TSG-RAN Working Group 3 meeting #10   *TSGR3#10(00)0400*
Gothenburg, Sweden, 24th – 28th January 2000

Source:	RAN WG3
To:	TSG SA WG3
Title:	RANAP Signalling procedures in case of Unsuccessful Integrity check
Cc:	

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RAN WG3 have noted within the TS 33.102 v3.3.0 (*Security Architecture)* specification (Section 6.4.6), the situation whereby the RNC can request the CN to perform a re-authentication when the current CK and IK in use, cannot be used.

- Can TSG SA WG3 confirm that Integrity checking is applied to signalling only?

RAN WG3 believe that the RNC should be able to indicate to the CN that such a scenario has occurred, and a solution within RAN WG3 is available for this implementation.

One such solution involves the RNC informing the CN by sending a *RAB RELEASE REQUEST* message (once for every signalling message that has Integrity Checksum failed) with a Cause value indicating that the reason for this request is due to integrity failure. The *RAB Release Request* procedure will be amended such if the CN receives such a message it does not mean that the RAB shall be released, rather it *should* be released. Therefore it is the decision of the CN to decide what actions should be taken – try re-authentication or if problem persists, release the RAB itself.

- Regarding the 'failure situation persists' text, at what point does the CN ignore the 'Security Check Request' from the UTRAN i.e. how many times shall the CN ignore the *RAB RELEASE REQUEST* from the RNC indicating that Integrity checking has failed, before releasing RABs, and ultimately the call?

Regarding Authentication, it was accepted that Authentication Response (within the *DIRECT TRANSFER* RANAP message) must be sent to the CN even in this integrity failure scenario. However it was unclear to RAN WG3 what the RNC should do when integrity fails:

- Does the RNC **stop transfer** of all RANAP messages or permit the transfer of **selected** RANAP messages when Integrity Check failure occurs – Can TSG SA WG3 clarify this?

If selected messages only, are allowed to be passed to the CN e.g. Direct Transfer (for Authentication Response), does the *DIRECT TRANSFER* message require an indication that Integrity checking has failed, or is it sufficient to include this only in the *RAB RELEASE REQUEST* message?