**3GPP TSG-SA3 Meeting #102-e-Bis *S3-210874***

**meeting, 01- 05 March 2021**

**Source: MITRE**

**Title: ProSe Direct Discovery Clarification in Out-of-Coverage Scenarios**

**Document for: Approval**

**Agenda Item: 2.9**

1 Decision/action requested

***This pCR proposes to add the Editor’s Note to Solution #22: Representation of identities during broadcast***

3 References

[1] 3GPP TR 33.847 "Study on Security Aspects of Enhancement for Proximity Based Services in 5GS".

2 Rationale

There is still a gap in describing how the ProSe enabled UE will perform Direct Discovery when out-of-coverage. For example, if the UE makes a discovery request then receives codes and filters from the 5GC. Then the validity of the codes and filters expires after moving out-of-coverage. How will the UE continue to perform Direct Discovery? This is still unclear in the TR. Furthermore, If the codes are available after the validity period expires this is a security concern.

We think it is necessary to add an Editor’s Note in Solution 22, to clarify how the codes and filters are renewed/updated when out-of-coverage. Otherwise, security requirements of KI 11 are not met in out-of-coverage scenarios.

3 Detailed proposal

SA3 is kindly requested to agree to the below pCR to TR 33.847.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* First Change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*

## 6.22 Solution #22: Representation of identities during broadcast

### 6.22.1 Introduction

This solution addresses Key Issue #11, UE identity protection during ProSe discovery.

The solution is based on the idea to use representations of the UE identity during announcing (i.e. broadcasting) and monitoring (i.e. filtering). Using a representation enables resistance to tracing and impersonation of UEs.

The solution is described using the framework and terminology of ProSe Direct Discovery as described in TS 23.303 [5], i.e. for Model A discovery, the terms Announcing UE and Monitoring UE are used, and for Model B discovery, the terms Discoverer UE and Discoveree UE are used.

ProSE Direct Discovery procedure can partially work in out-of-coverage scenarios in the following sense: at the start of the discovery process, codes and filters are provided through a required connection with the 5GC. The connection with the 5GC can be direct or via a relay. After this step the discovery process can continue out of coverage.

Editor’s Note: How codes and filters are renewed in out-of-coverage scenarios needs to be clarified.

\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\* End of Change \*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*\*