TSG-RAN Working Group 3 meeting #6　　　　　*TSGR3#6(99)A01*

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Agenda item:　　　**10.1**

Source:　　　　　Nokia

Title:　　　　　**RANAP functions**

Document for:

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1　Introduction

This contribution lists the functions of the RANAP protocol that are proposed to be included in RANAP Specification TS 25.413. These functions are derived from the already approved RANAP procedures that are currently included in the document.

2　RANAP protocol functions

RANAP protocol has the following functions:

- Relocating Serving RNC. This function enables to change the serving RNC functionality as well as the related Iu resources (RAB(s) and Signalling connection) from one RNC to another.

- Overall RAB management. This function is responsible for setting up, modifying and releasing RABs.

- Queuing the setup of RAB. The purpose of this function is to allow placing some requested RABs into a queue, and indicate the peer entity about the queuing.

- Requesting RAB release. While the overall RAB management is a function of the CN, the UTRAN has the capability to request the release of RAB.

- Release of all Iu Resources. This function is used to explicitly release all resources related to one UE from the corresponding instance of Iu.

- Requesting the release of all Iu Resources. While the Iu release is managed from the CN, the UTRAN has the capability to request the release of all Iu resources.

- Controlling Overload in the Iu Interface. This function allows adjusting the load in the Iu interface.

- Resetting the Iu. This function is used for resetting an instance of Iu.

- Sending the UE Common Id (IMSI) to the RNC. This function makes the RNC aware of the UE's common Id (IMSI)

- Paging the user. This function provides the CN for capability to page the UE.

- Controlling the tracing of the UE activity. This function allows setting the trace mode for a given UE.

- Transport of NAS information between UE and CN. This function has two sub-classes.

    - Transport of the initial NAS signalling message from the UE to CN. This function transfers transparently the NAS information. As a consequence also the Iu signalling connection is set up.

    - Transport of NAS signalling messages between UE and CN, This function transfers transparently the NAS signalling messages on the existing Iu signalling connection.

- Transport of NAS information to be broadcasted to UEs. This function allows setting the NAS information to be broadcasted to the UEs from the CN.

- Controlling the security mode in the UTRAN. This function is used to send the security keys (ciphering and integrity check) to the UTRAN, and setting the operation mode for security functions.

- Controlling Location Reporting. This function allows the CN to set the mode in which the UTRAN reports the location of the UE

- Location Reporting. This function is used for transferring the actual location information from RNC to the CN.

- Reporting general error situations. This function allows reporting of general error situations, for which function specific error messages have not been defined.

These functions are implemented by one or several RANAP elementary procedures described in the following section.

3   Proposals

It is proposed to add the text in section 2 of this contribution to section 7 of [1].

4   Reference

[1]   3GPP UMTS 25.413, *UTRAN Iu Interface, RANAP signalling*, v.1.1.2, Source: Editor