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THE PERFORMANCE EVALUATION OF A NEW PROPOSED ADAPTIVE BEAMFORMING ALGORITHM IN WCDMA ENVIRONMENT

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Abstract

Wideband Code Division Multiple Access (WCDMA), a widely accepted 3G interface, is based on Direct Sequence (DS), CDMA technology. Mobile communication services are penetrating in to our society at an explosive growth rate. To satisfy ever-increasing demands for high data rates, as well as to allow more users to simultaneously access the network, interest has peaked in what has come to be known as WCDMA. In Wideband Code Division Multiple Access (WCDMA) same frequency spectrum is shared through all cells simultaneously, as opposed to TDMA which is used for most 2nd generation systems. In a WCDMA system all transmitted signals turn out to be disturbing factors to all other users in the system in the form of interference, limiting the system capacity. In this work, the Bit Error Rate (BER) performance of a WCDMA uplink with a new proposed smart antenna algorithm for different data rates with varying number of interferers is investigated.

KeyWords and Phrases : Smart Antenna, WCDMA, Mobile communication, BER, Data Rates.