3GPP TSG RAN WG1 Meeting #17
Stockholm, Sweden, 21-24 NOV 2000

Document R1-00-1402
e.g. for 3GPP use the format TP-99xxx
or for SMG, use the format P-99-xxx

CHANGE REQUEST

Please see embedded help file at the bottom of this page for instructions on how to fill in this form correctly.

25.224	CR	043	Current Version:	3.4.0

GSM (AA.BB) or 3G (AA.BBB) specification number ? *? CR number as allocated by MCC support team*

For submission to:	TSG RAN 10	for approval	X	strategic		(for SMG use only)
list expected approval meeting # here ?		for information		non-strategic		

Form: CR cover sheet, version 2 for 3GPP and SMG *The latest version of this form is available from: ftp://ftp.3gpp.org/Information/CR-Form-v2.doc*

Proposed change affects: *(at least one should be marked with an X)*	(U)SIM		ME	X	UTRAN / Radio	X	Core Network	

Source: Siemens AG **Date:** 15/11/00

Subject: Limit on maximum value of alpha used for open loop power control

Work item:

Category: *(only one category shall be marked with an X)*

F	Correction	X	**Release:**	Phase 2	
A	Corresponds to a correction in an earlier release			Release 96	
B	Addition of feature			Release 97	
C	Functional modification of feature			Release 98	
D	Editorial modification			Release 99	X
				Release 00	

Reason for change: The value of alpha used in the open loop power control equation can currently be set autonomously by the UE subject to a minimum value of 0 and a maximum value of 1. The use of a high value of alpha assumes a high degree of reciprocity between the downlink beacon channel and the uplink channel being power controlled. This reciprocity is not guaranteed, however. For example, the Node B may be using separate transmit and receive antennas. It is therefore proposed that the network can impose a minimum level of filtering of the pathloss estimate by specifying a maximum value of alpha that can be used in the open loop power control equation. This parameter would be set dependent on the expected channel reciprocity.

Clauses affected: 4.2.2.3.2

Other specs affected:

Other 3G core specifications		?	List of CRs:
Other GSM core specifications		?	List of CRs:
MS test specifications		?	List of CRs:
BSS test specifications		?	List of CRs:
O&M specifications		?	List of CRs:

Other comments:

help.doc

<--------- double-click here for help and instructions on how to create a CR.

4.2.2.3.2 Power Control Loop

After the synchronisation between UTRAN and UE is established, the UE transits into open-loop transmitter power control (TPC).

The power setting for each uplink DPCH in one CCTrCH shall be calculated by the following equation:

$P_{UL} = ? L_{P\text{-}CCPCH} + (1-?) L_0 + I_{BTS} + SIR_{TARGET} +$ Constant value

where

P_{UL}: Power setting in dBm, cf. section "Combination of physical channels in uplink" in [10]; This value corresponds to a particular CCTrCH (due to CCTrCH-specific SIR_{TARGET}) and a particular timeslot (due to possibly timeslot-specific ? and I_{BTS}).

$L_{P\text{-}CCPCH}$: Measure representing path loss in dB (reference transmit power is broadcast on BCH).

L_0: Long term average of path loss in dB.

I_{BTS}: Interference signal power level at cell's receiver in dBm, which is broadcast on BCH.

?: .? is a weighting parameter which represents the quality of path loss measurements. ? may be a function of the time delay between the uplink time slot and the most recent down link time slot containing a beacon channel, see [8]. ? ~~is~~ shall be calculated autonomously at the UE, subject to a maximum allowed value which shall be signalled by higher layers. An example for calculating ? as a function of the time delay is given in annex A.1.

SIR_{TARGET}: Target SNR in dB. A higher layer outer loop adjusts the target SIR.

Constant value: This value shall be set by higher Layer (operator matter). and is broadcast on BCH.

If the midamble is used in the evaluation of $L_{P\text{-}CCPCH}$ and L_0, and the Tx diversity scheme used for the P-CCPCH involves the transmission of different midambles from the diversity antennas, the received power of the different midambles from the different antennas shall be combined prior to evaluation of these variables.