ABSTRACT

Forensic odontology is a branch of dentistry in a judicial system interest as evidence of investigation to solve legal and crime problems. As an example of identification carried out by the forensic dentistry is by the identifying bite marks. The bitemarks being found on the body usually occur in crime cases that involves physical injury such as theft, rape, murder, etc.The shape of each bite marks are different from each of individual, hence by identifying the bite marks will result a possibility of getting a vital information such as the gender of suspect or victim.

The research and simulation system arrangement has been done in a case of identifying gender using digital image processing based on bitemark. As for the method in the system design, there are Gray Level Co-Occurrence Matrix for feature extraction and image registration to help fix the quality of the image, meanwhile Support Vector Machine.

Based on the result, system has succeed in identifying gender based on bitemark image with maximum accuracy of 77% and 0,01870 seconds computational time. This result is obtained using GLCM parameter that is combination of two order contrast, correlation, energy and homogeneity, with the distance = 3, direction = 45º. While in the SVM classification process the best kernell type used when gaussian kernel.

Keyword : Forensic Odontology, Bitemark, Gray Level Co-Occurrence (GLCM), Support Vector Machine (SVM)