

TSG-RAN Working Group 3 meeting #2
Nynäshamn, Sweden, 15th - 19th March 1999

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Agenda: **14.5**

Source: **Motorola**

Title: **Common Channels on Iur Interface**

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Date: March 15-19, 1999



Source:

Key Issue: Iur User Plane

1. Introduction

This contribution is intended to re-iterate why it is desirable to support the DSCH on the Iur interface, and introduce another point for discussion with respect to the common channels. Note that the DSCH is often referred to as a common channel. This contribution treats the DSCH separately.

2. DSCH Support on Iur

The reasons for supporting DSCH on the Iur have been covered in ETSI-SMG2ARC previously (tdoc SMG2-ARC 355). The discussion is reproduced below.

A UE may have a voice call active, utilising a DCH, and be in soft handover (it will at least have the possibility of going into soft handover). The user may then wish to transfer data as well as maintaining the voice call. There are a number of ways that this may be achieved dependent on the amount of data the user wishes to transfer, and the delay that is acceptable

- i) The DCH may be left as it is, with the data transfers happening in the speech quiet periods.
- ii) The DCH may be modified to change the QoS to allow higher peak bit rate transfers, and the data interleaved into speech quiet periods.
- iii) A CCH may be used to transfer the data, being shared with other data users, with the DCH for voice being maintained. Note that this is contrary to the current L23 working assumption.
- iv) A DSCH, if available can be used, being shared with other users, with the DCH for voice being maintained.

The DSCH exists in order to support high bit rate packet data transfers without reducing the capacity of a cell dramatically due to multiple such channels operating, and the blocking of the OVSF code tree. It is likely to be used for packet data transfers whenever possible.

In scenario iv), as the mobile moves, the DCH will go into soft handover with new cells, possibly under new RNS', and the DSCH will hard handover to new cells (possibly on a new RNS). There is no guarantee that these handovers will happen at the same time, or to the same cells.

Therefore, for cases where a particular user is assigned simultaneously to a DCH and a DSCH shared transport channel, a handover involving the shared transport channel should NOT force SRNS Relocation.

The conclusion that can be reached is therefore that the Iur will need to support hard handover data streams for DSCH.

3. CCH Support on Iur

There have previously been no concrete examples of a need to transport CCH on the Iur interface. There is however an example from IS95 that should be acknowledged.

IS95A has discovered problems with the access channels not being able to be in soft handover (SHO). The consequence is dropped calls when originations occur on cell boundaries, i.e. in areas where soft handover would be required. IS95 has modified the specifications to allow SHO on access channels in IS95B & C.

Addressing this problem as it applies to the UTRA for SHO regions between two controlling RNCs would require transfer of CCH related data across Iur. The support of DSCH related data on Iur is likely to introduce procedures that could be re-used to allow support of CCH on Iur, even if they are not initially intended for that purpose.

The extent of the problem in IS95 is small, and may not be considered to be of great enough significance to justify the additional work on it's own. However, in light of the need for the DSCH to be carried on Iur, the work to allow CCH could be covered and the problem discovered in IS95 addressed.

4. Proposals

It is proposed that the current working assumption that CCH should be carried on Iur is maintained. The work required to specify the DSCH on Iur should be generalised to allow transport of CCH.

5. References

[1] Tdoc SMG2-ARC 355, HHO Streams on Iur Interface