Agenda Item: 10.4 Message contents and parameter range
Source: **NEC**
Title: Content in the Source RNC to Target RNC Transparent Container
Document for: Discussion and Decision

[1] 25.413 RANAP Specification v1.2.1
[2] 25.303: UE Functions and Interlayer Procedure in Connected Mode v2.1.0
[3] 23.121: Architectural Requirement for Release 99 v3.0.0
[4] 25.331: RRC Protocol Specification v1.3.0
[5] 25.322: RLC Protocol Specification v1.2.0
[6] R3-99455 RANAP Relocation Procedure: Transparent Field (Source Ericsson)
[7] R3-99678 Parameters for Relocation Required and Relocation Request Message (Source Alcatel)

1. abstract
   In the meeting in Helsinki, contents in the transparent container of Relocation Required and Relocation Request has been discussed. This contribution proposes some more contents in the transparent container.

2. contents in Transparent Container
   In the current discussion about the transparent container of Relocation Required and Relocation Request is based on the [6] and [7]. It is thought that the Target RNC should take over the current RRC information Transport Channel Information etc. of the serving RNC in order to provide continuous services to the UE. This RRC information, Transport Channel Information etc. should be incorporated into the transparent container.
   Table 1 shows the contents in the transparent container. The underline shows the new proposal from this contribution

   For easy understanding, this contribution has changed the format of the Transparent container, the format can be discussed further.

Format of the "Source RNC to target RNC transparent container":

Parameter Identifier	**Type**
Length	M
UE Identifier	O
IMSI	M
Number of CN Nodes	O
UE Capability Information for UTRAN	M
Cipher Information	
Cipher Key	M
Cipher Algorithm	M

RAB Information	M
RAB ID(s) for RRC	M
RAB Multiplexing Information	M
Transport Channel Information	M
TFCS	M
TFC Subset	M
Transport CH ID (s)	M
TFS for each Transport CH	M
State Information	M
RRC State Indication	M
RLC State Information	O
Other System specific information container	O

Table X Contents of the Transparent Container

- **Ciphering Information**: this information shows the ciphering information, i.e. cipher key and cipher algorithm that the UE has been using before Relocation.
- **RAB Information**: this information shows the RAB information for RRC that has been established before Relocation: this information includes RAB ID(s) and RAB Multiplexing Information for each RAB. For detail please refer to [4].
- **Transport CH Information**: this information shows the transport CH information that has been established before Relocation. This information includes TFCS, TFC Subset, Transport CH ID(s). For detail please refer to [4].
- **State Information: RRC State Indication**: This indication shows the current RRC state, e.g. Cell Connected state(DCH-DCH, RACH-FACH etc.) or URA Connected State(RACH-PCH). For detail please refer to [3] and [2]. **RLC State Information**: This information shows the current state of RLC. For detail please refer to [5].

3. Reason for including these information
   3.1 Ciphering Information
   Regarding Ciphering Information, two alternatives are possible.
   Alternative 1: The CN sends the Ciphering Information to the TRNC.
   Alternative 2: The SRNC sends the Ciphering Information to the TRNC.
   The alternative 1 has a possibility that the CN can change e.g. cipher key during Relocation. If the CN change the ciphering information during Relocation procedure, the UE should be informed. It is thought that alternative 1 would have much more complexity during the Relocation procedure.
   Therefore in order to keep simplicity of the Relocation Procedure, this contribution proposes not to change ciphering information during Relocation procedure and the alternative 2 is proposed.

   3.2 RAB Information
   The RAB information between the RNC and the UE will not change during Relocation. This information should be transfer from SRNC to TRNC.

   3.3 Transport Channel Information
   Two alternatives are possible for transferring Transport Channel Information.
   Alternative 1: TRNC generates Transport Channel Information from the information of RAB parameters in the Relocation Request message.
   Alternative 2: SRNC sends the current Transport Channel Information to the

TRNC.

The SRNC may change the Transport CH information during communication with the UE before Relocation. (This is done by using Transport Channel Reconfiguration procedure in the RRC protocol. Please refer to [4] for detail) If the TRNC generate the Transport Channel Information from the information of RAB parameters in the Relocation Request message, then the configuration of Transport Channel will have inconsistency between UTRAN and UE after Relocation. The alternative 2 can avoid this inconsistency.

3.4 State Information

For example the Relocation is initiated by receiving a URA Update message from the UE. The TRNC should recognize that it is URA Connected state before Relocation and then the TRNC can have appropriate process e.g. enter URA Connected state after completion of Relocation procedure.

4. proposal

It is proposed to include content of table X into 25.413 RANAP specification.