Abstract

"Customer Churn" is the result of fierce competition among the world where every operators provides an interesting gimmick. If this continues then this will cause a huge loss in revenue of the operator. In these circumstances, the smart way to overcome this is the charter operators are forced to look for alternative ways to use data mining techniques and statistical tools to identify the cause of the problem and take action to resolve it. This is possible if the history data of customers are analyzed systematically. The use of appropriate technical Data Mining will soon be able to predict the customers that will do the churn and after that this needs immediate treatment retention by providing a gimmick according to the needs of the customers. Churn Prevention is a combination of Churn Prediction and Special Treatment Retention so that customers can be maintained longer.

In this research, dataset from Broadband Internet Customer of PT. TELKOM Indonesia is used. And its main objective is to reduce customer churn using the proposed Churn Prevention System. The classifier used on this research is Random Forest. Random Forest is taking not only the most important part of this Churn Prevention System that acts as classifier that can give high True Positive Rate but also helping to find the most significant variables to obtain special treatment for the predicted churn customer. The results show that the proposed Churn Prevention System can reduce churn rate approximately 21% using National dataset compared to the actual churn rate using the existing system.

Keywords: Churn Prediction, Broadband Internet Customer, Random Forest