

相異天線陣列中同步二維時頻系統之研究

張祐碩、陳雍宗

E-mail: 321842@mail.dyu.edu.tw

摘要

在本篇論文中，我們提出一種可提升OFDM-MC-CDMA(orthogonal frequency division multiplexing-multicarrier coded-division multiple-access)系統效率的接收技術，稱其為二維接收機 (two-dimension, 2-D)技術；其系統的模組在本篇論文中，包含了展頻碼，以及二維接收機系統方塊圖，除了，其系統之接收信號能夠快速的識別；而且OFDM-CDMA 系統結合了所提出的接收機設備後，在本篇論文中亦研究計算其效能分析。最後，為了計算通道衰落的影響結果，考慮了相關性衰落環境，利用相關性Nakagami-m 分布之統計估計。數值計算後之結果顯示OFDM-CDMA 之系統效能，不只受使用者數量，以及副載波數目影響，也會由都卜勒偏移(Doppler shift)，與信號衰落參數(fading parameter) (環境因素)增減所影響。

關鍵詞：二維接收、相關性Nakagami-m、OFDM-MC-CDMA系統、都卜勒偏移、衰落參數

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