

ABSTRACT

The number of natural disasters, crime, fraud in cases of age forgery and wrong in estimating age through physical body sometimes make forensic experts called to know the identity of actual age. The forensic expert admitted that is difficult thing to know the actual age of a person. One way to identify age can be done through one part of the tooth, that is an pulp cavity. The growth of the dental pulp cavity will further narrow with the increasing human age.

In this final project, a system has been designed to be able to identify human age through teeth more efficient and easier. To support the identification of age through teeth, the researcher performs panoramic radiographic image processing using Adaptive Region Growing Approach image segmentation method. In Adaptive Region Growing Approach method an image will be divided into very small parts. Those parts are then repeatedly put together into a homogeneous region with the determination of the threshold and seed point first.

The results of this study resulted in a system accuracy of 63% of 47 data tested for 7 age classes and resulted in an accuracy of 17% of 47 data tested for 15 age classes. Those results are obtained by changing the parameter value that affect in the system that has been made. From the research that has been done, it can be concluded that the system that has been created by Adaptive Region Growing Approach method can be used to identify age through the teeth. This study is also expected to help the process of age identification through teeth to be more efficient and easier.

Keywords: Panoramic Radiography, Dental Pulp, Adaptive Region Growing Approach, Seed Point, Threshold