Abstract

Orthogonal Frequency Division Multiplexing (OFDM) has been accepted as the modulation scheme of choice for the next generation high-speed wireless communication systems due to the advantages that it offers like high spectral efficiency, resistance to multipath fading and resistance to frequency selective fading. Moreover, it lends itself to simple channel equalization. Conventional single carrier systems do not provide such advantages and hence, OFDM would
almost ubiquitously be used for high speed wireless data transmission. However, the main drawback of such systems over single carrier systems is that in the presence of noise, there is an increased computational complexity at the receiver end to decode the data. In this paper, a low complexity detection algorithm is proposed for OFDM systems. Maximum likelihood detection is taken as the baseline detection algorithm and the proposed algorithm is compared with ML detection algorithm. Comparison results are plotted and conclusions are drawn.

**Reference**


**Index Terms**

Computer Science  Wireless
Key words

complexity
symbol energy

OFDM
Computational