**3GPP TSG-WG SA2 Meeting #164 *S2-2407746***

**19 – 23 Aug, 2024, Maastricht, NL (*revision of S2-240xxxx*)**

**Title: [DRAFT] LS on applicability of MUSIM UE capability restriction mechanism for DualSteer device**

**Response to: -**

**Release: Release 19**

**Work Item: FS\_MASSS**

**Source:** **SA2**

**To:** **RAN2**

**Cc: -**

**Contact Person:**

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

**Attachments:** -

**1. Overall Description:**

As part of the Rel-19 study on Multi-Access (FS\_MASSS; S2-231802), SA2 is studying 5GS support for DualSteer devices, as described in the WT#1 of S2-231802:

*WT#1: Study the overall architecture and function enhancements to 5GS to support a DualSteer Device (see TS 22.261 for definition of DualSteer Device). A DualSteer Device supports traffic steering and switching of user data (for different services) across two 3GPP access networks; it can be (a) a single UE, in case of non-simultaneous data transmission over the two networks, or (b) two separate UEs in case of simultaneous data transmission over the two networks. The subscriber of the DualSteer Device has two subscriptions/SUPIs, sharing one subscription profile from the same operator. For any particular service, at any given time, the DualSteer Device shall transmit all traffic of that service using only a single 3GPP access network.*

*The following scenarios are considered:*

*1. Two NR/5GC accesses in a single PLMN (HPLMN or VPLMN) with each access being NR TN or NR NTN;*

*2. Two NR/5GC accesses in two different PLMNs (including two VPLMNs or a VPLMN and the HPLMN) with each access being NR TN or NR NTN;*

*3. NR/5GC access and E-UTRA/EPC access in two different PLMNs (including two VPLMNs or a VPLMN and the HPLMN);*

*4. NR/5GC access and E-UTRA/EPC access in a single PLMN (HPLMN or VPLMN);*

*…*

For the case where the DualSteer device consists of two UEs and supports simultaneous data transmission over two 3GPP accesses, SA2 had some discussion whether there would be any RAN impacts caused by the simultaneous transmission that is not network-coordianted.

Some companies were of the opinion that this case is already supported with the Rel-18 MUSIM enhancements specified by RAN2 and that no further work in RAN is needed. Specifically, the *musim-CapRestrictionInd* that was introduced in the RRCSetupComplete and other RRC messages would allow each of the two UEs to indicate a temporary capability restriction to the network, in the same way as it is used by a MUSIM UE as defined in TS 38.331:

***musim-CapRestrictionInd***

*This field indicates the UE temporary capability restriction due to MUSIM operation.*

While the DualSteer feature at system level differs from MUSIM in that the two 3GPP accesses are used by the UE to exchange data with the same (home) CN (instead of two different and independent CNs), the mechanism for indicating UE temporary capability restriction would be common to both the DualSteer device and the MUSIM UE.

SA2 kindly asks RAN2 for feedback on whether the UE temporary capability restriction due to MUSIM operation could also apply to the DualSteer device with two separate UEs in case of simultaneous transmission over two 3GPP accesses.

**2. Actions:**

**To RAN2:**

**ACTION:** SA2 kindly asks RAN2 for feedback on whether the UE temporary capability restriction due to MUSIM operation could also apply to the DualSteer device with two separate UEs in case of simultaneous transmission over two 3GPP accesses.

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

3GPP SA2#165 14 - 18 Oct 2024 Hyderabad, IN

3GPP SA2#166 18 - 22 Oct 2024 Orlando, FL, US