混合預測向量與搜尋樣板的快速移動估測演算法

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摘 要

在多媒體影像傳輸中仰賴視訊壓縮技術來適當減少傳輸的資料量與提高傳輸速度是必要的。在移動估測中，使用不同的預測向量與搜尋樣版對於移動估測的效能影響非常的大。近年來，提出了許多快速的移動估測演算法，其中如三步搜尋法（TSS）、菱形搜尋法（DS）、六邊形搜尋法（HS）。本論文在這提出了一種混合預測向量與搜尋樣版的快速移動估測演算法（HPS），能使用在視訊壓縮之上。包含了提早中止條件，能加快了在搜尋移動向量上的速度。在實驗結果顯示，我們的方法比DS和HS，在平均一張影像的搜尋時間上至少快了14ms~21ms，在影像品質上能平均提高0.1dB~0.28dB。與Fast Predictive Search Algorithm for Video Motion Estimation - Early Termination（FPSA-ET）論文比較，雖然在搜尋時間上只較慢了3ms，但在影像品質上能提高0.02dB。證明我們的方法能有效的提高重建影像品質與適合用於即時的系統上。

關鍵詞 : 移動估測、移動向量、預測向量、視訊編碼

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