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Abstract

In order to achieve access independence for the IP multimedia subsystem the ISIM and the USIM need to be separated not only logically but also on a physical level. In the current definition of the ISIM it is stated that it should reside on the UICC. The definition of the UICC defines that it can contain one or more applications one of which must be the USIM. This prevents access independence and UE split since the ISIM can not exist independently of the USIM. This contribution suggests re-definitions to solve this problem.

Current definitions

”Universal Subscriber Identity Module (USIM): An application residing on the UICC used for accessing services provided by mobile networks, which the application is able to register on with the appropriate security.” [3]

”UMTS IC Card: An IC card (or ‘smartcard’) of defined electromechanical specification which contains at least one USIM” [3]

“UMTS Integrated Circuit Card (UICC): a physically secure device that can be inserted and removed from terminal equipment. It can contain one or more applications one of which must be the USIM”[1]

“ISIM – IM Services Identity Module. In a security context, this module is responsible for performing subscriber and network authentication and key agreement in IM CN SS. The ISIM resides on the UICC.” [2]

Suggested new definitions

This contribution suggest the introduction of a IMS Integrated Circuit Card (IICC), which is similar to the UICC but used for storing the ISIM. This IICC could be the same physical smartcard as the UICC, ie the USIM and ISIM stored on the same smartcard, but this is only optional. The ISIM can be stored on a smartcard (IICC) without the USIM in order to achieve access independence.

New definition:

“IMS Integrated Circuit Card (IICC): a physically secure device that can be inserted and removed from terminal equipment. It can contain one or more applications one of which must be the ISIM. The IICC could be implemented in the same physical card as the UICC, but not necessarily ”

Change of definition:

“ISIM – IM Services Identity Module. In a security context, this module is responsible for performing subscriber and network authentication and key agreement in IM CN SS. The ISIM resides on the IICC.”

References

- [1] 3rd Generation Partnership Project; Technical Specification Group Services and System Aspects; 3G Security; Security Threats and Requirements (3G TS 21.133 version 3.1.0)

- [2] 3G TS 33.203 V0.5.0 (2001-06) 3rd Generation Partnership Project; Technical Specification Group SA3; Access security for IP-based services (Release 5)

- [3] Universal Mobile Telecommunications System (UMTS); Vocabulary for 3GPP Specifications (3GPP TR 21.905 version 4.3.0 Release 4) (2001-06)