**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)

**[China Telecom view]**

**Position:**

We support option 1, with option 3 as a supplement.

**Justification**:

Option 1: The existing RTP and SRTP header/header extensions can be effective in identifying DL PDU Set.

Option 2.1: Current GTP-U protocol is used between UPF and gNB, while the identification of PDU Set is at the UPF. The extension of GTP-U protocol may introduce too much impact on current 5GS.

Option 2.2: Since HTTP protocol is mainly used for encrypted data transmission, it is still not mature enough to adopt extended HTTP header in this Release.

Option 2.3: Extended RTP header is also not mature enough to be realized in this Release.

Option 3: AF knows the traffic characteristics and can send this information to assist the identification of PDU Set. This can be used as a supplement for option 1.

Option 4: Since this option is intended for encrypted XR traffic, its feasibility needs further discussion. We are neutral.

### 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

**[China Telecom view]**

**Position:**

We prefer option 1.

**Justification**:

Using different sub-QoS flows within one QoS Flow can basically achieve the same results as using different QoS flows, while sub-QoS profile configuration and sub-QoS Identifier are too complex. What’s more, if the concept of sub-QoS flow is introduced, this statement “The QoS Flow is the finest granularity of QoS differentiation in the PDU Session” in current QoS model would no longer work.

### 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.

**[China Telecom view]**

**Position:**

We support Option 2 and Option 3.

**Justification**:

Option 1: It is too complex to explore all kinds of dependency relationship between PDU Sets.

Option 2: Since the accurate dependency relationship is too complex and this is a possible scenario, we can start with such a simple relationship.

Option 3: In our understanding, if a PDU Set is depended by others, AF/UPF will consider this PDU Set to be important. Based on such “importance” information, the RAN then perform scheduling for this PDU Set. This is reasonable.

### Q4. Support to hierarchical PDU Set:

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

**[China Telecom view]**

**Position:**

We are neutral.

**Justification**:

On the one hand, we accept that PDU Set Group can indicate frame that may be dependent on each other; on the other hand, the introduction of PDU Set group would certainly make things more complicated. Therefore, we take a neutral stance.

### 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.

**[China Telecom view]**

**Position:**

We prefer option 2.

**Justification**:

We should first reach an agreement on the definition of PSDB. And in my understanding, RAN can drop packets once the transmission time exceed PDB/PSDB. To avoid duplicated effort, it is unnecessary to define PDU Set Discard Time for now.