

Improving bit error rate of OCDMA systems using and subtraction technique

A new detection scheme, namely AND subtraction technique is proposed and presented in this paper. The theory is being elaborated and experimental results have been done by comparing Double-Weight (DW) code against the existing code, Hadamard. In this paper we have proved that AND subtraction technique gives better Bit Error Rates (BER) performance than Complementary subtraction technique against the received power level. The overall system cost and complexity can be reduced by using less number of filters in this technique. At the same time, the performance of the OCDMA system is improved significantly because with less number of filters in the decoder, the total power loss can be reduced and this can be clearly seen in the result.