利用線性濾波技術降低區塊效應之研究

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摘 要

以區塊為基礎的離散餘弦轉換(BDCT)方法廣泛地應用在靜態影像及動態視訊的壓縮上。然而，當影像過度壓縮後，其重建影像卻會產生嚴重的區(方)塊效應(Blocking Effect)，為了有更好的視覺品質與影像資訊，將壓縮後的影像經由後處理(Post-processing)，就能以更低的位元率達到相同的視覺品質。在本篇論文中，我們依據8x8方塊中像素的變化，提出一個線性濾波技術去除方塊效應的演算法，能降低低位元率重建影像視覺效果不佳的狀況。針對影像區塊中的每一列像素，我們將之分為高活動區(high activity)與低活動區(low activity)。對高活動區不做任何處理，低活動區則作適應性線性濾波處理。最後，不論在視覺上或在客觀的數據上，本方法均能有效地去除區塊效應及提升影像的視覺效果。

關鍵詞 : 區塊效應 ; 後處理 ; 離散餘弦轉換 ; 線性濾波

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