Agenda Item:

Source: **Telecom MODUS**

Title: **Clarifications on RNTI**

Relevant Document :   **ZZ.01 "UTRAN Architecture Description"**

1. Introduction

In the UTRAN architecture description document [1], the RNTI concept has been described in terms of long RNTI, Short RNTI and UE temporary ID. The information included on the UL common channel transmission and DL common channel transmission served as a starting point. While it is clearly recognised that some details may be left to implementation, further important details are needed to retain compatibility with other procedures that will ultimately govern the UTRAN's mobility and routing issues.

In 3GPP TSG RAN WG2, there is an issue regarding the use of logical channels when performing cell updates. The selection of CCCH or DCCH to perform cell update is not settled. The working assumption there is that CCCH is used for URA updates, and cell updates when moving into new URA or cell. At present the unsettled issue is the choice of channel when performing a cell update when changing cell within an URA. The possibility of an URA split over multiple RNCs could influence the choice of logical channel.

The RNTI definition and the uniqueness-level for each RNTI type directly influence the message formats carried on common transport channels. Furthermore, relationship between RNTI-long and RNTI-short can affect Message Sequence Charts. For example, if the "UE temporary ID" in RNTI-long and RNTI-short are to be identical, in cases where the CRNC is responsible for assigning the "UE temporary ID", additional signallings will be required in order to inform the SRNC of the new UE's ID.

2. RNTI Issues

The following issues need to be considered in addition to the starting points discussions outlined in ZZ.01 [1].

- ♦ Uniqueness of RNTI-Long
- ♦ Uniqueness of RNTI-Short
- ♦ Definitions of UE temporary ID for long and short RNTI
- ♦ Ciphering of the CCCH messages
- ♦ Usage of the split URA (URA controlled by multiple RNCs)
- ♦ Signalling procedures across Iur for CCCH
- ♦ Choice of RNTI-Long or RNTI-short in MAC-c

3. Proposal

It is proposed that 3GPP-WG3 address the issues listed in this contribution aimed to provide a better understanding to the group on RNTI in light of the current and upcoming future working assumptions.

4. References

[1] SMG2-ARC: UMTS ZZ.01 " UTRAN Architecture Description".