無線通信系統中線性調變方法工作於不同衰落環境時之LCR與AFD效益研究

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摘 要

本論文旨在利用平均準位跨越率(Average level crossing rate, LCR)和平均衰落區間(Average fade duration, AFD)的效能評定方式，假設線性分集(Linear diversity)方法，包含最大比例合成(Maximal Ratio Combinig, MRC)和選擇性合成(Selection Combining, SC)工作於相關性中上分布(Correlated-Nakagami-m)環境時的效能。除外，接收分支間皆假設存在相關特性。經由傳統的LCR與 AFD之效能定義公式推導外，本研究論文亦收錄了各種工作環境通道的衰落分布，其中涵蓋獨立分支與相關分支。最後並推導Nakagami-m分布衰落環境中工作的完成式(Closed-form)，並藉由數值分析以驗證本論文研究推導公式的正確性，互相比對驗證，使最後所得之數 值的可靠性得以提高。

關鍵詞 : MRC，SC，平均準位跨越率，平均衰落區間，Nakagami-m 相關性通道。

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