia ([https://en.wikipedia.org/wiki/Video\_compression\_picture\_types#Slices](https://apc01.safelinks.protection.outlook.com/?url=https%3A%2F%2Furldefense.com%2Fv3%2F__https%3A%2Fen.wikipedia.org%2Fwiki%2FVideo_compression_picture_types*Slices__%3BIw!!CTRNKA9wMg0ARbw!128yY8zGyIiSgHP9S8UrV0smFM8xSnV949Z3Ba5WMJqvyVLIjgxYmticSWZL0nbGPsCk-g%24&data=04%7C01%7Cguoboren%40OPPO.COM%7C40cf12d4f4334d15a35308d9f5e1f1e3%7Cf1905eb1c35341c5951662b4a54b5ee6%7C0%7C0%7C637811173957699680%7CUnknown%7CTWFpbGZsb3d8eyJWIjoiMC4wLjAwMDAiLCJQIjoiV2luMzIiLCJBTiI6Ik1haWwiLCJXVCI6Mn0%3D%7C3000&sdata=X9Slm0DWwi1J4%2FZemS7PTlJtUqB5QTJKKkOC0XaH7Xk%3D&reserved=0)) and needs to be confirmed by SA4.

**PDU Set:** A PDU Set is composed of one or more PDUs carrying the payload of one unit of information generated at the application level (e.g., a frame or video slice for XRM Services), which are of same importance requirement at application layer. All PDUs in a PDU Set are needed by the application layer to decode the corresponding unit of information.

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