**3GPP TSG-WG SA2 Meeting #143E e-meeting *S2-210xxxx***

**Elbonia, February 24 – March 09, 2021 (revision of S2-210xxxx)**

**Source: Huawei, HiSilicon**

**Title: KI#2: Service continuity PLMN/SNPN**

**Document for: Approval**

**Agenda Item: 8.2**

**Work Item / Release: FS\_eNPN/ Rel-17**

*Abstract: This contribution clarifies the difference between service continuity and session continuity issue and propose to add that in the conclusion. Meanwhile, it proposes some description for SR UE case to bind with an Editor’s note.*

# 1. Introduction/Discussion

## 1.1 Service continuity

There were extensive discussion on service continuity and session continuity in SA2#141E and SA2#142E meeting. This contribution discuss the relationship between service continuity and session continuity and propose to clarify that in the conclusion of KI#2 regarding service continuity support for VIAPA services.

Session/service continuity between the two networks can be supported with two options:

1. Using session continuity mechanism in 3GPP network
2. Using the mobility procedure between the two networks in 3GPP network assuming high layer service continuity support (e.g., MPTCP, multi-homing support in the application layer).

Session continuity in option 1 works only in case of a common anchor or status synchronization between the 2 networks. This is not possible for very low latency VIAPA services which require direct 3GPP access in both networks. Meanwhile, SNPN does not allow for the network status synchronization with other networks by definition. Option 2 requires no common anchor and no interaction between the 2 networks. Therefore, it is proposed to include the mobility procedure in the conclusion of service continuity support for VIAPA.

The “Editor's note: Whether the network trigger the UE register to the target network via N3IWF before it lose the radio coverage is FFS.” shows the mechanism to improve the mobility procedure for SR UE case in option 2 above. Therefore it is proposed to keep this aspect in the conclusion. A NOTE is added to clarify that this feature will implemented using the existing mechanism in this release.

# 2. Text Proposal

It is proposed to capture the following changes vs. TR 23.700-07.

\* \* \* \* First change \* \* \* \*

## 8.2 Key Issue #2: NPN support for Video, Imaging and Audio for Professional Applications (VIAPA)

Editor's note: These are INTERIM conclusions for Key issue #2.

When UE only has single subscription, the data service from both V-SNPN and Home SP (PLMN or SNPN), as well as service continuity is to be evaluated and concluded by KI#1.

When UE have both subscriptions for SNPN and PLMN, following interim agreements are adopted.

For the issue of service continuity for VIAPA,

- It is concluded that the existing Rel-16 N3IWF-architecture is used as the basis to address data service from both networks and session/service continuity between the two networks.

- For single radio UE, PDU session continuity can be realized by utilizing the existing handover procedure between non-3GPP access and 3GPP access for single access PDU session, where one network is acting as non-3GPP access of the other network. UE may register to target network and establish a PDU session via N3IWF before it loses the radio coverage to shorten the handover procedure.

NOTE: In this release, the trigger for UE to register to the target network via N3IWF before it lose the radio uses the existing mechanism (e.g., UE configuration update from the network).

- For dual radio UE the UE can use one radio operating in SNPN access mode and the other operating the normal PLMN selection, in order to avoid SNPN access mode switch. PDU Session continuity and service continuity may e.g. be provided as follows:

- UE registers to both SNPN and PLMN the procedure described in clause 4.9.2 in TS 23.502 [6] is followed as necessary.

- Register to the same 5GC via both Uu and NWu interface and possibly establish MA-PDU session. Upon mobility, UE and UPF could switch the user plane resource to the corresponding access type.

Editor's note: Dual radio may have radio limitation when operated simultaneous with two independent service providers. It is FFS whether is further enhancements is needed.

\* \* \* \* Second change \* \* \* \*

\* \* \* \* Third change \* \* \* \*

\* \* \* \* Fourth change \* \* \* \*

\* \* \* \* Fifth change \* \* \* \*

\* \* \* \* End of changes \* \* \* \*