**3GPP SA4 119-E meeting** ***S4-220660***

**E-meeting, May 11th – 20th, 2022**

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| *CR-Form-v12.0* | | | | | | | | |
| **CHANGE REQUEST** | | | | | | | | |
|  | | | | | | | | |
|  | **TS 26.502** | **CR** | **0003** | **rev** | **–** | **Current version:** | **1.0.0** |  |
|  | | | | | | | | |
| *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 |  | Radio Access Network |  | Core Network | **X** |

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| ***Title:*** | CR to TS 26.502 support of Group Communication Service | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Source to WG:*** | Huawei, HiSilicon | | | | | | | | | |
| ***Source to TSG:*** | S4 | | | | | | | | | |
|  |  | | | | | | | | | |
| ***Work item code:*** | 5MBUSA | | | | |  | ***Date:*** | | | 2022-05-04 |
|  |  | | | |  | |  | | |  |
| ***Category:*** | **F** |  | | | | | ***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:*** | | In the SA2 LS S4-220706/S2-2203051, the Group Communication is only applicable to LTE/EPC and is referenced in TS 23.247 in Rel-17 only in the context of interworking with LTE eMBMS. The exchanges between MBSF and MBSTF via Nmb2 is clarified. | | | | | | | | |
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| ***Summary of change:*** | | Clarify the support of GC services for MBSF/MBSTF when interworking with LTE eMBMS. | | | | | | | | |
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| ***Consequences if not approved:*** | | Support of group communication services is missing. | | | | | | | | |
|  | |  | | | | | | | | |
| ***Clauses affected:*** | | 2, A.1 | | | | | | | | |
|  | |  | | | | | | | | |
|  | | **Y** | **N** |  | | | |  | | |
| ***Other specs*** | |  | **X** | Other core specifications | | | |  | | |
| ***affected:*** | |  | **X** | Test specifications | | | |  | | |
| ***(show related CRs)*** | |  | **X** | O&M Specifications | | | |  | | |
|  | |  | | | | | | | | |
| ***Other comments:*** | |  | | | | | | | | |
|  | |  | | | | | | | | |
| ***This CR's revision history:*** | |  | | | | | | | | |

First change

# 2 References

The following documents contain provisions which, through reference in this text, constitute provisions of the present document.

- References are either specific (identified by date of publication, edition number, version number, etc.) or non‑specific.

- For a specific reference, subsequent revisions do not apply.

- For a non-specific reference, the latest version applies. In the case of a reference to a 3GPP document (including a GSM document), a non-specific reference implicitly refers to the latest version of that document *in the same Release as the present document*.

[1] 3GPP TR 21.905: "Vocabulary for 3GPP Specifications".

[2] 3GPP TS 23.501: "System architecture for the 5G System (5GS)".

[3] 3GPP TS 23.502: "Procedures for the 5G System (5GS)".

[4] 3GPP TS 23.503: "Policy and charging control framework for the 5G System (5GS); Stage 2".

[5] 3GPP TS 23.247: "Architectural enhancements for 5G multicast-broadcast services; Stage 2".

[6] 3GPP TS 26.348: "Northbound Application Programming Interface (API) for Multimedia Broadcast/Multicast Service (MBMS) at the xMB reference point".

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

[8] IETF RFC 3500: "RTP: A Transport Protocol for Real-Time Applications".

[9] IETF RFC 2250: "RTP Payload Format for MPEG1/MPEG2 Video".

[10] 3GPP TS 26.247: "Transparent end-to-end Packet-switched Streaming Service (PSS); Progressive Download and Dynamic Adaptive Streaming over HTTP (3GP-DASH)".

[X] 3GPP TS 23.468: "Group Communication System Enablers for LTE (GCSE\_LTE)".

SECOND change

# A.1 Group Communication

The Group Communication (GC) Service defined in TS 23.468 [X] is only applicable to LTE/EPC. In order to allow the MBS System to interwork with an LTE-based eMBMS System, the MBSF also supports reference point MB2‑C and the MBSTF also supports reference point MB2‑U, as defined in clause 5.2 of TS 23.247 [5]. The MBSF and MBSTF here jointly play the role of a BM‑SC for LTE-based eMBMS. In this case, the GCS AS integrates with theMBS System as specified in annex C of [5].

Figure A.1‑1: User Plane protocol stack for Group Communication services

NOTE: Whether ingested GC traffic from GCS AS via MB2-U can be distributed to the MB-UPF via Nmb9 as well depends on coordination with SA2.

The following MBS Distribution Session properties (see clause 4.5.6) are used by the MBSF at reference point Nmb2 to provision this setup in the MBSTF:

- Distribution method is set to Packet.

- Operating mode is set to Forward-only.

- Packet ingest method is set to Unicast.

- User plane traffic flow information is omitted because ingested multicast packets are not modified.

- FEC configuration information is provided if AL‑FEC protection was requested by the GCS AS in the MBMS bearer allocation request at MB2-C.

- The MBSTF provides the MBSTF ingest endpoint addresses (representing the BM‑SC address and BM‑SC port) via the MBSF to the GCS AS at reference point MB2‑C so that the GCS AS can establish a UDP/IP tunnel with the MBSTF at MB2-U and start sending tunnelled IP packets.

- The MBSTF provides forward error protection according to the *FEC configuration* for downlink IP packets ingested from GCS AS, and then sends the source packets and any FEC packets to the MBMS GW at reference point SGi-mb.

End of CHANGEs