ABSTRACT

Identification is a way to determine individual victim and the criminal of criminality in enforcing existing laws, for example by the identification process through bite mark and the field that handles the bite mark identification process is odontology forensic.

The sign of a bite mark is usually found on the victim or the criminal of criminality, for example in the cases of violence , rape, and child abuse. Bite mark becomes an important evidence to do the identification process because through the bite mark marks found on the body can be information one of which is the sex of the perpetrator information or the victim of the crime perpetrator, this is caused by different characteristic of each individual's teeth. The identification process of bite mark that has been done currently passing the long process, so it causes the distortion in the bite mark analysis process, therefore it needs another way in the process of identifying the bite mark.

Then in this final project is done a design and research system for gender identification by using digital image based on the edge of bite mark. With the bite mark image characteristic extraction using Gray Level Co-Occurrence Matrix (GLCM) method and for the classification on the bite mark image using Support Vector Machine (SVM) method.

From the test result, the system is able to identify gender based on bite mark image with maximum accuracy value of 82.97%. This result is obtained using GLCM parameter that is combination of two order contrast, homogeneity and entropy, with distance = 1, direction = 45^0, quantization level 8. while in the SVM classification process the best kernel type used when polynomial kernel using multiclass OAA. The tested canine distance parameters show that the female canine distance is 0.95% smaller than the male canine distance

***Keywords* :** *Bite Mark, Gray Level Co-Occurrence Matrix (GLCM), Support Vector Machine (SVM)*