

ABSTRACT

Tooth is one of the organs inside the mouth with the hardest texture. Root is one of the part of tooth, that covered by gum, tooth enamel as protection to prevent tooth hole happened, dentin as bottom layer under the tooth enamel, then pulp that fill by nerve and blood vessel in tooth. Not all of the part of tooth can seeing.

This research is descriptive with survey method and have the goal to detect how the condition of tooth using periapikal radiograph based region growing method and template matching.

The application can produces accuracy level 54,2% with computation time 3,141 seconds when there are no image normalization. After doing image normalization the accuracy rise become 57,33% with computation time 3,462 seconds.

The conclusions is the application can stimulated to detect the pulpitis with android application. So it can facilitate pulpitis detection in all doctors in different parts of country, even in the far area are very difficult to get radiology tools because it is very expensive because this application can be shared easily.

Keyword : *radiograph periapical, pulpitis, region growing, template matching*