ABSTRACT

A cyst is a cavity containing a liquid or gas, periapical cyst is a cyst that occurs at the end of the roots, usually start with pulpitis. To correctly diagnose periapical cyst, a doctor who has an expert in radiology is needed, which are still few in number in Indonesia, because of that problems the author makes this final project with the aim of facilitating the detection of periapical cysts.

Based on previous researches that is already done, author selected two tested methods that return in this final task, the method of BLOB (Binary Large Object) and the method of GLCM (Gray Level Co-Occurrence Matrix). Both methods of feature extraction then classified using classification method of K-Nearest Neighbor.

This research uses 16 trained data and 13 test data, after the test has been done, the obtained results for GLCM (Gray Level Co-Occurrence Matrix) method is 100% with computing time 0, 6521s on the 512x512-dimensional image with the value of the quantization 16 at 5 with 90° phase and BLOB (Binary Large Object) method on the-dimensional image 128 x 128 using statistical characteristics of order one using mean, kurtosis, and the entropy resulting level of accuracy test of 76.92% with computing time 0, 5434s.

Keywords: Periapical Cyst, BLOB, Periapical Radiograph, GLCM