

ABSTRACT

Visual identification is one of the most commonly applied methods in forensic science. Forensic is a field of science used to assist the process of identifying individuals and the interests of law enforcement. Lip print can be an alternative data supporting identification if the fingerprint is left behind and no other identification methods are available, because of the unique and individual pattern of each person. Processing of lips image sample, in this research will be implemented method Content Based Image Retrieval (CBIR) as feature extraction and Backpropagation-Artificial Neural Network (ANN) as classification method. The CBIR method is used for feature extraction methods. And the feature extraction methods used in this final Project were GLCM and HSV histogram color feature extraction.

This Final Project is intended to facilitate the identification and classification of lipstick on the individual. The system performs with the greatest accuracy rate of 72,5 % and 13.43 computational time using 40 sample of training image and 40 test images. With this system can be a comparison in the identification of lip patterns by using different methods and can be useful for the world of forensic odontology in identifying lip patterns.

Keywords: *Forensics Lip print pattern, Content Based Image Retrieval (CBIR), GLCM, Artificial Neural Network (ANN) - Back Propagation*