

3GPP TSG SA WG3 Security — S3#19

3 - 6 July, 2001

Newbury, UK

Source: Chairman and Secretary of the meeting (V Niemi (Nokia) and Maurice Pope, MCC)

Title: Draft report for joint S1/S3/T2/T3 meeting about security implications of UE functional split 3rd July 2001 - version 0.0.3

1 Opening of the meeting

Prof. Michael Walker, Vodafone, welcomed delegates to the joint meeting and provided information about the domestic arrangements.

2 Roll call of delegates

The Joint meeting Chairman, V. Niemi, introduced himself and asked delegates to briefly introduce themselves and the group they usually attended.

3 Agreement of meeting objectives and agenda

The Chairman outlined the objectives: this is a joint meeting that SA WG3 has arranged with SA WG1, T WG2 and T WG3 to review the security implications of splitting UE functionality.

[TD S3-010316](#) Draft agenda for joint S1/S3/T2/T3 meeting about security implications of UE functional split. The agenda was presented and **approved**.

4 Assignment of input documents

The available documents were assigned to their appropriate agenda items.

5 Presentation on UE functionality split architecture (T2/SA1)

The output of the SA WG1/T WG2 UE functionality split meeting in Dallas the previous week was used as the basis for the presentation.

[TD S3-010341](#) SA WG1 UE-Split Meeting Report (presentation slides. The Word version was provided in [TD S3-010344](#)). This was presented to the meeting and each scenario discussed. The document was used in discussions of the different scenarios and their impact upon the security architecture for the summary of possible solutions (agenda item 8).

[TD S3-010345](#) Draft TS version 0.0.1: Service requirements for the IP Multimedia; Requirements Report on UE Functionality Split; (Release 5). This was presented for information and some open issues were found, and some clarification was provided on the different scenarios for envisaged split-UE applications. The draft had not been updated yet to include results of the previous week meeting in Dallas.

[TD S3-010358](#) Presentation about current status of S3 work on access security for IMS and the draft TS 33.203 version 0.4.0. This was presented by the rapporteur for information on the current assumptions in SA WG3. The logical separation of IMS master key and transport level master key had not been considered when UE split scenarios had been discussed in SA WG1 and T WG2.

6 Implications of proposals on 3G security architecture (SA3)

Includes review of recent SA3 LS to SA1, T2 and T3 (S3-01289).

[TD S3-010315](#) LS Concerning Reviews of UE Functionality Split. This was a response from T WG2 thanking groups for their attention to the UE functionality split document and resulting actions performed in the WGs. The LS was [noted](#).

[TD S3-010342](#) UE Split. This was presented by BT and provided feedback from the Dallas meeting on UE split considerations. There was some discussion and clarification over the security implications of the solutions proposed. The non-security related aspects of the proposal will be discussed further in SA WG1.

[TD S3-010343](#) Discussion Document on Location of Firewall Functionality. This was presented by Nortel. There was some discussion over whether the standardisation of firewalls was expected, and it was agreed that although the actual firewalls do not need standardisation in 3GPP, some protection against unexpected ME behaviour may be needed, in the multi-application environment associated with the split UE functionality concept.

[TD S3-010289](#) LS to S1/T2/T3 on Security and UE functionality split. This liaison was presented by the joint meeting Chairman, and discussed the implications on the security architecture of split UE. The UMTS security architecture was not designed to protect the MT-TE interfaces.

The SA WG1 Chairman asked whether SA WG3 could clarify the logical separation of the IMS authentication entity and the USIM authentication. It was agreed that this would be discussed in the SA WG3 meeting and that a new document clarifying this would be drafted if possible.

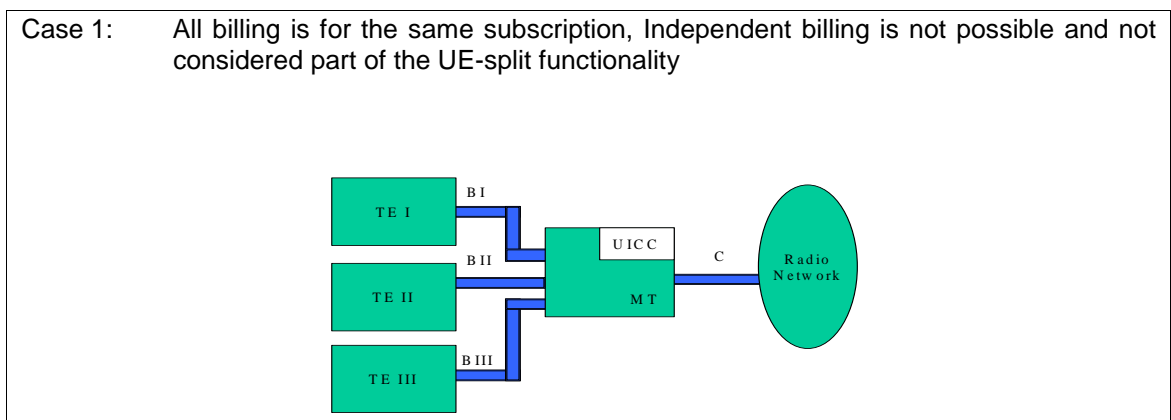
Maurice Pope to e-mail any output from SA WG3 meeting 4-6 July to Kevin Holley.
[TD S3-010386](#)

7 Identification of security concerns (SA3)

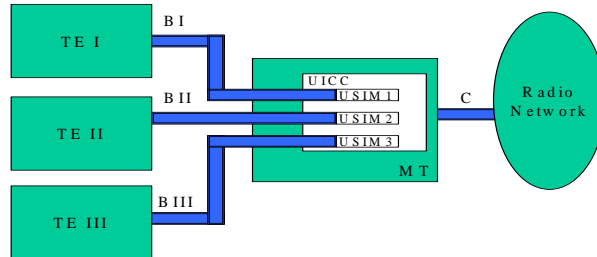
A brief analysis of the security implications of different functional splits as presented in [TD S3-010341](#) was carried out, see results under agenda item 8.

8 Outline of solutions (SA3/SA1/T2/T3)

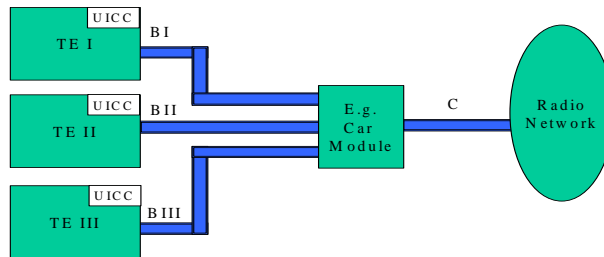
Potential approaches to provide solutions for the scenarios in the Case Studies provided in [TD S3-010341](#) were [discussed](#). As a result, an estimate of the extent of needed changes to 3G security architecture was given for each case.



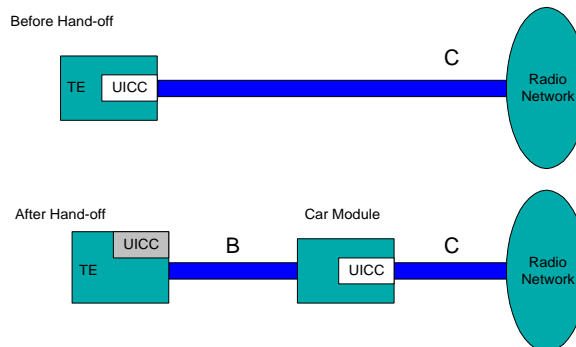
Case 2: Multiple USIM/SIM can be stored on a UICC. Only a single USIM/SIM application can be active



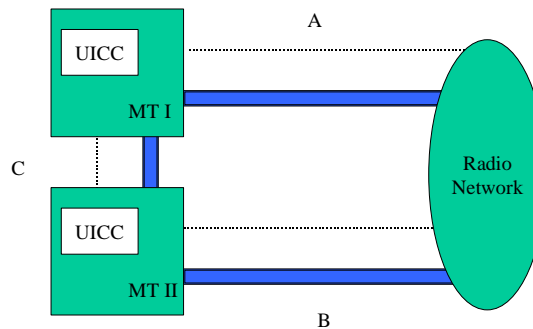
Case 3: Security concerns prohibit location of UICC on TE. Case not supported



Case 4: Handoff in "IDLE" state possible with existing services using existing supplementary services – forwarding, transfer. Assumes TE-MT functionality split remains constant. Handoff during "Active" state challenging



Case 5: The USIM/SIM application in MT1 will be billed for all data on interface A, MT2 will be billed for all data on interface B. Any load sharing between the two is an application issue.



Case 1 was divided into two subcases: simpler case with single TE and the more general case with several TEs connected to a single MT.

For the simpler case, it was agreed that even if the application in TE is transparent for the 3GPP system, some security functionality needs to be developed for MT. Based on the proposal of BT (TD S3-010342) it was estimated that inclusion of e.g. IMS-related application into the TE would imply non-trivial re-design of either the 3G security architecture or the MT architecture in general (or both).

As a solution for the simple case with 3GPP transparent application in TE the following solution was discussed: The user would have the responsibility for what TE is connected to the MT when the TE is transparent to / independent of the 3GPP system. Also, some access control on the B interfaces would need to be standardised. This needs further study as it looked like a substantial amount of work and may require some modification to the security architecture. SA WG3 will study this and feed back information to SA WG1 for their meeting.

The more complicated case with several TEs was not discussed separately.

Case 2 can potentially be reduced to the case 1 but some additional issues around the access control of various TEs towards the USIMs have to be taken into account.

Case 3 would require major re-design of the 3G security architecture.

Case 4 contains several subcases. Some of them can be realized simply e.g. via existing call forwarding functionality but the more challenging cases were seen to imply major re-design of the 3G security architecture.

Case 5 was seen to be outside of the scope of the work at least if the network has no visibility of the connection between the two terminals.

9 AOB

A further meeting was suggested that a similar joint meeting would be useful and a suitable venue should be considered and offered over e-mail. (Possibility of Cancun joint with T WG2 meeting, November, if delegates are available and willing to attend).

10 Closing of meeting

The Joint meeting Chairman thanked the delegates for their hardwork and co-operation during the meeting and thanked the hosts, Vodafone, for the organisation of the meeting, and closed the meeting.

Annex A: List of attendees

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