**3GPP TSG-SA WG6 Meeting #50-e S6-222255\_Rev1**

**e-meeting, 22nd – 31st August 2022 (revision of S6-22xxxx)**

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| *CR-Form-v12.2* |
| **CHANGE REQUEST** |
|  |
|  | **23.434** | **CR** | **0124** | **rev** | - | **Current version:** | **18.1.0** |  |
|  |
| *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:***  | Application level control signalling over 5G MBS sessions |
|  |  |
| ***Source to WG:*** | S6 |
| ***Source to TSG:*** | Huawei, Hisilicon |
|  |  |
| ***Work item code:*** | eSEAL2 |  | ***Date:*** | 2022.08.08 |
|  |  |  |  |  |
| ***Category:*** | B |  | ***Release:*** | R18 |
|  | *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 canbe 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-16 (Release 16)Rel-17 (Release 17)Rel-18 (Release 18)Rel-19 (Release 19)* |
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| ***Reason for change:*** | One-to-many transmission is an important requirements for many verticals, like V2X. In 5G, the MBS is designed and completed in R17 to support the one-to-many transmission at the network layer. However, the 5G MBS is not supported by the SEAL to facilitate the verticals to take advantage of this feature.  |
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| ***Summary of change:*** | Introduce the procedure of aplication level control signalling over 5G MBS sessions. |
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| ***Consequences if not approved:*** | Verticals cannot use 5G MBS via the SEAL. |
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| ***Clauses affected:*** | 14.3.4A.7 (new), 14.3.4A.7.1 (new), 14.3.4A.7.2 (new)  |
|  |  |
|  | **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 ...  |
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| ***Other comments:*** |  |
|  |  |
| ***This CR's revision history:*** |  |

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* First Change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/

#### 14.3.4A.7 Aplication level control signalling over 5G MBS sessions

##### 14.3.4A.7.1 Description

The VAL server may use an 5G MBS session for application level control signalling. An 5G MBS session for application level control signalling is typically used for the purposes beyond the benefit for using 5G for resource efficiency, e.g. for improved MC service performance (KPIs), handling of high load scenarios.

Similar to the usage of eMBMS, both broadcast and multicast 5MBS session for application level control signalling may be used to transmit the following messages, for example:

- MBS session announcement for media sessions

- Group application paging

- Group dynamic data (e.g. status of the group)

5G MBS session for application level control signalling is created in a service area that is larger than the estimated service for media MBS session. The service area for the media sessions is mainly based on counting of group members in each defined service area. The MBS session for application level control signalling is also created with a QoS that is better than MBS media session since the packet loss requirements are much stricter.

The NRM client shall not send responses to group-addressed application level control signalling unless instructed or configured to respond.

Editor’s note: The definition of MBS session announcement is FFS.

##### 14.3.4A.7.2 Procedure

The procedure in figure 14.3.4A.7.2-1 shows only one of the receiving VAL UE using a 5G MBS session.



Figure 14.3.4A.7.2-1: Use of 5G MBS for application-level control signalling

1. The VAL server determines to create MBS session for application-level control signalling, the VAL server initiated the 5G MBS session establishment via the NRM is done according to clause 14.3.4A.2.

2. The NRM server passes the 5G MBS session info for the service description associated with the 5G MBS session to the NRM client. The NRM client obtains the MBS session ID, from the service description.

NOTE: For 5G MBS and 4G MBMS co-existence, the MBMS bearers activation and MBS session announcement are performed as specified in the procedure for pre-created MBS session and session announcement.

3. The NRM client stores the information associated with the MBS session ID. The NRM client uses the MBS session ID and other 5G MBS session related information to enable monitoring of the 5G MBS session by the VAL UE.

4. Steps 4 to 6 defined in clause 14.3.4A.2 are performed.

5. The VAL server transmits MC application control messages over the MBS session.

/\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Changes \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*/