

# FBC、CFO、and PN for OFDMA systems

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## ABSTRACT

The degradation of CFO (carrier frequency offset) and CPN (carrier phase noise) phenomena for evaluating the system performance of an modulating to the multi-carrier based radio communication systems is explored in this thesis. Both the parameters will cause the effect of ICI (inter-carrier interference) and CPE (common phase error). In this thesis the author focus on the issue of aggregate in investigating to determine the parameter dominates the system performance of an MC-CDMA (multi-carrier coded-division multiple-access) system. As usual, the parameters mentioned previously in the evaluation of system performance for an MC-CDMA system almost considered as independence each other for the reason of simplifying the algebra. Some original novel formulas of involving both parameters are proposed in this investigation. Finally, the existence of channel fading environments is also considered into the calculation of performance.

Keywords : CFO (carrier frequency offset)、CPN (carrier phase noise)、ICI (inter-carrier interference)、MC-CDMA system

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