Abstract

In the last years wireless communications have experienced a fast growth due to the high mobility that they allow. However, wireless channels have some disadvantages, like multi-path fading, that make them difficult to deal with. A modulation that efficiently deals with selective fading channels is OFDM. An important disadvantage of OFDM systems is their high peak-to-average power ratio (PAPR). Clipping and filtering can be a simple and effective method of reducing the peak-to-average power ratio (PAPR). But this results in an increase in Side Band / out-of-band (OOB) power, thereby increase in PAPR. In this paper it is shown that if the OOB power is limited, then PAPR can also be reduced and limited. Simulation results using MATLAB are presented.

Reference

[12] ETSI TS 101 475: “Broadband Radio Access Networks (BRAN); HIPERLAN Type 2; physical (PHY) layer.

Index Terms
Electronics Wireless Communications

Key words
OFDM peak-to-average power ratio (PAPR)
out-of-band (OOB)

power
Simulation
MATLAB