UNIVERSITI TEKNOLOGI MARA

BLOCK DIAGONALIZATION PRECODING FOR MULTIUSER-MIMO DOWNLINK CHANNEL

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ABSTRACT

The transmission of data in broadcast channel is not a straightforward process; on the receiver side, there could be difficulties in coordinating signal detection. In this paper, the use of Block Diagonalization (BD) to mitigate the inter-user interferences for this work will be investigated. This paper will probe the bit error rate (BER) performances of BD within various parameters number of antennas ,NM and the number of users, K. Computer simulation , matrix laboratory (MATLAB) tools will be utilised and the result of simulation will be shown through demonstrating uses by more users and lesser antennas, which is better than having more antennas with fewer users in the BD precoding method.

Kepvords: Block Diagonalization(BD); precoding ;Multiuser-MIMO(MU-MIMO)

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