

Espoo, Finland, June 14-15, 2000

Agenda Item: AH21
Source: CWTS
To: TSG RAN WG1
Title: Coding of transmit power control (TPC)
Document for: Discussion and Approval

Introduction

This document describes coding of transmit power control (TPC) for low chip rate TDD option.

Conclusion

It's proposed to discuss and include the following text proposal into the clause 8.2.3 Coding of transmit power control (TPC) of TR25.928.

----- changes to TR25.928 begin -----

8.2.3 Coding of transmit power control (TPC)

[Description:]

The TPC command, one kind of L1 control signals, is an identifier sent both in up- and downlink, to instruct a power level adjustment which is increase or decrease. The coding of the TPC command is shown.

[Rational:]

The TPC command is an identifier sent both in up- and downlink, to instruct a power level adjustment which is increase or decrease. The length of the TPC command is one symbol. The coding of the TPC command is shown in table 1.

Table 1: Coding of the TPC

TPC	TPC Bits	Meaning
'Up'	11	Increase Tx Power
'Down'	00	Decrease Tx Power

* Note: other methods like e.g. definition of 'do nothing' are under consideration

When 8PSK modulation is applied, the length of the coded TPC command remains one symbol and therefore the number of TPC Bits is 3. The specific coding of TPC for the case of 2Mbps service is shown in table 2.

Table 2: Coding of the TPC (Special for 8PSK)

TPC	TPC Bits	Meaning
'Up'	111	Increase TX power
'Down'	001	Decrease TX power

* Note¹: other methods like e.g. definition of 'do nothing' is under consideration

* Note2: the TPC coding for 8PSK refer to 9.1.2

[Explanation difference:]

In high chip rate option, the TPC command is sent in uplink transmission only, to instruct the NodeB whether Tx power has to be increased or decreased. The length of the TPC command is one symbol.

In the low chip rate option, the TPC command is an identifier sent both in up- and downlink, to instruct a power level adjustment which is increase or decrease. When 8PSK modulation is applied the length of the coded TPC command remains one symbol and therefore the number of TPC Bits is 3. The specific coding of TPC for the case of 8PSK is shown in table 2. Other methods like e.g. to define the command of 'do nothing' is under consideration.

----- changes to TR25.928 end -----