TSG-RAN Working Group 1 meeting #9

Document

TSGR1#9(99)k84

Dresden, Germany, November 30 – December 3, 1999 e.g. for 3GPP use the format TP-99xxx or for SMG, use the format P-99-xxx

	CHANGE REQUEST			Please page for	Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.			
		25.224	CR	004	r1	Current Version	on: 3.0.0	
GSM (AA.BB) or 3G (AA.BBB) specification number ↑ ↑ CR number as allocated by MCC support team								
For submission to: TSG RA list expected approval meeting # here ↑ Form: CR cover sheet, ver		for infor	for information		strate non-strate of this form is available from: ftp://ftp.3gpp.		egic use only)	
Proposed change affects: (U)SIM ME X UTRAN / Radio X Core Network (at least one should be marked with an X)								
Source:	Motorola					<u>Date:</u>	November 9	9 th 99
Subject:	STTD capa	ability for P-CCPC	H, TDD	compon	ent.			
Work item:								
(only one category shall be marked	B Addition of	modification of fe		arlier rele		Release:	Phase 2 Release 96 Release 97 Release 98 Release 99 Release 00	X
Reason for change:	Minor edito	rial modifications	during A	AH01.				
Clauses affected: 4.7.3								
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Other comments:								
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4.7.3 Transmit Diversity for P-CCPCH

Block Space Time Transmit Diversity (Block STTD) may be employed as transmit diversity scheme for the Primary Common Control Physical Channels (P-CCPCH).

4.7.3.1.1 P-CCPCH Transmission Scheme

The open loop downlink transmit diversity employs a Block Space Time Transmit Diversity scheme (Block STTD).

A block diagram of the Block STTD transmitter is shown in Figure 6. Before Block STTD encoding, channel coding, rate matching, interleaving and bit-to-symbol mapping are performed as in the non-diversity mode.

Block STTD encoding is separately performed for each of the two data fields present in a burst (each data field contains N data symbols). For each data field at the encoder input, 2 data fields are generated at its output, corresponding to each of the diversity antennas. The Block STTD encoding operation is illustrated in Figure 7, where the superscript * stands for complex conjugate. If N is an odd number, the first symbol of the block shall not be STTD encoded and the same symbol will be transmitted with equal power from both antennas.

After Block STTD encoding both branches are separately spread and scrambled as in the non-diversity mode.

The use of Block STTD encoding will be indicated by higher layers.

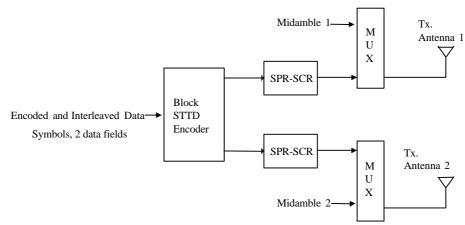


Figure 6: Block Diagram of the transmitter (STTD)

