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**Source: SA3****Title: Evaluation of the impact on positive authentication reporting on network performance****Document for: Evaluation****Agenda Item: (tbd)**

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## Introduction

At the recent SA3 meeting in Stockholm there was a joint session between SA3 and TIA TR45 AHAG on harmonization of 3GPP and 3GPP2 security standards. In particular, the two groups discussed how to make 3GPP AKA the common international Authentication and Key Agreement standard for 3G.

During the meeting a few features was identified that TIA TR45 AHAG would want SA3 to consider for inclusion in the UMTS security architecture. One of these features is the possibility of having a positive acknowledge of the use of the Authentication Vectors.

SA3 therefore kindly requests CN4 for advice on what impact such mechanism might have on network performance and if CN4 foresees any problems in implementing such mechanism within 3GPP networks.

## Authentication Status Reporting

The UMTS Security Architecture already contains the feature "Authentication Failure Report" which provides a mechanism for the VLR/SGSN to report authentication failures back to the HLR.

However, this is not sufficient for TIA TR45 AHAG since they also have a requirement that the VLR/SGSN should be able to report successful authentications. So to facilitate roaming between 3GPP and 3GPP2 systems it may become a requirement that a 3GPP SN should be able to report successful authentication.

Taking this as a starting point, what seems to be required is that the current 3GPP Authentication Failure Report mechanism be extended to also be able to report successful authentication.

The shaded section below is a rewritten version of chapter 6.3.6 from TS 33.102 (v3.4.0) that should provide CN4 with a rough idea of what the generic authentication reporting mechanism might look like.

### 6.3.6 Reporting authentication failures-results from the SGSN/VLR to the HLR

The purpose of this procedure is to provide a mechanism for reporting authentication failures-results from the serving environment back to the home environment.

The procedure is shown in Figure 13.

