ABSTRACT

Vocal cords disfunction can be observed using a laryngoscopic device by physician. This tool functions to see the physical shape of the vocal cords directly displayed on the monitor screen. Vocal cords disfunction will be seen in changes in the shape of the glottic contour. By using digital image processing technology, identification of vocal cords dysfunction can be analyzed using extraction features of the glottic contour and statistics of the coordinates of the glottic contour. The extraction of the glottic contour features was obtained after convert the RGB (Red Green Blue) image to a binary image with the segmentation process using the active contour method, the Chan-Vese algorithm. Form feature extraction parameters there are glottic contour area, eccentricity value, perimeter, and metric. The classification process with K-NN (K-Nearest Neighbor) method. Based on previous research, identification vocal cords condition with moore neighbor tracing method obtained an accuracy of 85.83% [1]. By optimizing the image processing process to be automated and decision making with K-NN the identification rate can be improved to 92.67%.

Keywords: *Glottic Contour, Chan-Vese Algorithm, Feature Extraction,* K-NN