**3GPP TSG- Meeting # *S4-251400***

**, , -**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.3* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  |  | **CR** |  | **rev** |  | **Current version:** |  |  |
|  | | | | | | | | |
| *For* [***HE******LP***](http://www.3gpp.org/3G_Specs/CRs.htm#_blank)*on using this form: comprehensive instructions can be found at* [*http://www.3gpp.org/Change-Requests*](http://www.3gpp.org/Change-Requests)*.* | | | | | | | | |
|  | | | | | | | | |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| ***Proposed change affects:*** | UICC apps |  | ME | **x** | Radio Access Network | **x** | Core Network | **x** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** |  | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** |  | | | | | | | | | |
| ***Source to TSG:*** | S4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** |  | | | | |  | ***Date:*** | | |  |
|  |  | | | |  | |  | | |  |
| ***Category:*** |  |  | | | | | ***Release:*** | | |  |
|  | *Use one of the following categories:* ***F*** *(correction)* ***A*** *(mirror corresponding to a change in an earlier release)* ***B*** *(addition of feature),* ***C*** *(functional modification of feature)* ***D*** *(editorial modification)*  Detailed explanations of the above categories can be found in 3GPP [TR 21.900](http://www.3gpp.org/ftp/Specs/html-info/21900.htm). | | | | | | | | *Use one of the following releases: Rel-8 (Release 8) Rel-9 (Release 9) Rel-10 (Release 10) Rel-11 (Release 11) … Rel-17 (Release 17) Rel-18 (Release 18) Rel-19 (Release 19)  Rel-20 (Release 20)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | At the SA4 #131-bis-e meeting, S4-250672, which proposed to specify the update of the burst size indication, was agreed. Further motivation based on WebRTC source code as well as the scope analysis was provided in S4-250971. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add the burst size indication update, by elevating a reserved bit of the RTP header extension for dynamically changing traffic characteristics | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | The support for the indication update is missing. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **x** | Other core specifications | | | | TS/TR ... CR ... | | |
| ***affected:*** | |  | **x** | Test specifications | | | | TS/TR ... CR ... | | |
| ***(show related CRs)*** | |  | **x** | O&M Specifications | | | | TS/TR ... CR ... | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

4.5.2 One-byte RTP header extension format

The one-byte RTP HE for the marking of dynamically changing traffic characteristics is defined as follows:

0 1 2 3

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+

| 0xBE | 0xDE | length |

+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+

| ID | len |U| R | BSSize

+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+

| TTNB |

+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+

4.5.3 Two-byte RTP Header Extension Format

The two-byte RTP HE for the marking of dynamically changing traffic characteristics is defined as follows:

0 1 2 3

0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1 2 3 4 5 6 7 8 9 0 1

+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+

| 0x100 |appbits| length |

+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+

| ID | len |U| R | BSSize

+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+

| TTNB |

+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+-+

4.5.4 Semantics

The semantics of the fields of the RTP HE for marking dynamically changing traffic characteristics are defined as follows:

- **Burst Size Update [U] (1 bit):** The Burst Size in this RTP header extension is an update of a previously indicated Burst Size for the same data burst when the bit is set to 1.

- **Reserved [R] 7 bits):** This field is reserved for future usage, it shall be set to 0 by the RTP sender and shall be ignored by the RTP receiver.

- **Burst Size [BSSize] (24 bits):** The Burst Size indicates the total size of the burst to be transmitted (in bytes (including the overhead of the RTP Header).) when the U bit is set to 0; the Burst Size indicats the remainder of the burst size when the U bit is set to 1. If the burst size is not known it shall be set to 0

NOTE 1: If a packager generates all packets of the burst at once, no additional delay is introduced when setting the burst size, as the packets can be marked with the complete burst size. If this is not the case (e.g. multiple frames combined in one burst) a delay as large as the burst duration could be introduced by marking the entire burst. Therefore, this approach may not be suitable for all types of packagers/encoders, especially those that gradually produce packets additional latency may be introduced if the size is not known in advance.

- **Time To Next Burst [TTNB] (16 bits):** Indicates the approximate time in tenth of milliseconds to the next burst If the time to next burst is not known, it shall be set the reserved value 65535.

NOTE: The definition of time to next burst in this context is for further study