

## ABSTRACT

Detecting the movement of human lips is sensitive to the context of work, not only visually recognize the shape of the mouth, but also recognize the key words to predict the word and also to identify key elements that are more specific in predicting a sentence. Therefore in this thesis is restricted to vowels alone, so read lips is a difficult job for the sentence. Therefore in this thesis is restricted to vowels alone, so read lip is a difficult job for the extraction of visual features.

This system was designed with the help of the (*software*) Matlab 7.8.0. identification process designed application programs starts by taking offline video, then preprocessing, feature extraction with *Gray Level Co-occurrence* frame per frame, then classify using the *K-Nearest Neighbor*.

Output of the system of recognition form the pronunciation of the vowels a, i, u, e, o. Designed system has a level of recognition accuracy is good enough for fifth letter is based on its feature extraction and the influence of the value of k. The accuracy based on its feature extraction that is 89,93 % at a distance of 7 cm from the camera and the value of  $k=1$ .

Keywords : digital video processing, *Gray Level Co-occurrence*, *K- Nearest Neighbor*.