

ABSTRACT

The increasing rate of population, especially in Indonesia requires an application system that can quickly and easily calculate parameters associated with population. One kind of parameter is the large number of houses in an area. By knowing how many houses in an area, we can estimate the population and the rate of growth in there.

Google Earth is an application that facilitate people to quickly get an Earth map by satellite. Using Google Earth we can display images of the earth surface in areas/ regions that we want, such as residential areas, mountains, seas and others. With the display images of the earth surface from Google Earth, an application of digital image processing for detecting and counting numbers of houses in an area is designed in this final task by extracting characteristic of RGB value. Mean value, which is used to be RGB databases for house and non house, can be obtained from extracting characteristic of RGB value. Thus, by using KKN can be classified which one is a house and non house

KKN classification can automatically explained about condition of an area, which later will be treated using ienhancement/reconfiguration of testing image so that it can be separated from noise. After that we can calculate the number of the houses in the area. In this application, the best mean accuracy is 78,19% with parameter value is $k=1$ and threshold of open area is 100.

Keywords: Detection, Feature Extraction Google Earth, K-NN, RGB