International J. of Engg. Research & Indu. Appls. (IJERIA).
ISSN 0974-1518, Vol.4, No. II (May 2011), pp 375-383

# AUTOMATIC SEGMENTATION OF CATARACT INFECTED REGION OF AN EYE

**V. AYYAPPAN AND A. KANNABHIRAN**

**Abstract**

Diagnosing the abnormal regions in eye images is one of the critical issues because these images contain different types of random noises and attenuation artifacts. This paper proposes an automatic morphological segmentation and region growing method to change the representation of an image into something that is more meaningful and easier to analyze. There are several methods that intend to perform segmentation, but it is difficult to adapt easily and diagnose accurately. To resolve this problem, this paper aims to present an adaptable automatic morphological segmentation and region growing method that can be applied to any type of medical image which is exactly diagnosed even with the small changes that occur in the image. This proposed method is based in a model of morph function which applies the morphological operator to a gray scale image. Morphological segment technique is used to segment the image and selecting the specific image objects, thinning the object to diagnose the region. After using a morphological operation to expose the basic elements within an image, it is often useful to extract and analyze specific information about those image elements. The region grow function performs region growing for a given region within an N-dimensional array by finding all pixels within the array that are connected to neighboring region pixels and that fall within provided constraints. This technique was applied to segment the medical image, diagnosing the interested object from the grown region in all medical images.

---

**Keywords** : Morphology, Segmentation, Region growing, Diagnosing