Abstract

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A NEW APPROACH FOR PAPR REDUCTION OF OFDM SIGNAL BASED ON COMBINING PTS and SLM

Orthogonal Frequency Division Multiplexing (OFDM) has gained a tremendous interest in recent years because of its robustness in the presence of multipath fading and inter-symbol interference (ISI), in addition to its high spectral efficiency. However, the high Peak-to-Average Power Ratio (PAPR) of transmitted signals is a serious disadvantage for OFDM communication systems. The focus of this thesis is to propose a PAPR reduction schemes for OFDM system. The new schemes are hybrid algorithms of classical Selected Mapping (SLM) and Partial Transmit Sequence (PTS). Thus, We lay out SLM and PTS fundamentals as our building blocks for the new schemes. The performance of the new schemes is measured using the Complementary Cumulative Distribution Function (CCDF). The simulation results show that the new schemes have a better PAPR performance as compared to classical SLM and PTS. On the other hand, the price paid is a slight increase in the system complexity and the side information.