**Source: Huawei (Rapporteur)**

**Title: KI#4 and KI#5, key questions for company view collection**

This document is to collect company views on key questions of KI#4 and #5 to facilitate the following conclusion discussion. Please kindly provide your company views on the following questions before EoB of Sep 16th. The rapporteur will collect the views and propose summary/way forwards/SoH for further discussion afterwards.

### Q1: How does UPF identify DL PDU Set info?

* Option 1: use existing IETF RTP/SRTP RFC and draft
* Option 2: Define/extend N6 protocols to carry related info
	+ Option 2.1: extend GTP-U protocol
	+ Option 2.2: extend HTTP header (S2-2205830)
	+ Option 2.3: extend RTP header
* Option 3: UPF implementation based on e.g. traffic characteristics.
* Option 4: UPF interacts with NWDAF(S2-2205838)

**[Company view]**

**[Tencent view]**

**Position:** Option 1 should be supported. Option 2 can be further considered.

**Justification**:

Option 1: The protocol in Option 1 has been ready and used in the industry. Supporting option 1 should be firstly considered for the XR traffic at this stage. The network needs to be cooperated with AF to get some information on the payload to be interpreted.

Option 2: We are basically neutral and open to option 2. All the options require enhancements and acceptance in the application side. Option 2.2 requires the further support in IETF; Option 2.3 requires further work in SA4 and IETF. Coordination with IETF is needed to support option 2.2 and 2.3.

Option 3: It’s not perfect enough to get the precise information, but it could be considered as a backup solution.

### Q2. How to deliver PDU Set importance information to RAN:

* Option 1: use different QoS Flows with different priority level. PDU Set importance is mapped to existing QoS flow priority.
* Option 2: use one QoS flow for different PDU Set with different priority level
	+ Option 2.1: use different sub-QoS Flow within one QoS Flow, and using sub-QoS flow Identifier in GTP-U header
	+ Option 2.2: use PDU Set importance information in GTP-U header

**[Company view]**

**[Tencent view]**

**Position:** Support option 2.

**Justification**:

Option 1: It’s not preferred to separate the PDUs within the same service data flow into the multiple QoS flows. It may also need to define some cooperation between these QoS flows. This option would limit the further PDU set identification and usage within the XR service.

Option 2: Using one QoS flow for different PDU sets is more preferred and aligned with the service expectation. Option 2.1 and 2.2 are similar, and would be fine for us.

### Q3: Support to PDU Set dependency-based scheduling

* Option 1: Identify accurate dependency relationship between PDU Sets for scheduling.
* Option 2: In some scenario (e.g. closed GOP), the decoding of the non-I frames between two successive I frames always directly or indirectly relies on the 1st I frame of the two successive I frames. If the 1st I frame is in error, the non-I frames can be dropped until the next I frame. (proposed in S2-2205839)
* Option 3: If a PDU Set is depended by others, it can be considered as more important during scheduling. But the scheduling will not further consider the accurate dependency relationship.

**[Company view]**

**Tencent view:**

**Position:** Considering dependency would be helpful for the scheduling. Support option 1, 2, 3.

**Justification**:

Considering dependency would be helpful for the scheduling.

Option 1: Identifying dependency relationship can be possible for certain options in Q1. This option has higher complexity than option 3.

Option 2 is similar with option 1, and also relies on the LS out from SA4.

Option 3 has lower complexity than option 1 and 2. It is not clear how the dependency information would be used for the scheduling. Some clarification may be needed.

### Q4. Support to hierarchical PDU Set:

* Option 1: introduces PDU Set group. (S2-2205938)
* Option 2: not support.

**[Company view]**

**Tencent view:**

**Position:** support option 1 with some conditions.

**Justification**:

The PDU Set group is not clearly defined in the TR. It’s not clear to us which PDU sets can be formed as the PDU Set group. It would be better to have clear definition on it before our final conclusion. If PDU set group can help the handling of the PDU set, we are fine to support it.

### Q5. On “*Whether to drop a PDU Set in case PSDB is exceeded*”, do we need further define “*PDU Set Discard Time*” (A PDU Set shall be dropped in case this time is exceeded (sol 25 etc):

* Option 1: Support
* Option 2: not support.

**[Company view]**

**Tencent view:**

**Position:** Open now. The PSDB is not clearly defined. The definition needs to be firstly fixed.

**Justification**:

We are open to the first question. The definition of PSDB is not quite clear now.

PDU Set Discard Time is not needed for now.