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ENHANCEMENT OF CHANNEL CAPACITY PERFORMANCE IN MIMO TECHNOLOGY USING SPATIAL MULTIPLEXING

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Abstract

To enhance the performance of channel capacity in MIMO (Multiple Input Multiple Output) technology, Spatial Multiplexing is used in this paper. In this, independent or non-interfering data streams can be multiplexed in space and all the streams can be recovered at the receiver. The channel capacity of MIMO technology can be done with Channel State Information at Transmitter (CSIT) or with Channel State Information at Receiver (CSIR) using spatial multiplexing. In addition to this, a non linear approach is used along with Zero Forcing (ZF) or Minimum Mean Square Error (MMSE) detector to improve the performance of channel capacity using spatial multiplexing by Successive Interference Cancellation (SIC).

Keywords : MIMO, MMSE detector, ZF detector, CSIT, CSIR.