**3GPP TSG-WG SA4 Meeting #111e e-meeting *S4-201573***

**Staying safe at home, November 11 – 20, 2020**

**Title: Reply LS on Service Layer aspects for 5G MBS**

**Release: Rel-17**

**Work Item: FS\_5MBS**

**Source: SA WG4**

**To: SA WG2**

**Cc: SA WG6**

**Contact person: Thorsten Lohmar**

**Thorsten.Lohmar@ericsson.com**

**Send any reply LS to: 3GPP Liaisons Coordinator,** [**mailto:3GPPLiaison@etsi.org**](mailto:3GPPLiaison@etsi.org)

**Attachments:**

# 1 Overall description

SA4 thanks SA2 for their LS on 5MBS progress and the Service Layer Aspects for 5MBS. SA4 is already studying potential Multicast extensions for the 5G Media Streaming Architecture within the FS\_5GMS\_Multicast study item. We understand that 5MBS may also be used independently from the 5G Media Streaming Architecture (5GMSA).

SA4 would like to provide the following feedback:

*SA2 assumes that the 5G service layer functionality for MBS is in scope of SA4 work.*

SA4 concur with your assumption that the 5G service layer functionality for MBS is in scope of SA4. SA4 has already started identifying the functional mapping of BM-SC functions and xMB interfaces to the new MBSF entities (MBSF-C and MBSF-U).

…*therefore SA2 would like to seek coordination with SA4 regarding the standardisation of a framework to enable media processing for 5MBS services and related interactions between MBSF-C and MBSF-U. Solution #33 in the TR contains not yet agreed proposals for such a framework*.

SA4 has started the discussions around the MBSF-U functionality and its configuration from an API invoker side. The current SA4 architecture assumptions are in S4-201568 [modified to remove any contradictions](). It is assumed that existing BM-SC user plane functions and the xMB-U ingest protocols are evolved into the MBSF-U. Does SA2 agree that SA4 defines the MBSF functions (MBSF-C and MBSF-U entities) and defines the Nmbsu Interface (Stage 2)?

SA4 has also identified a couple of issues which would benefit from SA2 input:

1. For the MBSF-U design (in particular the Nmbsu definition) we need to know the MB-UPF ingest options and configuration parameters. From TR 23.757, N6 appears to offer two transport options, either direct IP Multicast or a unicast tunnel (MB2-U). Is this assumption correct?
2. Regarding Configuration 1, Figure A.3.2-2, TR 23.757: Can an Application Function in any external Data Network publish data directly into the MB-UPF via N6/MB2-U? Or is Configuration 1 limited to Mission Critical Services / GCS?
3. The existing BM-SC hosts the SYNC (for time synchronization) and PDCP layer (for RoHC header compression). The prime reason here is MBSFN operation. SA4 understands that the 5MBS feature does not yet have a requirement for synchronization between adjacent cells, but that the related RAN normative work item does not preclude its introduction in a later release. Does SA2 have a view on the need of SYNC and/or RoHC header compression support in the MBSF-U?
4. After some initial discussion, SA4 suggests that interface Nmbsu should follow the SBA design pattern (i.e. following HTTP REST principles), re-using concepts and properties from xMB-C. Would SA2 agree with this assumption?

Besides this, SA4 has some other feedback:

* SA2’s Converged architecture depicts only a single AF function handling both control plane and user plane interactions. During our recent joint conference call with SA2 FS\_MBS experts it was clarified that the AF can also support the separation of control plane and user plane aspects (like the split between 5GMS AF and 5GMS AS). SA4 kindly asks SA2 to add a note into the final TS that an AF can also support control/user plane split.
* SA4 has frequent conference calls to progress the work between formal e-meetings. SA2 delegates are very welcome to join these discussions.

Editor’s note: Do we want this more formal, or propose a date?

# 2 Actions

**To SA2**

**ACTION: SA4 kindly asks SA2 to**

* + Notify SA4 when the 5G MBS reference architecture is finalized
  + Note the control plane / user plane split of the AF in their specification

SA4 kindly asks SA2 to:

* + Does SA2 agree that SA4 defines the MBSF functions (MBSF-C and MBSF-U entities) and defines the Nmbsu Interface (Stage 2)?
  + Provide information on the N6 transport options
  + Provide information on external AF permission (i.e. can an IP Multicast stream sourced from an external AF)
  + Provide information on SYNC and / or RoHC in the MBSF
  + SA4 would appreciate feedback on the initial design thoughts around Nmbsu

# 3 Dates of next TSG SA WG2 meetings

Editor’s note: The SA4#112 dates are not completely fixed.

TSG SA WG4 Meeting 112e February [1 -10], 2021 Still at home