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Performance Improvement of MC-CDMA System

N . Kumaratharan

Abstract - Literature reported that multi-carrier code division multiple access (MC-CDMA) system revived a great deal of attention due to their great potential in achieving high data rates in wireless communication . Nevertheless , when transmission over fading channel multi-cell interface occurs and this degrades the performance of this system. Site diversity technique is aplied to the system to overcome multicell interference . Due to non orthogonality of spreading codes multicell interference is not completely eradicated . To overcome this problem spreading codes are assigned to each base station . In this paper space time block code (STBC) site diversity with multiple input multiple output (MIMO) technique is proposed to improve the performance of MC- CDMA systems and is extended to space time trellis code (STTC) site diversity . Simulation results show that STTC Out performs STBC site diversity .