**3GPP TSG-RAN WG3 #128 R3-253837**

**Malta, MT, 19th – 23th May 2025**

**Agenda item: 21.3**

**Source: Nokia, Nokia Shanghai Bell**

**Title: (TP to BL CR for TS 38.415) Update for BSSize/TTNB and available data rate exposure**

**Document for: Discussion and Decision**

# 1 Introduction

This contribution proposes TP for following:

* Remove following ENs:
* Editor’s Note: FFS on the field size.
* Editor’s Note: FFS on whether TTNB and/or BSSize related information may be removed in this clause and introduced into other frame(e.g. DL PDU SET INFORMATION).
* Define available bitrate and threshold as a 32-bit integer with unit kbps.
* To align with SA2 TS 23.501, Change “Available Data Rate” to “Available Bitrate”

# TP to BL CR for TS 38.415

***-----------------Start of the Changes-------------------***

#### 5.5.2.2 UL PDU SESSION INFORMATION (PDU Type 1)

This frame format is defined to allow the UPF to receive some control information elements which are associated with the transfer of a packet over the interface.

The following shows the respective UL PDU SESSION INFORMATION frame.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Bits | | | | | | | | Number of Octets |
| 7 | 6 | 5 | 4 | 3 | 2 | 1 | 0 |
| PDU Type (=1) | | | | QMP | DL Delay Ind. | UL Delay Ind. | SNP | 1 |
| N3/N9 Delay Ind. | New IE Flag | QoS Flow Identifier | | | | | | 1 |
| DL Sending Time Stamp Repeated | | | | | | | | 0 or 8 |
| DL Received Time Stamp | | | | | | | | 0 or 8 |
| UL Sending Time Stamp | | | | | | | | 0 or 8 |
| DL Delay Result | | | | | | | | 0 or 4 |
| UL Delay Result | | | | | | | | 0 or 4 |
| UL QFI Sequence Number | | | | | | | | 0 or 3 |
| N3/N9 Delay Result | | | | | | | | 0 or 4 |
| New IE flag 7(E) | New IE Flag 6 | New IE Flag 5 | New IE Flag 4 | New IE Flag 3 | New IE Flag 2 | New IE Flag 1 | New IE Flag 0 | 0 or 1  New IE  Flags  Octet |
| Spare | | | | | | | D1 UL PDCPDelay Result Ind | 0 or 1 |
| UL Congestion Information | | | | | | | | 0 or 2 |
| DL Congestion Information | | | | | | | | 0 or 2 |
| UL Available Bitrate | | | | | | | | 0 or 4 |
| DL Available Bitrate | | | | | | | | 0 or 4 |
| Padding | | | | | | | | 0-3 |

Figure 5.5.2.2-1: UL PDU SESSION INFORMATION (PDU Type 1) Format

The New IE Flag in bit 6 of 2nd octet in UL PDU SESSION INFORMATION (PDU Type 1) indicates if the first octet ofNew IE Flags Octet is present or not.

Bit 0 of New IE Flags Octet in UL PDU SESSION INFORMATION (PDU Type 1) indicates if the D1 UL PDCP Delay Result Ind is present (1) or not (0).

Bit 1 of New IE Flags Octet in UL PDU SESSION INFORMATION (PDU Type 1) indicates if the UL Congestion Information is present (1) or not (0).

Bit 2 of New IE Flags Octet in UL PDU SESSION INFORMATION (PDU Type 1) indicates if the DL Congestion Information is present (1) or not (0).

Bit 3 of New IE Flags Octet in UL PDU SESSION INFORMATION (PDU Type 1) indicates if the UL Available Bitrate is present (1) or not (0).

Bit 4 of New IE Flags Octet in UL PDU SESSION INFORMATION (PDU Type 1) indicates if the DL Available Bitrate is present (1) or not (0).

### 5.5.3 Coding of information elements in frames

#### 5.5.3.1 PDU Type

**Description:** The PDU Type indicates the structure of the PDU session UP frame. The field takes the value of the PDU Type it identifies; i.e. "0" for PDU Type 0. The PDU type is in bit 4 to bit 7 in the first octet of the frame.

**Value range:** {0= DL PDU SESSION INFORMATION, 1=UL PDU SESSION INFORMATION, 2-15=reserved for future PDU type extensions}.

**Field length:** 4 bits.

//////////////////////////////////////////////////////////////irrelevant operations skipped/////////////////////////////////////////////////////////////////////

#### 5.5.3.26 UL Congestion Information

**Description:** For the cases of ECN marking at UPF request, this field indicates the percentage of UL IP packets up to two decimal points that should be ECN marked for a QoS flow.

For the case of congestion information request, this field should be interpreted as a percentage of congestion level in UL up to two decimal points for a QoS Flow.

As an example, value 9574 corresponds to a percentage of 95.74%

**Value range:** {0..10000}.

**Field length:** 2 octets.

#### 5.5.3.a UL Available Bitrate Information

**Description:** This parameter indicates the UL available bitrate of the QoS flow. The unit is Kbps.

**Value range:** {0..4,000,000,000}.

**Field length:** 4 octets.

#### 5.5.3.b DL Available Bitrate Information

**Description:** This parameter indicates the DL available bitrate of the QoS flow. The unit is Kbps.

**Value range:** {0..4,000,000,000}.

**Field length:** 4 octets.

#### 5.5.3.ca BSSI (Burst Size Indicator)

**Description:** This parameter indicates the presence of Burst Size (BSSize).

**Value range:** {0= BSSize not present, 1= BSSize present}.

**Field length:** 1 bit.

#### 5.5.3.db Burst Size (BSSize)

**Description:** This parameter indicates the total size of the burst.

**Value range:** {0..224-1}.

**Field length:** 3 octets.

#### 5.5.3.e TTNBI (TTNB Indicator)

**Description:** This parameter indicates the presence of Time To Next Burst (TTNB).

**Value range:** {0= TTNB not present, 1= TTNB present}.

**Field length:** 1 bit.

#### 5.5.5.f Time To Next Burst (TTNB)

**Description:** This parameter indicates the the approximate time in tenth of milliseconds to the next burst.

**Value range:** {0..216-1}.

**Field length:** 2 octets.

***-----------------End of the Change-------------------***