

Agenda Item: 8.2

Source: Ericsson

Title: Iu Interface Characteristics

Document for: Approval

References

[1] 25.401 UTRAN Overall Description

Introduction

Currently, section 4.5 of 25.410 is empty. It is proposed to include the text below into that section.

Proposed Text

4.5 Iu Interface Characteristics

4.5.1 General

The protocol stack used on the Iu interface follows a layered structure, although the naming of the layers is not consistent with the OSI 7-layer model.

4.5.2 Characteristics

In the radio network layer control plane, the functional split and the common procedures are identical for the two domains, but parameters in the procedures may differ. The UE – CN signalling transferred transparently through UTRAN may also be different.

The Iu supports a common set of services to the two CN domains, and therefore the radio network layer user data protocol is defined commonly for both Iu-PS and Iu-CS. The protocol has a number of modes of operation to allow features to be activated on a per RAB basis.

For the transport network layer, different protocol stacks are used towards each Core Network domain.

4.5.3 Co-ordination between Iu Instances

It is the responsibility of the UTRAN to co-ordinate the two Iu interface instances for one UE.

The following co-ordination functionality is required due to the existence of two CN domains:

- The SRNS shall be able to handle two Iu connections, one for each CN domain, for one UE, i.e. for one RRC connection. This implies:
 - a) Functionality to set-up and associate a second Iu connection to an already established RRC connection.
 - b) Transferral of control signalling between UE and respective CN node, by using one RRC connection between UE and SRNC and the two Iu connections.
 - c) Release of one Iu connection, while keeping the other Iu connection and the RRC connection.

- When receiving a page request from a CN node for a UE that already has an established RRC connection (and associated UE identity (i.e. IMSI) at the RNC receiving the request), no “CN page” shall be performed. Instead a corresponding notification shall be sent by the SRNC to the UE via the established RRC connection. “CN page” refers to the RRC procedure using the page channel for transmitting a page message indicating a UE identity defined by the CN.

- A special relocation co-ordination is needed when two Iu interfaces, towards the two CN nodes for a specific UE, shall be moved from one RNC to another RNC.

- When receiving a cipher request, from a CN node, for a UE, a special co-ordination is also needed. *This co-ordination is FFS.*

The mechanism used for distribution of control signalling from UE to respective CN domain is described in [1].