

**Source :** France Télécom

**Title :** Inclusion of the new security mechanisms in Release 99

**Document for :** Action

**Agenda Item :**

## **1. Introduction**

During the last TSG SA it was decided to **conditionally** approve the new security requirements proposed by TSG SA3. This approval was only conditional because it was felt necessary to check that these important changes can be implemented in the technical specifications before the end of 1999 when Release 99 of UMTS shall be completed.

It was further necessary to check that some important service requirements are still met after the implementation of these new security requirements.

## **2. Service Requirements**

### **2.1 Roaming of a UMTS subscriber on a GSM coverage**

In this case a UMTS subscriber uses a dual mode GSM/UMTS equipment in which he/she inserted a USIM. He/she lost the UMTS coverage and aims to use the GSM coverage in order to get some basic services. This is a very important service requirement as the UMTS coverage will be less good than the GSM coverage : this will be particularly true at the beginning of the UMTS roll out.

Consequences on the different domains of the network can be analysed as follows :

2.1.1 The UICC shall be able to behave as a SIM card in order to react correctly to the GSM procedures (e.g. : security, authentication); the interface between the UICC and the dual mode GSM/UMTS equipment shall allow such mechanisms. This should be easy as it is already required that the UICC includes both SIM and USIM functionality.

2.1.2 The GSM VLR will interrogate the HLR of this UMTS subscriber, it is necessary that this HLR is able to send GSM authentication triplets

## **2.2 Roaming of a GSM subscriber on a UMTS coverage**

In this case a GSM subscriber uses a UMTS mobile equipment or a dual mode GSM/UMTS equipment in which he/she inserted a GSM SIM. Such a case is useful for GSM subscribers wanting to roam in countries where a UMTS network is deployed but where no GSM network is deployed. For instance it will probably be the case in Japan.

Consequences on the different aspects of the network can be analysed as follows :

2.2.1 Both a UMTS mobile equipment and a dual mode GSM/UMTS equipment shall accept a GSM SIM.

2.2.2 The VLR of the visited UMTS network shall be able to request GSM authentication triplets to the GSM HLR of the visiting subscriber.

2.2.3 The parameters of the GSM security (authentication triplets) shall be used on the UMTS radio interface. Regarding ciphering this would yield that UMTS ciphering would be used with a GSM key as an input.

According to the decision of the last SA, it shall be signalled on the radio interface that a GSM SIM is inserted in the roaming mobile station. This may be done in MM messages transmitted during the registration procedure.

## **3. Handling of the service requirements by the TSGs**

Some analysis on the whole matter have been performed by TSG SA2 and by TSG CN2, liaisons have been sent by these groups to TSG SA3.

If available the answer from TSG SA3 should be presented during the present meeting.

### **3.1 Roaming of a UMTS subscriber on a GSM coverage**

Item 2.1.1 is under the responsibility of TSG T3. It seems that the work on it has started in T3. Could a detailed information be given ?

Item 2.1.2 is under the responsibility of TSG CN2. The analysis has started, a detailed status should be given at this meeting.

### **3.2 Roaming of a GSM subscriber on a UMTS coverage**

Item 2.2.1 is under the responsibility of TSG T3. It seems that the work on that is well advanced in T3. Could that be confirmed ?

Item 2.2.2 is under the responsibility of TSG CN2. The analysis has started, a detailed status should be given at this meeting.

Item 2.2.3 is under the responsibility of TSG RAN2, TSG RAN3 and TSG CN1. A detailed report from these groups is expected.

## **4. Recommended actions**

According to the last decisions of TSG SA, it is expected that the different TSGs report on the items listed in paragraph 3.

Then a similar report should be given by the TSGs during the October meeting of TSG SA, based on these reports it shall be decided which of the new security mechanisms can be kept in Release 99.

TSGs are encouraged to continue their work on the different items listed in paragraph 2.