

ABSTRACT

Trend transition of utilization the telecommunications services since 2008, which was originally inclined to voice and SMS services to data and VAS services affects the decreasing ARPU of voice and SMS services any of the PT. Telekomunikasi Indonesia Tbk., (PT Telkom) products, especially the prepaid CDMA Flexi Trendy. Flexi Trendy voice and SMS services ARPU decreased by almost 50% in 2009, although the number of subscribers Flexi Trendy has increased. While aware that the data and VAS services contribute to PT Telkom's revenue by 7% per year. Therefore, PT Telkom needs customer development strategy to pay attention to the potential customers that are likely to increase the intensity utilization of data and VAS services Flexi Trendy, in an effort to increase back ARPU Flexi Trendy.

RFM is a method to segment customers based on the attributes of recency, frequency and monetary customers in spending money. While K-Means clustering is a method in data mining to segment customers based on common characteristics of customers in a number of k or clusters predetermined by researcher. Combination of RFM with K-Means produces the higher cluster quality, customer segmentation that better describe the behavior and speed up the runtime model. In addition, combination of RFM method and K-Means can generate potential customers that can be given customer development program.

Type of data that used are the vouchers purchase data for modeling using the RFM and service usage data for modeling using K-Means. RFM model produces one new variable, then combined with the use of data services that has been divided into four new variables, namely voice, SMS, data and VAS as well as the total revenue to be modeled using K-Means.

After a customer segmentation model using a combination of five variables RFM and K-Means, the optimal number of clusters obtained are as many as five clusters. Each cluster had a tendency to use the service and different improvement of RFM score. The third cluster is a cluster that potential for a given customer development program because it has the characteristics of the use of data services and VAS more than the other clusters. In addition, customer development program is also given to other clusters that tend to use a particular service.

Key Words: RFM, K-Means, Customer Development, Flexi Trendy