ABSTRACT

The downward trend on the number of customers happened to ISP (Internet Service Provider) in Indonesia, PT. Telekomunikasi Indonesia Tbk. (Telkom), especially in operational areas-Bandung, with product data and internet services, Speedy. The downward trend in the number of customers happened because of churn. After identified, the churn is due to the termination of service caused by various factors, such as lack of service usage, the delinquent, or customer dissatisfaction towards the service. Termination of services can be done by the customer or the company, so the company needs to be aware of the churn in subsequent periods, by providing a retention program in accordance with the characteristics of a potential customer churn. Retention programs are conducted to enhance customer loyalty to the company, thus it will be increasing company's revenue.

Customer churn potentially can be predicted and segmented using data mining. One of method prediction that can be used is Decision Tree. Potential customer churn pattern can be seen by the percentage value of important predictors used. Predictors that are used in the prediction of customer churn are billing, usage, number of interruptions, and the duration of subscription. In churn prediction modelling, customer billing gets the highest predictor value 92%, the number of interruptions and subscription duration obtain a percentage predictor value 4%, while usage has no effect in modeling.

Customer segmentation uses clustering K-Means algorithm. it uses data potential customers churn that has no network problem, with duration more than 12 months subscription. The Important attributes that are used in customer segmentation are customer billing, usage, and duration of the subscription. Trial of K-Means clustering is done by the number of K from 1 to 5. Then the quality of the cluster obtained with the best K is 2, thus it is formed two clusters with different characteristics. From 2 cluster obtained, it is elected cluster 2 because it has fulfilled the criteria of cross selling GrooviaTV service. There are 601 potential customers who will be given cross selling GrooviaTV program and complementary services.

Key word: Data Mining, Decision Tree, Clustering K-Means, Retention Program, Cross Selling, Speedy