ABSTRACT

Parts of the human body are not equal to each other and have its own characteristics. Therefore, parts of the human body can be used as a tool to identify information or identity of an individual. Some ways to identify an individual's identity is by examining the teeth, DNA identification from cell tissues in the oral cavity or lip print patterns. Basically, lip contains in them various characteristic patterns of groove, furrows, wrinkles and lines, the combination of which is individualistic and unique like finger prints. The techniques used to identify lip print pattern is biometric techniques.

This final project aims to identify patterns of lip prints from different individuals to obtain information and the identity of the individual. The method used for feature extraction is Gabor Wavelet and the method used to classify is K-Nearest Neighbor (K-NN) using MATLAB (MATrix LABoratory) application.

The result of this final project is a program that can identify lip prints patterns from different individuals to know the identity of the individual with the highest accuracy is 72.2222% and the computation time is 6.2195 seconds. With this system lip print pattern can be used as an alternative in order to help and facilitate the dentist and forensic experts to identify each individual.

Key Words: *Lip print patterns, Forensic, Gabor Wavelet, K-Nearest Neighbor*