ABSTRACT

Ornamental plants can be divided into two types, namely ornamental plants based on flower and based on leaves. It would be very easy to distinguish the plants, but not to ornamental plants leaves. One of the leaves of ornamental plants that are difficult to distinguish by naked eye is an ornamental plant Alocasia. Ornamental plants Alocasia it self has a variety of types.

In this final project has been made an application to analyze and classify Alocasia through shape and color of leaves. Where the leaves of alocasia being used as test data and training data. In this Final project used wavelet for feature extraction method. On the wavelet transform, process of decomposition will be carried out on the method for feature extraction and Neural Networks Self Organizing Maps (SOM), the image restoration process will be carried out to classify and categorizethe types of plantsthose are used as ornamental Alocasia sample.

The results that have been achieved in the classification of Alocasia is an accuracy of 98% with an average computation time 12,57 seconds with image captured vertically and horizontally to the photo with the distance, the slope, background, the light is exactly the same and everything is already in the database.

Keywords: Identification of ornamental plant of Alocasia, wavelet transform, JST