Abstract- in this article, we propose an adaptive image segmentation method based on saliency. First of all, we obtain the saliency map of an image via four bottom-layer feature tunnels, i.e. color, intensity, direction and energy. The energy tunnel helps to describe the outline of objects better in the saliency map. Then, we construct the target detection masks according to the greyness of pixels in the saliency map. Each mask is applied to the original image as the result of pre-segmentation, then corresponding image entropy is calculated. Predict the expected entropy according to maximum entropy criteria and select the optimal segmentation according to the entropies of pre-segmented images and the expected entropy. A large number of experiments have proved the effectiveness and advantages of this algorithm.

Index terms: Visual feature, image segment, maximum energy criteria, saliency detection