ABSTRACT

The rapid usage and development of information technology causes kind of new improvement of this technology. Internet has become information technology that growing very fast along with increasing of public needs of fast and accurate information. As time goes by, internet service user growing rapidly. With the result that network traffic also increasingly. With increasing of network traffic than network capacity need to be improved.

To determine network capacity wich will be provided, internet service provider requires a method to find out traffic that will happen in the future. One of method that can be applied is time series forecasting. Time series forecasting is short term forecasting using previous period data.

Backpropagation is one of Artificial Neural Network model that can be used to forecast future data based on previous data. Backpropagation model trains network to recognize data pattern applied in training to give correct response to input data pattern that similar with data pattern used during training.

This final project used backpropagation to forecast internet network traffic in time series forecasting. With only using previous traffic data wich is available, it have been trained and tested to data so obtained architecture of backpropagation model which most accurate for traffic forecasting system, that is architecture 2-15-1.

Key words: Forecasting, time series, Artificial Neural Network, Backpropagation