**3GPP TSG SA WG4#115-e** ***S4-211143***

**E-meeting, 18th-27th August, 2021**

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| *CR-Form-v12.0* |
| **PSEUDO CHANGE REQUEST** |
|  |
|  | **TS 26.502** | **CR** | **–** | **rev** | **–** | **Current version:** | **0.0.1** |  |
|  |
| *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)*.* |
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| ***Proposed change affects:*** | UICC apps |  | ME |  | Radio Access Network |  | Core Network |  |

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|  |
| ***Title:***  | pCR to TS 26.502 on reference architecture  |
|  |  |
| ***Source to WG:*** | TELUS |
| ***Source to TSG:*** | S4 |
|  |  |
| ***Work item code:*** | 5MBUSA |  | ***Date:*** | 2021-08-11 |
|  |  |  |  |  |
| ***Category:*** | **D** |  | ***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)*. |  |
|  |  |
| ***Reason for change:*** | Added text in reference architecture for 5G Multicast-Broadcast User Services |
|  |  |
| ***Summary of change:*** |  |
|  |  |
| ***Consequences if not approved:*** |  |
|  |  |
| ***Clauses affected:*** | Several clauses |
|  |  |
|  | **Y** | **N** |  |  |
| ***Other specs*** |  | **X** |  Other core specifications  |  |
| ***affected:*** |  | **X** |  Test specifications |  |
| ***(show related CRs)*** |  | **X** |  O&M Specifications |  |
|  |  |
| ***Other comments:*** | Changes against skeleton document TS 26.502 |
|  |  |
| ***This CR's revision history:*** |  |

FIRST CHANGE

4.4 Functional entities

### 4.4.1 General

Figure 4.4.1-1 depicts the 5MBS network architecture showing 5MBS related entities involved in providing 5MBS User Service delivery and control.

AF and MBSF interact to support MBS session operations and transport (i.e. xMB-C and MB2-C reference points).

AS and MBSTF interact to support MBS data handling (e.g. encoding) via xMB-U and MB2-U interfaces. MBSTF performs generic packet transport functionalities available to any IP multicast-enabled application such as framing, multiple flows, packet FEC (encoding). It also performs multicast/broadcast delivery of input files as objects or object flows. If needed, MBSTF provides a media anchor for MBS data traffic and sourcing of IP multicast.



Figure 4.4.1-1: Network Architecture for 5MBS User Service Delivery and Control

The 5MBS User Service is provided by the MBSF and MBSTF. 5MBS User Services enable applications. It presents a complete service offering to an end-user, via a set of APIs that allows the 5MBS Client to activate or deactivate reception of the service.

Figure 4.4.1-2 depicts the functional entities in MBSF and MBSTF to support 5MBS User Service.



Figure 4.4.1-2: 5MBS user service functional entities

The User Service Discovery/Announcement provides session access information, which is necessary to initiate the reception of a 5MBS User Service. The session access information may contain information for presentation to the end-user, as well as application parameters used in generating service content to the 5MBS Client.

### 4.4.2 5G Media Streaming with the use of 5MBS User Service

5G media streaming service as specified in TS 26.501 [7] could utilize 5MBS User Services to deliver DASH segments. When delivering these segments to a 5MBS Client, the MBSTF uses one or more 5MBS Delivery Methods described in Clause 4.5.

Figure 4.4.2-1-1 depicts a deployment of 5G Media Downlink Streaming delivery over multicast. The 5GMSd Application Provider is a combined external application entity and content-specific media functionality (e.g. media creation, encoding and formatting) that uses the 5GMS System to distribute media to a 5GMSd-Aware Application.



Figure 4.4.2-1: 5G multicast media streaming User Service functional entities

The 5GMSd AF provides 5G Media Downlink Streaming provisioning, and various control functions to the Media Session Handler in the 5GMS Client located in the UE. It may relay or initate a request for different PCF treatment.

In the deployment architecture as shown by Figure 4.4.2-1, the 5GMSdAF and MBSF are fully separated logical functions. Alternatively, the MBSF could be integrated within the 5GMSd AF. In such a deployment, the embedded MBSF still uses the Nmb2 to configure and control the multicast delivery functionality of the MBSTF.

##

## 4.5 Delivery methods

### 4.5.1 General

A set of 5MBS Delivery Methods are provided by the MBSTF. These provide functionality such as security and key distribution, reliability control (by means of FEC techniques) and associated delivery procedures.

**5MBS object delivery method:** Use the protocol specified in Clause 6 to deliver objects over 5MBS sessions. It also supports the real-time delivery of media segments (as special objects) including Low-Latency CMAF delivery.

**Transparent delivery method:** Support the IP streaming use cases, for which UDP payloads (also referred to as Application Data Units) are distributed as part of UDP or IP flows carried to the UE over an MBS session. Examples of higher layer protocols are RTP, packetized MPEG-2 TS or other UDP-based streams.

The above Delivery Methods may use either a multicast or broadcast session to deliver content to a receiving application, and may also make use of a set of 5MBS associated delivery procedures.

The use of 5MBS Sessions by the object delivery method is described in Clause 6.

The use of 5MBS Sessions by the transparent delivery method is descried in Caluse 7.

NEXT CHANGE

# 2 References

[7] 3GPP TS 26.501: "5G Media Streaming (5GMS); General description and architecture".

END OF CHANGES