Title: **USCH/DSCH data frames on Iub**

Source: **Siemens, Italtel**

Agenda Item: **14.2**

Document for: **Approval, addition to 25.435**

Introduction

In [1], the Iub Data Frames for DSCH (for FDD and TDD) and USCH (TDD only) channels are currently not specified. This paper makes a proposal, based on the model of USCH/DSCH for NodeB [2].

5.1.3 Downlink Shared Channels

DSCH Data Frame includes the Cell SFN in which the payload shall be sent. If the payload is to be sent in several Cell SFNs the first Cell SFN shall be indicated.

The following frame structure is supposed to be applicable for both FDD DSCH and TDD DSCH, i.e. with and without a simultaneous DPCH connection, and independent of the different DSCH modeling in NodeB (see [2]).

	Information element	**Description**
Header	Frame Type	Data Frame
	FN_{CELL}	Indicates the Cell Frame Number on which this DSCH TBSs need to be transmitted
	Transport Format Indicator	This TFI to denote the format of the Transport Block set carrying the DSCH payload.
	Transmission power level	Indicator of the transmission power level
Payload	Transport Block Set	The TBS includes the DSCH payload data to be transmitted by the physical layer over the air-interface.
Tail	Data frame checksum.	Checksum of the header and payload

Note: The parameter "Transmission power level" may be used for slow closed loop downlink TX power control on the DSCH.

5.1.4 [TDD - Uplink Shared Channels]

USCH Data Frame includes the Cell SFN in which the payload was received. If the payload was received in several Cell SFNs the first Cell SFN shall be indicated.

	Information element	Description
Header	Frame Type	Data Frame
	FN_{CELL}	Indicates the Cell Frame Number count when the USCH was received.
	Transport Format Indicator	The TFI to denote the format of the Transport Block set carrying the USCH payload.
Payload	Transport Block Set	Data from the Radio interface
	Rx Timing Deviation (option for TDD)	Reports the measured Rx Timing Deviation of the UL bursts (TDD)
Tail	Data frame checksum.	Checksum of the header and payload

Proposal

We propose to include the above two sections in TS 25.435, in the indicated sections.

References

[1]   TSGR3#6(99)816, TS 25.435 v.0.3.1: Iub interface user plane protocols for Common Transport Channel data streams

[2]   TSGR3#6(99)958: Amendments to 25.430 in support of "Standalone" USCH/DSCH (source: Siemens, Italtel)