**3GPP TSG SA WG4 #114e *S4-210803***

**E-meeting, 19th – 28th May 2021**

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| *CR-Form-v12.0* | | | | | | | | |
| **Pseudo CHANGE REQUEST** | | | | | | | | |
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|  | **26.802** | **CR** | **<CR#>** | **rev** | **-** | **Current version:** | **1.2.8** |  |
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| *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:*** | [FS\_5GMS\_Multicast] Key issue on re-use of MBMS service layer | | | | | | | | | |
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| ***Source to WG:*** | Qualcomm Incorporated | | | | | | | | | |
| ***Source to TSG:*** | SA4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | FS\_5GMS\_Multicast | | | | |  | ***Date:*** | | | 2021-05-11 |
|  |  | | | |  | |  | | |  |
| ***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)* | |
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| ***Reason for change:*** | |  | | | | | | | | |
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| ***Summary of change:*** | |  | | | | | | | | |
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| ***Consequences if not approved:*** | |  | | | | | | | | |
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| ***Clauses affected:*** | |  | | | | | | | | |
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|  | | **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 =====**

## 5.5 Key Issue #4: Reuse of MBMS service layer

### 5.5.1 Description

The following aspects are proposed in order to study the reuse of MBMS service layer:

1. Study the re-use of relevant “MBMS Service layer” functionalities (as defined in TS 26.346) for 5G MBS Session (as to be defined in Rel-17, TR 23.757) with full multicast support. In particular relevant functionalities are:

o Service Announcement and Discovery as defined in TS 26.346.

o Download Delivery method, File Delivery as defined in TS 26.346, clause 7.

o DASH/HLS over MBMS (both broadcast/multicast only as well as hybrid) as defined in TS 26.346, clause 5.3.

o Transparent delivery method as defined in TS 26.346, clause 8B.

o Associated delivery procedures as defined in TS 26.346, clause 9.

2. Study the necessary extensions of relevant “MBMS Service Layer” functionalities to support 5GS and 5G MBS Sessions (as to be defined in Rel-17, TR 23.757) in the context of 5G Media Streaming

3. Identify harmonization potentials for the 5G Media Streaming APIs (as defined in TS 26.501 and TS 26.512) with APIs defined in TS 26.348 (xMB), TS 26.346 (Protocols) and TS 26.347 (Client APIs) and integrate the “MBMS user service” relevant functions into 5G Media Streaming either by reference or by creating a new specification TS 26.51x.

4. Study the separation of the User Plane and Control Plane Functionalities of “BMSC” and map this to the relevant 5GMSd AS and AF.

5. Study the separation the User Plane and Control Plane Functionalities/APIs of “MBMS client” and map to or extend 5GMSd client functionalities/APIs (Clause 6 in TS 26.347 is control, clause 7 in TS 26.347 is user).

6. Study the integration of the 5G Broadcast System (EPC-based) as defined in TS 103 720 [27] into 5GMS on both the UE and the transmitter side.

### 5.5.2 Conclusions

Based on the discussions in this TR, the following re-use aspects are proposed.

1. The following “user service” functionalities (as defined in TS 26.346) with proper mapping to 5G MBS architecture (as to be defined in Rel-17, TS 23.247) are proposed to be reused and extended if needed. The combination with 5G Media Streaming is one deployment scenario.

a) Service Announcement and Discovery as defined in TS 26.346 based on userServiceDescription. Stage-3 aspects may be reconsidered, for example to align with 5GS design principles.

b) Object delivery Method that includes

- Download delivery method, File Delivery as defined in TS 26.346, clause 7.

- DASH/HLS over MBMS as defined in TS 26.346, clause 5.6 and 5.7, including Low-Latency CMAF as defined in 5GMS.

c) A common packet delivery method that includes the relevant delivery aspects of transparent delivery method, group communication delivery method and streaming delivery method as defined in TS 26.346, clause 8B, 8A and 8 respectively.

d) The relevant functions as now defined as Associated Delivery Procedures in TS 26.346, clause 9, and aligning with 5GMS.

2. Define the necessary extensions of relevant “MBMS Service Layer” functionalities to support 5GS and 5G MBS Sessions (as to be defined in Rel-17, TS 23.247). This pre-dominantly includes the definition or proper delivery method establishment.

3. Provide the relevant functions and protocols for northbound interfaces based on the xMB API defined in TS 26.348.

4. Define the separation of the User Plane and Control Plane Functionalities of “BM-SC” (now MBSF and MBSTF) and define the API between MBSF and MBSTF (named 'Nmb2').

5. Define the User Plane and Control Plane Functionalities/APIs of the 5MBS Client based on the MBMS Client functions as defined in TS 26.347 (Clause 6 is control, clause 7 is user-plane).