

## TSG-RAN Working Group1 meeting #7

Hannover (Germany), Aug 30<sup>th</sup>- Sept 3rd 1999

TSGR1#7(99)e30

Agenda Item :  
Source : RAN WG1  
Title : Liaison statement on power control limits  
To : 3GPP RAN WG3  
Copy : 3GPP TSG RAN 2, 3GPP RAN WG4

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During its seventh meeting, RAN WG1 introduced in specification 25.214 (Physical Layer procedure) power control limits for the downlink inner power control in order to improve consistency between the WG3 and WG1 specifications. More specifically the following text was added to section 5.2.3.2 (Ordinary transmit power control) in 25.214 :

*As a response to the received TPC commands, UTRAN may adjust the downlink DPCCCH/DPDCH power. The transmitted DPCCCH/DPDCH power may not exceed Maximum\_DL\_Power , nor may it be below Minimum\_DL\_Power.*

However while doing so a number of questions were raised related to the exact meaning of such limits and their use. RAN WG1 would like to list such questions below :

- 1) Are these limits expressed as a fraction of the maximum power of the cell or in an absolute manner ?
- 2) Since DTX may be applied on the downlink, power offset between the different fields (DPCCCH/DPDCH) and variable rate used, the transmit power from the UTRAN access point varies across the frame and from frame to frame.
  - a) Does the power correspond to the average power on the transmitted symbols, including or excluding the control symbols or does it correspond to the average power on the complete frame? Excluding the control symbol would allow independence from the use of power offsets
  - b) Should we consider the actually transmitted power at the antenna connector rather than the commanded power , knowing that there is some inaccuracy on the transmitted power?

It was noted that WG4 has a set of definition of powers. It was noted that we should align as much as possible the power definitions with the terminology used by WG4, unless the power limits require additional definitions.