**3GPP SA4#115-eS4-211097**

**18-27 Aug 2021**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| *CR-Form-v12.0* | | | | | | | | |
| **Pseudo CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **26.804** | **CR** | **<CR#>** | **rev** | **-** | **Current version:** | **0. 2.1** |  |
|  | | | | | | | | |
| *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 |  | Core Network | **X** |

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | | | | | | | | | | |
| ***Title:*** | [FS\_5GMS-EXT] Uplink Streaming: Metrics and contribution Reporting | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Tencent | | | | | | | | | |
| ***Source to TSG:*** | SA4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | FS\_5GMS-EXT | | | | |  | ***Date:*** | | | 2021-08-12 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***Release:*** | | | Rel-17 |
|  | *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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | The study item description identifies the key topic “Uplink Streaming”. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Adding additional gap analysis: metrics and contribution reporting | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Key topic not addressed | | | | | | | | |
|  | |  | | | | | | | | |
| ***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:*** | |  | | | | | | | | |
| ***56*** | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

**===== CHANGE 1 =====**

#### 5.5.1.2 Gap analysis of TS 26.501

The original focus of Rel-16 3GPP TS 26.501 [15] is on the overall system architecture, description of high-level procedures and call flows pertaining to downlink media streaming services.

In TS 26.501, there is significant imbalance in the scope and details of the described procedures for downlink vs. uplink media streaming. Key issues include the following:

1. The procedures for downlink media streaming include session establishment, provisioning of various types of configuration information, metrics reporting, consumption reporting, dynamic policy and network assistance. In comparison, the described procedures for uplink media streaming are limited to session management, remote control, and network assistance. It is unclear for uplink streaming whether and how the configurations for content preparation, content protocols discovery, dynamic policy, metrics reporting, etc., should be defined and how the associated functions will operate.

- Absent in clause 6 are procedural description and call flow regarding QoE metrics collection and reporting in uplink media streaming as compared to the presence of such text in clause 5.5 on metrics collection and reporting in downlink media streaming.

2. For downlink streaming, it is described that access to Service Access Information by the 5GMSd Client may be provided either over M8d by the Application Provider, or else fetched by the Client via M5u. For uplink streaming, the solely described method for the 5GMSu Client to obtain Service Access Information is via application metadata delivery over M8u. The only exception to this rule is the alternative method for provisioning Service Access Information to the 5GMSu Client by the 5GMSu AF, associated with remote control sessions in reference to remote control use cases and operational mechanisms in the context of FLUS (Framework for Live Uplink Streaming) as described in TR 26.939 [13] and TS 26.238 [14]. However, it should be noted that due to the limited description of the relationship between the uplink streaming framework and use cases, defined procedures and APIs in TS 26.512, it is unclear whether or how remote control sessions associated with uplink streaming delivery can make use of those interface procedures and APIs.

3. Clause 4.3 is missing the description of Service Access Information parameters for a metrics configuration set pertaining to uplink media streaming, as compared to the presence of such information for downlink media streaming in clause 4.2.3. In particular, the “Metrics” parameter of the downlink streaming metrics configuration set is explicitly bound to the 3GPP “metrics” scheme and corresponds to one or more of the QoE metrics for either a progressive download or 3GP-DASH streaming service as defined in TS 26.247 [26]. On the other hand, given the lack of definition by SA4 of uplink streaming QoE metrics collection and reporting related functionality for existing application service specifications, there is no associated list of metrics on collection and reporting by the 5GMSu Client that can be referenced. Therefore, the following items are studied:

a. Identify the quality metrics for uplink streaming.

b. Identify the subset of metrics in a. that must be collected by UE and cannot be collected by the network entities such as the 5GMSu AF or the 5GMSu AS.

4. For downlink streaming, the consumption reporting provides reports of the usage of download streaming of one single content. However, any contribution reporting from UE for uplink streaming currently is not addressed. Therefore, the following items are studied.

a. Identify the parameters useful for contribution reporting including the user’s initiated and interactivity events, as well as the user’s preferences for the uplink session such as hiding or reporting the location.

b. Identify the subset of parameters in a. that must be collected by UE that cannot be collected by the network entities such as the 5GMSu AF or the 5GMSu for reporting the usage pattern to the Application Provider.

c. Comparing the UE direct reporting of parameters (and metrics in item 3, above) to the collection of those parameters and metrics by the EVEX data collection AF.