**3GPP TSG-SA3 Meeting #116 *S3-242491r1***

**Jeju, Korea, 20 - 24 May 2024**

**Source: Apple**

**Title: Evaluation for solution#5**

**Document for: Approval**

**Agenda Item: 5.6**

# 1 Decision/action requested

***Approve the pCR to TR 33.701***

# 2 References

# 3 Rationale

This contribution proposes a solution evaluation for solution#5 in TR 33.701.

# 4 Detailed proposal

\*\*\* Start of 1st Change \*\*\*

## 5.5 Solution #5: Solution for access restrictions to decommissioned UTRAN and GERAN

### 5.5.1 Introduction

This solution address KI#1.

### 5.5.2 Details

The solution describes how a UE is provisioned with decommissioned UTRAN and GERAN access restriction information to avoid UTRAN/GERAN selection (e.g., when NR/LTE signal is unavailable). The UTRAN and GERAN access restriction information (i.e., list of restricted RAT specific to decommissioned UTRAN, decommissioned GERAN) can be sent to the UE in any NAS message following the establishment of NAS security.

The UDM/UDR based on operator’s local policy manages GERAN and UTRAN access restriction information for the UE(s) (e.g., in the subscription data as part of UE Access and mobility context).

NOTE 2: The UDM/UDR already manages Mobility restrictions and RAT restriction information for the UE(s) in the subscription data as part of UE Access and mobility context (described in TS 23.501 [4] Clause 5.3.4.1). It is upto the normative work to determine if the decommissioned UTRAN and GERAN access restriction can be managed along with the existing information, as part of UE Access and mobility context or any new information category is needed. Further any additional granularity of information if any needed as part of UTRAN and GERAN access restriction information can be upto the normative work.

During UE registration, the AMF fetches the GERAN and UTRAN access restriction information (i.e., using Nudm\_SDM\_Get/response as in TS 23.502 [2] step 14b in clause 4.2.2.2.2 or using any Nudm service), which indicates UTRAN access restriction/not allowed, and GERAN access restriction/not allowed information.

The AMF stores the received network access restriction information as part of UE context and provides the network access restriction information to UE in a secured NAS message (i.e., such as Registration Accept messaage).

#As alternative way, the AMF based on operator local policy can be configured with GERAN and UTRAN access restriction information, in such case UDM involvement described above is not applicable.

The UE stores the received information (if it can process i.e., if it is not a legacy device) and determines not to select the UTRAN or GERAN access based on the received network access restriction information.

NOTE 3: Legacy UEs cannot understand this new information, so it may be dropped with no action from the UE.

### 5.5.3 Evaluation

The solution addresses KI#1 by reusing the principles of existing access restrictions and includes the following impact:

Network: Solution provides 2 options, i.e., option-1 which impacts UDM and AMF; option-2 which impacts only AMF on the network side i.e., to fetch and provide UE with the network access restriction information that includes UTRAN and GERAN access restrictions for the decommissioned networks.

UE: The UE on receiving network access restriction information determines not to select decommissioned UTRAN and GERAN.

This solution does not address the problem for legacy devices.

\*\*\* End of 2nd Change \*\*\*