**3GPP TSG-SA3 Meeting #124 draft\_S3-253707-r1**

**Wuhan, China, 13 – 17 October 2025** revision of S3-253291

**Source: Interdigital**

**Title: New Solution: Security for UE Data Collection**

**Document for: Approval**

**Agenda item: 5.2.6**

**Spec: 3GPP TR 33.785**

**Version: 0.0.0**

**Work Item: FS\_AIML\_CN\_Ph2\_SEC**

**Comments**

This contribution proposes a new solution based on agreed key principles in TR 23.700-04 The solution covers authentication, transport security, , , replay,

\* \* \* First Change (all text new) \* \* \* \*

## 6.X Solution #X: Security for Data Collection

### 6.X.1 Introduction

This solution addresses Key Issue #1 and Key Issue #X.

This solution builds on TR 23.700-04 (standardized transfer of standardized data over UP for UE-side data collection) and introduces security enhancements in the 5GS for: (i) secure UE connection setup and data transfer with a Data Collection Function (DCF),

### 6.X.2 Solution details

**Architecture scope and roles**

- DCF in the MNO domain manages and orchestrates UE data collection and transfer,

### **Security functions**

### 1) Mutual authentication and session protection (UE↔DCF)

 - The UE establishes an secure association with the DCF using shared key derived from network credentials. Transport securityis bound to the shared key. Options for shared key derivation are:

- Option #1: AKMA-based keys (TS 33.535 [x]). DCF acts as an AF, and obtains KAF from the AAnF over SBI.

Editor’s Note: the role of DCF acting as AF is FFS needs alignment with SA2.

- Option #2: KSEAF or KAMF derived shared key. DCF obtains the shared key from AMF/SEAF over SBI.

Editor’s note: How shared key derivation and service operations for exchange of shared key between AMF/SEAF and DCF (option #2) are FFS.

Editor’s Note: How the UE perform data collection and its dependency on the solution is subject to SA2 progress.

### 2) UE authorization and policy enforcement

### - The DCF authorizes a UE to participate per DCP using subscription, consent, and operator policy.

Editor’s Note: Whether and how DCP subscription is applicable is FFS and depends on SA2.

### 4) Consent enforcement inside the Core Network

###  - The DCF acts as the consent enforcement point for data collection from the UE, i.e., checks consent from UDM/UDR for permissions, as per TS 33.501 [z], Annex V.

Editor’s note: whether and how user consent exposure applies will be decided by SA3 based on SA6 progress.

NOTE: Above points 1, 2 and 4 address Key Issue #1,

Editor’s Note: How the solution covers all the requirements of KI#1 is FFS.

### 6.X.3 Evaluation

Editor’s note: evaluation is FFS.