

ABSTRACT

Smoke detection on video has a rapid advancement with supported methods that have been developed method and the performance of computers that the more up-to-date performance. Video Smoke itself is hard to recognize even by our own eyes because the smoke is easily carried by the wind. So now the smoke detection using the instrument sensor is more applied, but smoke detection uses longer sensors in detecting smoke than smoke detection in video in open space.

LBP - TOP is a texture extracting method. 3 dimensional texture extracting taken from moving objects results from Three-Frame Differencing. the moving object will be extracted texture using LBP-TOP and taken 4 features using color moment into 4 dimensional vector which will be classified using K-Nearest Neighbor.

In this final project has been created smoke detection system on video using LBP-TOP The correct parameters on the system for this detection system on video based on serial testing are threshold 7 and time span 10 on Three-Frame Differencing, neighborhood 2 and time span 20 on LBP - TOP, K value 9 at KNN with accuracy at frame level of 82.5%. and boxing level 52%

Keyword : *LBP – TOP , subblok , Three-Frame Differencing , Histogram , K – Nearest Neighbor,plane.*