高斯與昇餘弦波束成形技術在CDMA系統之應用

葉益良、李金椿

E-mail: 9607533@mail.dyu.edu.tw

摘 要

本文在於研究高斯(Gaussian)與昇餘弦(Raised-Cosine)波束成形技術在CDMA系統上之應用，探討其兩種輻射場型對於CDMA系統效能改善的能力，並與基本的相位加權法做比較。效能改善能力採用位元能量對干擾功率密度比(Eb/I0)的改善增益作為評估指標。我們發現當陣列天線元子數增加時，細胞內干擾降低因子會減少，而細胞間的干擾增加因子，相位加權法會隨著天線元子數增加而增加，但高斯與昇餘弦兩種加權法則維持不變。在CDMA整體效能提昇上，高斯與昇餘弦兩種加權法會有較好的表現，雖然高斯加權法會隨著天線元子數增加而提昇效能但效能還是沒有比已飽和的昇餘弦加權法來的好，所以昇餘弦加權法在效能提昇上會有更好的表現。

關鍵詞 : CDMA、相位加權法、高斯加權法、昇餘弦加權法、細胞內部干擾降低因子、細胞間干擾增加因子。

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