Analysis of MIMO system through zero forcing and minimum mean square error detection scheme

ABSTRACT

In this paper, MIMO system is used to improve the performance of transmitted signal by reducing the signal fading rate. MIMO VBLAST technique is implemented to enhance the spectral efficiency and bandwidth with spatial diversity. Multiple antennas allowed the system to transmit multiple same data signal at the same time in which the data will not fade simultaneously, hence, improving the Signal to Noise Ratio (SNR) of the system. Zero Forcing (ZF) and Minimum Mean Square Error (MMSE) detection scheme are used to minimize the effect of channel estimation errors. The simulation was carried out in MATLAB software. Based on the simulation result, the proposed scheme for MIMO VBLAST has better network throughput in term of successful message delivery performance compared to the traditional scheme.