ABSTRACT

Periapical radiograph is a intraoral technique that can show individual teeth and the tissues around the apices with x-ray images. Visually the doctors can't directly see how the health of human teeth. With the periapical radiograph will be easier for doctors to diagnose tooth disease and take the further action. Pulpitis is one of the dental disease. Pulpitis is inflammation of the dental pulp resulting from untreated caries. Pulpitis can be divide into reversible pulpitis and irreversible pulpitis.

The majority of x-ray images acquired into a digital image having a low image quality, with contrast levels are low, the lighting is not good, and it has lot of noise. However, to be processed and analyzed, the digital image must have a good quality. To produce a good quality of digital x-ray image, there should be an image enhancement technique.

To overcome this problem, in this final assignment will be improving the image quality by using gray-level grouping method. Gray-level grouping method, not only produce images with better quality, but also in general can be implemented in many different images automatically. Based on testing that has been done that the gray-level grouping method can improve image quality periapical radiographs of teeth.

Keywords*: x-ray image, grey-level grouping, image enhancement, periapical radiograph.*