Improved PTS Method with New Weighting Factor Technique for FBMC-OQAM systems

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***Abstract*— Filter bank multi-carrier (FBMC) with offset quadrature amplitude modulation (OQAM) has been regarded as one of the candidates for next generation broadband wireless communication systems. Similar to OFDM systems, one of the major drawbacks in FBMC-OQAM systems is high peak-to-average power ratio (PAPR). To overcome this problem, Partial Transmit Sequence (PTS) method is a well - known method which can reduce the peak-to-average ratio (PAPR) for a multicarrier modulation signal. The PTS method can improve PAPR reduction performance very well as increasing the number of predetermined discrete phase factors and number of clusters. However, the side information is proportioned increasing as increased number of predetermined discrete phase factors or/and clutters that it is required to inform to the receiver for recovering the original data. In this paper, we propose the new discrete phase factor pattern which can improved the PAPR reduction performance better than conventional PTS method. This paper presents various computer simulation results to verify the effectiveness of proposed method.**

***(Pt9)Keyword*— FBMC-OQAM, PAPR, PTS and Phydyas Filter**

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