

FBC、CFO與PN參數對OFDMA系統影響之研究

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摘要

本文研究多載波無線電通信系統調變中當載波頻率偏移 (carrier frequency offset, CFO) 和載波相位雜訊 (carrier phase noise, CPN) 的現象所造成之系統性能評估。這兩個參數均會造成影響載波間干擾 (intercarrier interference, ICI), 和共同相位誤差 (common phase error, CPE)。在這項研究中, 作者著重在合計地研究問題, 以確定哪些參數, 也就是說, 載波頻率偏移或載波相位雜訊, 在多載波分碼多重存取 (multi-carrier coded-division multiple-access, MC-CDMA) 系統的性能中佔主導地位。像往常一樣, 在前面提到的參數對 MC-CDMA 系統的系統性能評估幾乎被簡化, 而被視為彼此獨立的代數的原因。然而, 在考慮到計算多載波通信系統的系統性能是一個有趣的問題。本文提出了一些包含兩者參數的一些新獨創方程式; 此外, 相同的值, 它們都假定在區間內, 同樣地, 指定這兩個參數的載波頻率偏移和載波相位雜訊; 最後, 存在通道衰落環境也被考慮在性能的計算之中。

關鍵詞: 載波頻率偏移、載波相位雜訊、載波間干擾

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