**3GPP TSG SA WG4#119e S4-220591**

**E-meeting, 11th – 20th May 2022 revision of S4-220560**

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| *CR-Form-v12.0* | | | | | | | | |
| **DRAFT CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **26**.**347** | **CR** | draft | **rev** |  | **Current version:** | **17.0.0** |  |
|  | | | | | | | | |
| *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)*.* | | | | | | | | |
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| ***Proposed change affects:*** | UICC apps |  | ME | **X** | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | **[5MBP3] API Extensions for 5GMS via eMBMS** | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Qualcomm Incorporated | | | | | | | | | |
| ***Source to TSG:*** | S4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5MBP3 | | | | |  | ***Date:*** | | | 30/03/2022 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **B** |  | | | | | ***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-12 (Release 12)* *Rel-13 (Release 13) Rel-14 (Release 14) Rel-15 (Release 15) Rel-16 (Release 16)* | |
|  |  | | | | | | | | | |
| ***Reason for change:*** | | See work item | | | | | | | | |
|  | |  | | | | | | | | |
| ***Summary of change:*** | | Add 5GMS via eMBMS | | | | | | | | |
|  | |  | | | | | | | | |
| ***Consequences if not approved:*** | | Work Item objectives not complete | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | See attached | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **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:*** | |  | | | | | | | | |

**===== CHANGE =====**

#### 6.3.3.1 Overview

Table 6.3.3.1-1 provides an overview over the methods defined for the Streaming Delivery Application Service API. Different types are differentiated, namely state changes triggered by the MAA, status query of the MAA to the client, parameter updates as well as notifications from the client. The direction of the main communication flow between MAA (A) and MBMS Client (C) is provided.

Table 6.3.3.1-1: Methods defined for Streaming Delivery Application Service API

| Method | Type | Direction | Brief Description | Section |
| --- | --- | --- | --- | --- |
| registerStreamingApp | State change | A -> C | MAA registers a callback listener with the MBMS client | 6.3.3.2 |
| deregisterStreamingApp | State change | A -> C | MAA deregisters with the MBMS client | 6.3.3.10 |
| startStreamingService | State change | A -> C | Starts streaming service | 6.3.3.7 |
| stopStreamingService | State change | A -> C | Stop streaming service | 6.3.3.9 |
| getStreamingServices | Status query | C <-> A | Get list of currently active services | 6.3.3.4 |
| getVersion | Status query | C <-> A | Retrieves the list of files previously captured for the MAA | 6.3.3.13 |
| setStreamingServiceClassFilter | Update to parameter list | A -> C | MAA sets a filter on file delivery services in which it is interested | 6.3.3.5 |
| registerStreamingResponse | Update to parameter list | C-> A | The response to the MAA streaming service register API | 6.3.3.3 |
| serviceStarted | Notification | C -> A | Notification to MAA when the streaming service started. | 6.3.3.8 |
| streamingServiceListUpdate | Notification | C -> A | Notification to MAA on an update of the available for Media streaming delivery services | 6.3.3.6 |
| streamingServiceError | Notification | C -> A | Notification to MAA when there is an error with the download of service | 6.3.3.12 |
| serviceStalled | Notification | C -> A | Notification to MAA that download Media segments failed | 6.3.3.11 |
| addSA | Update to parameter list | A -> C | Adds service announcement to the MBMS client on streaming services | 6.2.3.22 |
| addSAResponse | Notification | C -> A | Call back to addSA() | 6.2.3.23 |
| metricsCollection | State change | A -> C | Starts, updates, or stops the collection of metrics based on the parameters provided in the API call | 6.3.3.14 |

**===== CHANGE =====**

#### 6.3.3.14 Metrics Collection

##### 6.3.3.14.1 Overview

This clause defines the metricsCollection() API call. Metrics collection is assumed to be asynchronous, i.e. metrics are collected by the MBMS Client according to the configuration and the MMBS-Aware Application retrieves metrics reports from it when needed.

An overview of the procedure is provided in Figure 6.3.3.14-1.



Figure 6.3.3.14-1: Metrics collection call flow

##### 6.3.3.14.2 Parameters

The parameters for the metricsCollection()API call are:

- active – set to true or false whether metrics collection is activated or not.

- configuration – Configuration parameters for metrics collection.

Editor’s Note: Details of parameters are tbd with reference to TS 26.346.

- parameters – List of parameters that the MBMS Client shall collect.

Editor’s Note: Details of parameters are tbd with reference to TS 26.346.

- URL – Metrics Server URL from which metrics reports are to be fetched by the MBMS-Aware Application.

##### 6.3.3.14.3 Preconditions

The MBMS Client shall be in the ACTIVE state.

##### 6.3.3.14.4 Usage of method by MBMS-Aware Application

The MBMS-Aware Application triggers metrics collection in the MBMS Client and configures the collection parameters.

The MBMS-Aware Application subsequently retrieves metrics reports asynchronously from the MBMS Client by polling an endpoint URL provided by the MBMS Client in response. Metrics are reported over a defined reporting interval

##### 6.3.3.14.5 MBMS Client actions

The metricsCollection() API allows the MBMS Client to be configured.

The MBMS Client collects the metrics according to TS 26.346 [?] and provides metrics reports to the MBMS-Aware Application on demand.

Editor’s Note: Do we need any notification based metric collection?

##### 6.3.3.13.6 Postconditions

No state changes apply.