**3GPP TSG-WG SA2 Meeting #140E e-meeting *S2-2005415***

**Elbonia, August 19 – September 2, 2020 (revision of S2-200xxxx)**

Title: [DRAFT] LS on RAN impact of FS\_5MBS Study

Release: Release 17

Work Item: FS\_5MBS, NR\_MBS-Core

Source: [Huawei to be] SA2

To: RAN2, RAN3

Cc:

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**Attachments:** [**TR 23.757 v0.4.0**](http://www.3gpp.org/ftp/Specs/archive/23_series/23.757/23757-040.zip) **(version before** **SA2#140e)**

Note: [**TR 23.757 v0.5.0**](http://www.3gpp.org/ftp/Specs/archive/23_series/23.757/23757-050.zip) containing the results of SA2#140e will be available shortly after SA2#140E

**1. Overall Description:**

SA2 has been discussing on Rel-17 FS\_5MBS solutions since SA2 #135 meeting in TR 23.757, and captured several proposed solutions in clause 6, and architecture options in Annex A.

SA2 would like to kindly inform RAN2 and RAN3 the following interim agreements in SA2:

- SA2 will provide means to provide QoS requirements for an MBS Session to RAN nodes.

- SA2 agreed that the UE shall be able to receive on-going data of a multicast session while in CM-CONNECTED state.

- SA2 agrees that for each MBS session an own shared N3 tunnel will be used for DL MBS data delivery from MB-UPF to NG-RAN nodes. This tunnel can use either IP multicast transport (NG-RAN sends IGMP/MLD Join/Leave to a multicast router) or point-to-point unidirectional shared N3 tunnels from MB-UPF to NG-RAN nodes.

- Based on SA plenary decisions, Key Issue #5 ("Support of Broadcast TV Video and Radio communication services"), is out of scope of Rel-17.

SA2 would like to inform that no solution or combination of solutions has been adopted yet, and would like to receive feedback from RAN2 and RAN3 on the RAN impacts produced by some of the company proposed solutions. SA2 would like to kindly ask RAN2 and RAN3 the following related questions:

1. There were different proposals how to handle the CM-IDLE state:
a. UE within an multicast session shall stay in CM-CONNECTED state.
b. UE can receive data of a multicast session also while in CM-IDLE state.
c. UE may transition to CM-IDLE state if no data are received within the multicast session.
SA2 would appreciate RAN2 and RAN3 feedback on this topic.
2. For 1c, it was proposed that the network can trigger notification to UEs when the multicast session starts or resumes, or when multicast data are transmitted after a silence period.
SA2 would appreciate RAN2 and RAN3 feedback on this topic.
3. SA2 has studied Xn/N2 handover solutions documented in the TR. SA2 would appreciate RAN2 and RAN3 feedback on these.
4. As part of Xn/N2 handover solutions a temporary multicast data forwarding from source RAN to target RAN was proposed for the case that the target RAN applies multicast. SA2 would appreciate related RAN2 and RAN3 feedback.
5. SA2 would appreciate RAN2 and RAN3 feedback on whether RAN can perform service area restriction for an MBS session.
6. The SA2 study also includes some solutions for broadcast transmission (other than Broadcast TV Video and Radio communication services). Do RAN2 and RAN3 intend to support broadcast transmission (i.e. transmission of data without knowledge about the UEs receiving the broadcasted data) in Rel-17?

SA2 would like to reiterate that none of the solutions with diverse RAN impacts as described above have been concluded as way forward, and intends to use RAN WGs feedback on the RAN considerations, together with SA2’s own system level and core network considerations to reach final conclusions.

**2. Actions:**

**To RAN2 and RAN3 group.**

**ACTION:**

SA2 respectfully requests RAN2 and RAN3 to take the above information into account and to answer the questions raised by SA2 and to provide any other feedback to SA2.

**3. Date of Next TSG SA WG2 Meetings:**

TSG-SA2 Meeting #141E October 12 – 23, 2020 Elbonia

TSG-SA2 Meeting #142E November 16 – 20, 2020 Elbonia