

Low Complexity Sphere Decoding for V-BLAST Spatial Multiplexing MIMO

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Abstract— With the tremendous growth in the field of communication, wireless system requires significantly higher spectral efficiency. The solution of this problem is MIMO Spatial Multiplexing (SM). In this paper we compare performance of different methods for decoding multiple input-multiple output (MIMO) transmission System incorporating VBLAST-SM, which includes sphere decoding (SD), zero forcing (ZF), SVD-SD and maximum likelihood (ML) techniques.

Keywords - MIMO SM, V-BLAST, ZF, ML, MMSE, SD.