

非等增益分支與載波偏移現象於正交分頻多工技術之研究分析：已具相關性雙分支之SC分集為例 = Study on the effects of UGB ...

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摘要

在這篇論文中，主要是研究正交分頻多工(orthogonal frequency division multiplexing, OFDM)系統效能，其中假設利用雙分支選擇性合成(selection combining, SC)分集於小尺度衰落相關通道上加以研究。藉由採用Q-函數的非傳統表示結果，對於評估OFDM系統的平均位元錯誤率(bit error rate, BER)效能作為依歸。另外，相關性Weibull衰落分佈是適用於特徵傳輸衰落通道。並且，在這篇論文中，也作載波頻率偏移(carrier frequency offset, CFO)假定存在於子載波之間是另一個考慮的方案。值得注意探討的主題是，OFDM系統效能採用SC分集是明確地藉由傳輸環境加以支配，也就是說，除了衰落統計的衰落參數，它將是最重要的原因來作為決定OFDM系統的系統效能是優或劣之外，CFO是另一個影響效能現象的重要參數。此外，對於OFDM通訊系統假定在SC分集輸出端的接收波形，並利用等量與非等量兩者的分支增益也一併在本論文中進行討論。

關鍵詞：正交分頻多工;選擇性合成;載波頻率偏移

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