3GPP TSG-SA WG3 Security Meeting #35
St Paul's Bay, Malta, 5-8 October 2004

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CR-Form-v7.1

CHANGE REQUEST

⌘ **33.246 CR 001** ⌘ **rev - ** ⌘ Current version: **6.0.0** ⌘

*For **HELP** on using this form, see bottom of this page or look at the pop-up text over the ⌘ symbols.*

Proposed change affects: UICC apps⌘ □ ME ☒ Radio Access Network □ Core Network □

Title:	⌘	Deletion of MBMS keys stored in the ME
Source:	⌘	Orange
Work item code:	⌘	MBMS
Date:	⌘	27/09/2004
Category:	⌘	**B**
Release:	⌘	Rel-6

Use one of the following categories:
F *(correction)*
A *(corresponds to a correction in an earlier release)*
B *(addition of feature),*
C *(functional modification of feature)*
D *(editorial modification)*
Detailed explanations of the above categories can be found in 3GPP TR 21.900.

Use one of the following releases:

Ph2	*(GSM Phase 2)*
R96	*(Release 1996)*
R97	*(Release 1997)*
R98	*(Release 1998)*
R99	*(Release 1999)*
Rel-4	*(Release 4)*
Rel-5	*(Release 5)*
Rel-6	*(Release 6)*
Rel-7	*(Release 7)*

Reason for change:	⌘	It is not specified that MUK and MSK keys, if stored on the ME, should be deleted from the ME when the UICC is removed or the ME is powered down.
Summary of change:	⌘	MUK and MSK keys, if stored on the ME, should be deleted from the ME when the UICC is removed or the ME is powered down
Consequences if not approved:	⌘	MUK and MSK keys could be used during their validity time by another user inserting his UICC in the ME.

Clauses affected:	⌘	§6.1

Other specs affected: ⌘

Y	**N**		
		Other core specifications	⌘
		Test specifications	
		O&M Specifications	

Other comments:	⌘	

***** Begin of change *****

6 Security mechanisms

6.1 Using GBA for MBMS

GBA[6] is used to agree keys that are needed to run an MBMS Multicast User service. MBMS imposes the following requirements on the MBMS capable UICCs and MEs:

A UICC that contains MBMS key management functions shall implement GBA_U.

An ME that supports MBMS shall implement GBA_U and GBA_ME, and shall be capable of utilising the MBMS key management functions on the UICC.

Before a user can access an MBMS User service, the UE needs to share GBA-keys with the BM-SC. If no valid GBA-keys are available at the UE, the UE shall perform a GBA run with the BSF of the home network as described within [6] clause 5. The BM-SC will act as a NAF according to [6].

The MSKs for an MBMS User service shall be stored on either the UICC or the ME. Storing the MSKs on the UICC requires a UICC that contains the MBMS management functions (and that is GBA aware) and requires that the BM-SC is GBA_U aware. As a result of the GBA_U run in these circumstances, the BM-SC will share a key Ks_ext_NAF with the ME and share a key Ks_int_NAF with the UICC. This key Ks_int_NAF is used by the BM-SC and the UICC as the key MUK to protect MSK deliveries to the UICC as described within subclause 6.3. The key Ks_ext_NAF is used as the key MRK within the protocols as described within subclause 6.2.

NOTE: A run of GBA_U on a GBA aware UICC will not allow the MSKs to be stored on the UICC, if the MBMS management functions are not present on the UICC.

In any other circumstance, a run of GBA results in the BM-SC sharing a key Ks_(ext)_NAF with the ME. This key Ks_(ext)_NAF is used by the BM-SC and the ME to derive the key MUK and the key MRK (MBMS Request Key). The key MUK is used to protect MSK deliveries to the ME as described within subclause 6.3. The key MRK is used to authenticate the UE towards the BM-SC within the protocols as described within subclause 6.2.

In case MUK and MSK keys are stored on the ME, any keys MUK and MSK shall be deleted from storage when the UE is powered down, or when the UICC is removed.

***** End of change *****