降低以IDFT產生OFDM訊號的峰值因素之技術

李奇威、李金椿

E-mail: 345384@mail.dyu.edu.tw

摘 要

本文針對利用離散傅立葉反轉換 (Inverse Discrete Fourier Transform，IDFT) 來產生OFDM (Orthogonal Frequency Division Multiplexing) 訊號的方式，提出以減少位元傳輸量的技術，來降低其峰值因素 (Crest Factor)；也就是說我們針對訊號中的位元傳輸量作處理，減少輸入至IDFT的高頻成份，讓系統的峰對均值功率比 (Peak-to-Average Power Ratio，PAPR) 變低。然而，其評估標準採用互補累積分佈函數 (Complementary Cumulative Distribution Function，CCDF)，我們以 為標準，由模擬出來的結果發現，當傳送位元由4個bits減少了1個與2個bits時，訊號的PAPR分別降低了2.2dB與3.4dB，證明了這個方法確實有不錯的成效。

關鍵詞 : 離散傅立葉反轉換、峰值因素、峰對均值功率比、互補累積分佈函數

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