

A Novel Multi-Block Selective Mapping Scheme for PAPR Reduction in FBMC/OQAM Systems

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Abstract : Filter Bank Multicarrier with Offset Quadrature Amplitude Modulation (FBMC/OQAM) is presently known as a sustainable alternative to conventional Orthogonal Frequency Division Multiplexing (OFDM) for signal transmission over multi-path fading channels. Like all multicarrier systems, FBMC/OQAM suffers from high Peak to Average Power Ratio (PAPR). Due to the symbol overlap inherent in the FBMC/OQAM system, the direct application of conventional OFDM PAPR reduction scheme is far from being effective. This paper suggests a novel scheme termed Multi-Blocks Selective Mapping (MB-SLM) whose simulation results show that its performance in terms of PAPR reduction is almost identical to that of OFDM system.

Keywords : FBMC/OQAM, multi-blocks, OFDM, PAPR, SLM

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