

AUTOMATIC VIDEO SHOT BOUNDARY DETECTION AND KEY FRAME EXTRACTION USING GABOR MOMENTS

(Sponsored by KSCST)

PROJECT REPORT

Submitted to

**Visvesvaraya Technological University
BELGAUM - 590 018**

by

**Allan Merwin Menezes
Ashlesh MS
Kaushik
Sharan Rai A**



**USN:4VP10CS004
USN:4VP10CS013
USN:4VP10CS028
USN:4VP10CS055**

Under the guidance of

Mr. Harivinod N

**Asst. Professor, Dept. of Computer Sc. and Engg.
Vivekananda College of Engg. and Technology, PUTTUR (D.K.)**

in partial fulfillment of the requirements for the award of the degree of

Bachelor of Engineering



**Department of Computer Science & Engineering
VIVEKANANDA COLLEGE OF ENGINEERING AND TECHNOLOGY
Nehru Nagar, PUTTUR (D.K.) - 574 203**

JUNE 2014

ABSTRACT

In this project, a new shot boundary detection and key frame extraction method for videos are designed and implemented. This is the first step towards video summarization and video indexing. The shot boundaries include abrupt transitions like cuts and slow transitions like dissolve and wipe. The Gabor moments of frames are used as a feature, to represent each frame. Each frame is convolved with different Gabor filters and the moments in different orders are computed and concatenated to form the feature vector. The Euclidean distance of the feature vector is used as a discontinuity measure between two adjacent frames. If the discontinuity measure is greater than a threshold, then it indicates the presence of the shot boundary. Finally the key frames are extracted from the detected shot. A graphical user interface is also developed to visualize the results.