TSG-RAN Working Group1 meeting#19 TSGR1#19, R1-01-0423
Las Vegas, USA Feb 27.- Mar 2. 2001

Source: Siemens

Agenda Item: [AH24] HSDPA

Text proposal for section 8 of TR 25.848

Based on Tdoc R1-01-0240 it is proposed to add the following sections to TR 25.848.

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8.2 Simulation Assumptions

Table 1 presents the link level simulation assumptions for TDD. They are aligned with those for FDD (Annex A), whenever this is possible. However, some TDD specific parameters have to be taken into account.

Table 2: Link Level simulation assumptions

Parameter	**Value**	**Comments**
Carrier Frequency	2GHz	
Propagation conditions	AWGN, Indoor A	
Vehicle Speed for Flat Fading	3 kmh	
Closed loop Power Control	OFF	
HSDPA frame Length	10ms	
Ior/Ioc	Variable	
Channel Estimation	Real (on the midamble) / Ideal	As defined
Fast fading model	Jakes spectrum	
Channel coding	Turbo Decoder and Rate Matching as Specified in Release-99 Specification	see AMCS Table, see [2]
Tail bits	6 per RSC encoder	
Max no. of iterations for Turbo Coder	4	
Input to Turbo Decoder	Soft	
Hybrid ARQ	As defined	
Information Bit Rates (Kbps)	As defined	see AMCS Table
Number of Multicodes Simulated	As defined	see AMCS Table
TFCI model	Random symbols, ignored in the receiver but it is assumed that the receiver gets error free reception of TFCI information	
Reciever	Joint Detection (ZF-BLE)	
Oversampling	No	
Chiprate	3.84 Mcps	
Framestructure	15 TS per 10ms	see AMCS Table
SF	16	
Burstform No.	2	
Modulation Scheme	As defined	see AMCS Table
Other L1 Parameters	As Specified in Release-99 Specification	

8.3 Link-Level Simulation Results

This chapter presents link level simulation results using the link-level simulation assumptions of chapter 8.2 for the AMC schemes given in 8.1. Results are shown for the case, where 13 timeslots and 14 codes are allocated for the HS-DSCH. No HARQ is employed and a real channel estimation on the midamble is used.

Figure 1 depicts the FER vs. Eb/No of the seven MCS for the AWGN channel. Figure 2 shows the corresponding results for the Indoor A channel.

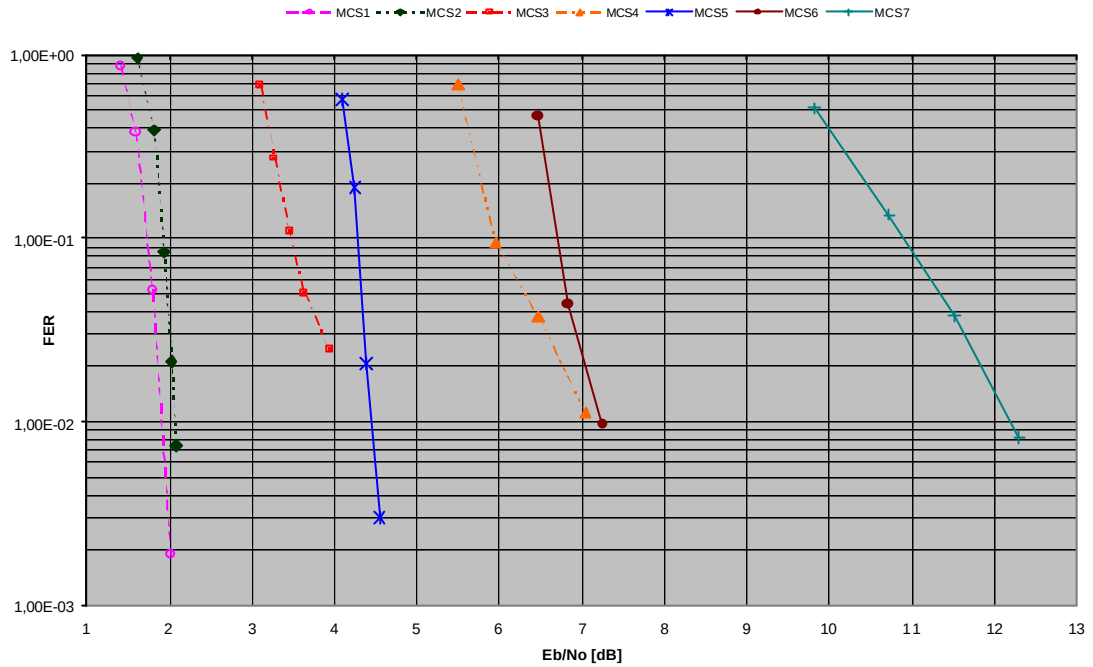

Figure 1: FER, AWGN channel

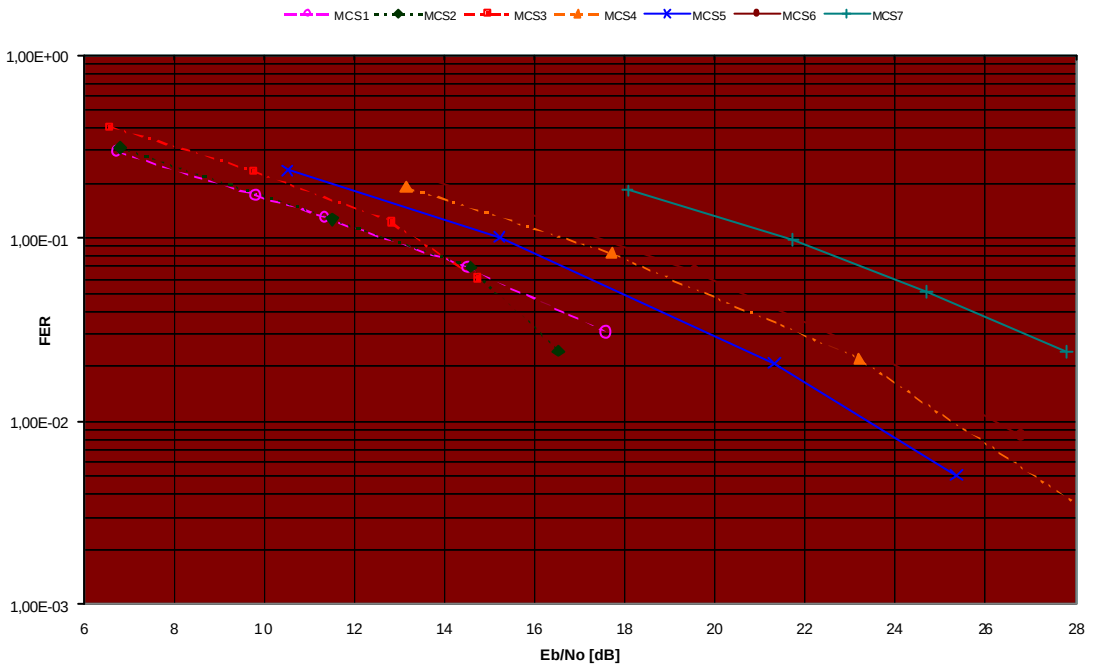

Figure 2: FER, Indoor A channel

The above simulations show that higher order modulation is applicable for the TDD mode. The presented link level performance results are comparable with those for FDD given in chapter 12. However, a direct numerical comparison is not possible due to some differences in the simulation assumptions. The TDD

simulations are using real channel estimation on the midamble in contrast to the FDD simulations, which are based on ideal channel estimation. Furthermore the Indoor A model was selected instead of the simple one ray model.
As a result of the performance similarities between TDD and FDD an alignment of the AMC schemes for both modes seems to be possible.

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