

W-CDMA配備智慧型天線後之微觀與巨觀分集

宋經天、李金椿

E-mail: 9124936@mail.dyu.edu.tw

摘要

本篇論文主要設計一個強健型的多用戶檢測器，使用適應性法則追蹤因特徵波形受到扭曲而衰減的 CDMA 信號。首先分析並比較各種不同的線性多用戶檢測器(LMDS)。在實際無線通訊環境下，多重路徑會使得特徵波形受到扭曲，然而在解調 LMDS 信號時，卻使用最初的特徵波形，而導致特性嚴重的衰減。這種因特徵波形受到干擾影響 LMD 特性的分析，將在本篇論文中詳細探討。在以下，我們將建議一個演算法來追蹤特徵波形的干擾，進而設計一個有效的特徵波形來解調信號。這個適應性處理法則應用子空間(SUBSPACE)方法及定向器(BEAMFORMER)輸出能量的技術，設計出強健型的線性多用戶檢測器，大大的提升了原本線性多用戶檢測器的實用性。

關鍵詞：特徵波形、CDMA、子空間、MVDR波束

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