

ABSTRACT

Radiography is application of an X-ray that can show the entire teeth to be analyzed for its condition. A dentist do the interpretation of an image rely on vision alone. The dentist's viewing ability different to one another, so interpretation can be different as well.

Granuloma is one of abnormalities in periapical teeth that can be checked using X-ray images on the radio lucent. This research about detection of granuloma through periapical radiograph image using Contourlet Transform method and K-Nearest Neighbor classification. This research consist of two scenarios, there are using image of granuloma tooth number 2-1 and image of granuloma tooth random number. Scenario of image of granuloma tooth number 2-1 has 10 images as training data and 12 images as testing data while scenario of image of granuloma tooth random number has 14 images as training data and 18 images as testing data.

The results of this research are the detection system has 83.33% as the best accuracy for scenario of image of granuloma tooth number 2-1 and 77.78%. as the best accuracy for scenario of image of granuloma tooth random number. Detection of granuloma image system can help the dentist doing the interpretation of an radiograph image efficiently and accurately.

Keyword : periapical radiograph, granuloma image, Contourlet Transform, K-Nearest Neighbor (K-NN).