**3GPP TSG-SA3 Meeting #115e *S3-241173***

**Electronic meeting, online, 15 April - 19 April 2024**

**Source: ZTE Corporation**

**Title: New Solution for KI#1**

**Document for: Approval**

**Agenda Item: 5.6**

# 1 Decision/action requested

***This contribution proposes to add a new Solution for KI#1***

# 2 References

None

# 3 Rationale

This solution addresses the Key Issue #1: Bidding down attacks from LTE/NR to decommissioned GERAN/UTRAN.

# 4 Detailed proposal

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

## 6.Y Solution #y: Using allowlist to aviod bidding down attack from LTE/NR to decommissioned GERAN/UTRAN

### 6.Y.1 Introduction

This solution addresses the security requirement in Key Issue #1: Bidding down attacks from LTE/NR to decommissioned GERAN/UTRAN.

### Y.2 Solution details

During the registration procedure of a UE registering 5G network, the network shall provide the UE the allowlist of networks, i.e., the allowed RAT types, in the Registration Accept message. If the operator has decommissioned GERAN and UTRAN networks, only 4G and/or 5G networks shall be listed.

Upon receiving the message, the UE stores the allowlist and replaces any previously received one with the new one.

When the UE accesses the 5G network, it checks whether the allowlist is available. If available, the UE shall not connect to the networks whose RAT types are not in the allowlist of the networks. If unavailable, the UE skips this step and performs cell selection as legacy procedures.

### 6.Y.3 Evaluation

This solution has impacts on AMF and UE and does not address the problem for legacy devices.

Impacts on the AMF:

* The AMF shall add a new information element indicating the allowlist of available networks to the Registration Accept message.

Impacts on the UE:

* The UE shall store the received allowlist of available networks.
* The UE shall not connect to the networks that are not in the allowlist of the networks.

\*\*\* End of 1st Change \*\*\*