

16 - 19 October, 2001

Sydney, Australia

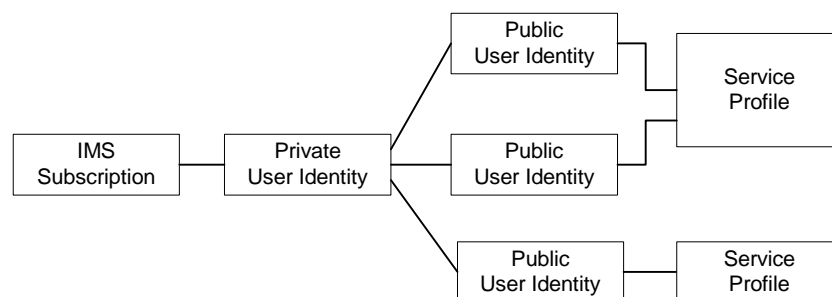
Source: TSG-SA WG3**To:** TSG-SA SA2**Cc:** TSG-CN WG1, TSG-CN WG4**Title:** Response to LS S2-012456 from SA2 on Security aspects for IMS related to Authentication**Contact person:** Guenther HornGuenther.horn@mchp.siemens.dePhone: +49 89 636 41494

1. Overview:

This LS is a response from SA3 to the LS S2-012456 = S3-010435 from SA2.

SA3 thanks SA2 for the detailed response to SA3's questions. This LS intends to answer a request by SA2 to SA3 in action item 1 of S2-012456.

In S2-012456 SA2 presents the scenario for the relation of public and private user identities and associated service profiles that should be supported by the IMS in Release 5.



Based on this scenario SA2 further describes the principles for the assignment of S-CSCFs. One of these principles is that different service profiles may be assigned to different S-CSCFs, even when the service profile belongs to the same private user identity. SA2 asks SA3 in action item 1 of S2-012456 "to respond if this work assumption significantly increases the SA3 work load such that the Release 5 IMS security standardisation can not be completed on time".

SA3 has started work in this direction and has come to the following conclusions:

- SA3 believes that, in principle, the security architecture for IMS can be designed in such a way that the use of different S-CSCFs for one Private ID can be supported.
- SA3 would, however, like to point out that the currently available results indicate that this working assumption may significantly increase the complexity of security procedures and/or the load on various entities in the IMS in comparison to a scenario in which all service profiles are assigned to the same S-CSCF at a given time.
- Given the high workload of SA3 and the significant amount of IMS security work which still has to be done to complete Rel'5 there is indeed a possibility that the additional specification work required by SA2's working assumption may negatively affect SA3's ability to complete IMS security in time.

2. Technical considerations

This section is meant to provide some technical detail to support the statements made in the preceding section.

At SA3#20 two contributions related to this issue were discussed, TD S3-010495 (Ericsson) and TD S3-010544 (Siemens). These contributions are attached to this LS. Following the discussion of TD S3-010495, it was agreed by SA3 that, in order to reduce the complexity of the UE and the P-CSCF and to minimize the number of authentications, at most one security association shall be active between the UE and the P-CSCF at a given time, irrespective of the number of ongoing registrations for different public user IDs of a particular user. TD S3-010544 shows that, under this assumption, and if different service profiles are assigned to different S-CSCFs, it may not be possible any more to maintain the working assumption shared by SA2 and SA3 that the S-CSCF is always in charge of authentications. Instead it may be required that either the HSS or the P-CSCF assist the S-CSCF in performing a refresh of security associations by authenticated re-registrations. This assistance would include the maintenance of timers per registration and/or per security association and the implementation of operator authentication policies which may depend on the type of user and may be dynamically changing. This seems undesirable.

3. Actions:

SA3 kindly asks SA2 to inform SA3 asap by email to the above contact or to the SA3 mailing list about their position regarding the following alternatives:

- If the working assumption is considered indispensable by SA2 for IMS Rel'5 then SA3 will endeavour to provide the corresponding security procedures.
- If the working assumption is considered not essential by SA2 and SA2 feels that the assignment of only one S-CSCF for all service profiles at a given time would not constitute a significant loss of functionality then SA3 would appreciate if the working assumption could be dropped and their future security work could be based on the simpler case of just one S-CSCF per user at a time.
- If the working assumption is considered important by SA2 and would be reconsidered only after more information has been received on the complexity of the related security procedures then SA2 is invited to clarify this issue in an email discussion with SA3. This email discussion should come to conclusions in time before the meetings of SA2 and SA3 in the last week of November. If an email discussion is to be conducted then SA2 is asked to name a contact with whom the procedures for this discussion can be agreed.

4. Next meetings

SA2#20	29 th October – 2 nd November 2001	Japan
SA2#21	26 th – 30 th November 2001	Cancun, Mexico
SA#21	27 th – 30 th November 2001	Sophia Antipolis

5. Attachments

TD S3-010495 and TD S3-010544