

ABSTRACT

This study investigates capacity of DS-CDMA system employing adaptive transmission technique under multipath fading channel. Two power control schemes with rate adaptive capability are proposed to exploit the time variation of channel fading. In all two schemes, adaptive transmission employing BPSK is realized through adapting the processing gain PG to the channel condition. A minimum PG constraint is made to ensure multiple access capability. When PG is at this minimum value, the system can have an option to adjust the transmission rate through using higher constellation QAM. The proposed power control scheme 2 can obtain higher system capacity than that of ideal constant received power at the base station.

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