**ABSTRACT**

The Color Thresholding based segmentation technique is highly used for manipulating the color components of the images, based on different color spaces. Using this approach we can create a segmentation mask for a color image. Image segmentation may be defined as a technique, which partitions a given image into a finite number of non overlapping regions with respect to some characteristics, such as gray value distribution, texture distribution, etc. The objective of dividing an image into homogeneous regions remains a challenge, especially when the image is made up of complex textures. The image segmentation is defined as an optimal segmentation obtained in a pure bottom-up fashion that provides the information necessary to initialize and constrain high level segmentation methods. This method is effective in segmenting the complex background images, these results are used to propose a new color image segmentation method. It searches for the principal colors, defined as the intersections of the homogeneous blocks of the given image. As such, rather than using the noisy individual pixels, which may contain many outliers, this method uses the linear representation of homogeneous blocks of image. Henceforth this segmentation technique is greatly helpful for detecting the exact affected nerves and tissues of tumor cells from MRI scan images.