Abstract

Flame recognition is very important for fire detection on a video. Many methods have been proposed by many researchers. But, some methods have drawbacks such as high computational complexity, moving objects that cannot be detected properly, etc. In this journal, the author will explain how to detect fire using the ViBe (Visual Background Extractor) algorithm to extract dynamic targets. The ViBe algorithm is better at detecting moving target objects such as flame combustion. This algorithm will also be combined with three frame differencing to gain better results on movement object. The HSI color space model will be applied after the movement object is obtained. Local Binary Pattern-Three Orthogonal Planes is used to obtain the feature extraction to be classified with Support Vector Machine.

Keywords : fire detection, ViBe algorithm, local binary pattern-three orthogonal planes, support vector machine