

Abstract Details

Title: PAPR Reduction in OFDM using Multiple Phase Sequence

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Abstract: Orthogonal frequency division multiplexing (OFDM) has gained considerable attention in the past couple of years. In our modern world the need for faster data transmission is never-ending. OFDM modulation provides us with a way of more densely packing modulated carriers in the frequency domain than other existing Frequency Multiplexing schemes, thus achieving higher data rates through communications channel. Besides various advantages an important disadvantage of OFDM systems is their high peak-to-average power ratio (PAPR). High PAPR degrades OFDM signals by forcing the analog amplifier to work in the nonlinear region, distorting this way the signal and making the amplifier to consume more power. There are several ways to reduce the PAPR of OFDM signals which can be divided in two groups: the techniques that non-linearly distort the signal and the ones that reduce the PAPR without distorting the signal. In this research, we will give an overview to OFDM technique and identify the PAPR problem characteristically. Some popular PAPR reduction schemes will be introduced and compared. In addition, we introduced an improved scheme having combination of SLM and PTS with a PAPR threshold.

Keywords: OFDM, PAPR, Multiple Phase Sequence.