ABSTRACT

The transformation of PT Telekomunikasi Indonesia Tbk., (Telkom) *from* FMM *to* TIME *caused the increasing of variance* Telkom *products. Plain Old Telephone Service* (POTS) *in a major* Telkom *products which decreased earnings from quarter* II 2009 *to quarter* II 2011. *While* Speedy *was one of* Telkom *products which experienced increases in income since* 2009 *to* 2011. *Therefore,* Telkom *is try to ancipate a decline in income of* POTS *using cross selling from* POTS *to* Speedy.

k-Nearest Neighbor (kNN) *is one method of classification in data mining that can be used to select the target cross-selling.* kNN *was chosen as the method used in the cross selling* POTS *to Speedy being able to predict with high accuracy, generate relatively stable recommendation, and feasible to predict the large amounts of data.*

In the formation of cross-selling models with kNN *algorithm, use* POTS *customer transaction data, customer transaction data Speedy, demographic data, and data networking capability devices* POTS. POTS *customer transaction data and Speedy customer transaction data used to obtain customer targeted cross selling. While the demographic data and data networking capabilities* POTS *devices used in the analysis and recommendations.*

After modelling process for cross selling using kNN *algorithm, there are four important attributes of the data used in the modeling process is revenue derived from subscription, total revenue earned before taxes, credit tickets for restitution, and discount tickets for restitution. Number k is used in cross-selling models* POTS *to Speedy service is two. After the customer's target if cross-selling models produced by, things should be done as follows checking the suitability of the target cross-selling models produced by Speedy sales target, to check the status of the subscription model output cross selling with the next period of data, checking the suitability of the ability of network devices that are targeted towards customer cross selling and perform the next step in accordance with the conditions of the customer.*

Keywords: Cross Selling, k-Nearest Neighbor, POTS, Speedy