TSG-RAN Working Group 3 meeting #7
Sophia Antipolis, France, September 1999

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Agenda Item: 10.3

Source: Nokia

Title: **Principles for including the Uu interface related information to RANAP messages used for relocation of SRNS**

Document for: Decision

1 Introduction

In relocation of SRNS the termination point of air interface protocols terminating in UTRAN are to be relocated from source RNC to target RNC. This means that a lot of parameters related to these protocols must be transferred from source RNC to target RNC.

This paper discusses the possibilities to transfer this type of information between RNCs in relocation of SRNS and proposes a solution in which the dependence of RANAP specificaton to other UMTS specifications are minimised.

2 Discussion

There are several alternatives to transfer Uu interface related information from source RNC to target RNC utilising RANAP protocols. Some of the alternatives are considered below:

1. Defining all required information elements as RANAP information elements

   This approach causes that a lot of new parameters have to be defined in RANAP specifications. This causes very strong relationship between RANAP and other UMTS specifications (especially RRC). It maximises the effort required for completion of RANAP specification and may cause difficulties in evolution of the protocols. This approach is not seen as an acceptable solution for the problem.

2. Defining the required information in RANAP as a set of Information elements defined in other specifications

   This approach means that RANAP specifications shall define which information elements from other specifications are to be included in the RANAP transparent container. RANAP should also define the usage of these information elements and specify how they are coded into the transparent container. The definition of the information elements itself in the RANAP is not required. All required protocol (e.g. RRC) information elements have to be anyway referred in RANAP specifications which introduces quite strong relationship between RANAP and other UMTS (e.g. RRC) specifications.

3. Defining in each related protocol specification a special PDU to be inserted to the RANAP transparent container in case of relocation of SRNS

   This approach means that in each relevant protocol a special PDU to be moved from the old termination point to the new termination point in case of Relocation of that protocol shall be defined.

   E.g. a new RRC-PDU "RRC Initialisation" should be defined in RRC specifications (25.331) This PDU should include all information required to start the RRC, RLC and MAC (PDCP ffs.) operation in target RNC, e.g. Radio Bearer Parameters, Transport Channel Parameters, Physical Channel Parameters, etc

   Whether similar Initialisation PDU should be defined for the PDCP protocol is ffs.

In RANAP messages used for relocation of SRNS only a transparent container for each of these special initialisation PDUs is to be defined. For the contents of the container only a reference to the appropriate specification is included in RANAP

The approach 3 is seen feasible and most suitable taking into account the requirements for the maximal independency of the specifications.

3 Proposals

1. It is proposed that following information element are inserted to the RANAP Transparent Containers used in relocation of SRNS:

   Source RNC to Target RNC transparent field:

RRC Information field		**O (2)**
RRC Information		M

   IE Definition:

   RRC Information

   RRC Information contains the information required by the receiving RRC entity e.g. to initialise the RRC protocol in the Target RNC or to produce the Uu interface Handover Command. The contents of the RRC Information is defined in UMTS TS 25.331.

2. Following text shall be added to the Relocation Preparation Chapter.

   <u>The information related to the Uu interface protocols shall be included to the appropriate fields in the transparent container of RELOCATION REQUIRED.</u>

3. It is proposed that following information element are inserted to the RANAP Transparent Containers used in relocation of SRNS:

   Target RNC to Source RNC transparent field:

RRC Information field x n		**O (2)**
RRC Information		M

4. Following text shall be added to the Relocation Resource Allocation Chapter:

   <u>The information related to the Uu interface protocols shall be included to the appropriate fields in the transparent container of RELOCATION REQUEST ACK.</u>

5. It is proposed to send a liaison statement to RAN WG2 describing the adopted RAN WG3 working assumptions regarding the transfer of Uu interface related information in RANAP transparent containers used for relocation of SRNS.