Liaison from SMG2 L1 Expert group to L23 on the Uplink Shared Channel (USCH)

Introduction

The uplink shared channel concept presented by Motorola in the L23 expert group gave rise to a liaison statement by L23 (Tdoc ETSI SMG2 UMTS L23 581/98), asking L1 for answers on physical layer issues related to the USCH concept.

In answer to these questions, Motorola presented Tdoc 46/99, addressing the following points: methods for fast power control for packet data, need for timing advance/guard periods and acquisition and channel estimation for packet data.

The Layer 1 expert group would like to inform the Layer 23 expert group of the outcome of the discussions in the L1 Ad-Hoc on Shared Channel meeting.

Outcome of the L1 Ad-Hoc on Shared Channel meeting

The Motorola contribution was noted, as bringing tentative answers to the identified issues. However, the following concerns were raised on:

- The convergence of the fast power control loop. Simulation results are needed to assess the performance of the fast closed loop power control in the case of bursty transmissions,

- Timing advance/guard periods: how is the timing advance information updated? The Motorola proposal is to use the RACH for setting the timing information.

- Is there a need for L1 receiver to get the knowledge of which UE is transmitting on a frame-by-frame basis (which may require an analysis of resource allocation messages coming from the RNC)?

- What functionality can be provided which is currently not available in XX documents?

It was concluded that further information including simulation results are needed on these points.