Abstract

In the current era, most of the digital information in the form of multimedia with a giant share of videos. Videos do have audio and visual content where the visual content has number of frames put in a sequence. Most of the consecutive frames do have very little discriminative contents. In video summarization process, several frames containing similar information are needed to get processed. This leads to redundant slow processing speed and complexity, time consumption. Video summarization using key frames can ease the speedup of video processing. In this paper, novel key frame extraction method is proposed with Linde-Buzo-Gray (LBG) codebook generation techniques of vector quantization with ten different codebook sizes. Experimentation done with the help of the test bed of videos has shown that higher codebook sizes of LBG have given better completeness in key frame extraction for video summarization. Experimental results are also discussed to represent the validity of the proposed method for video content summarization.

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**Index Terms**

Computer Science  
Image Processing

**Keywords**

video summarization  key frame  LBG  vector quantization  codebook.