

基於 H. 264 壓縮格式之多媒體娛樂影片檢索


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摘 要



在這篇論文中，我們提出了一個針對 H. 264 壓縮格式之多媒體娛樂影片檢索方法。我們的方法目的在於如何藉由一小片段找出來自不同來源包含該片段內容的完整影片。我們的方法在不需完全解壓縮影片的情況之下，分析出輸入影片的兩個主要特徵：亮度特徵(Lumas)及運動特徵(Motions)。在擷取亮度特徵的程序中，我們首先會對亮度值的分布做校正，之後再適當的移除多餘的特徵只保留具有代表性的特徵。在擷取運動特徵的程序中，我們藉由統計運動向量的分布來分析並結合物體與攝影機的運動向量特徵。在檢索的過程中，我們會使用這兩種特徵來做檢索。除此之外，所有的測試的影片檔案都是實際電視節目的影片。

H.264 Based Entertainment Video Retrieval


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Abstract

The logo of Nation Chiao-Tung University is a circular emblem with a gear-like outer border. Inside the circle, there are stylized letters 'E', 'S', and 'A' arranged vertically, with the year '1896' at the bottom. The logo is positioned in the center of the page, overlapping the abstract text.

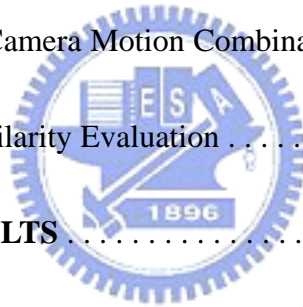
In this thesis, we provide a video retrieval system based on H.264 video compression format to retrieve complete desired videos by a short video clip. Without completely decompressing a video stream, we parse the H.264 video stream once to extract two useful features, luma and motions. On the process of luma feature extraction, the luma calibration is proposed and similar luma features are removed. On the process of motion feature extraction, a statistic scheme is proposed to extract and combine dominant object motions and camera motions. On the retrieval process, the most relevant results are returned to users by using these two features. Our testing videos are all entertainment TV programs.

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