

ABSTRACT

PT. Indonesia Cellular Telecommunication, known as Telkomsel is the biggest cellular telecommunications operator in Indonesia. Telkomsel always gives the best service for its customers. Thus, customer satisfaction service becomes the important matter to win the competition, because it will affect loyalty and customer growth. One of its services is 24 hours service of Caroline Telkomsel.

Caroline Telkomsel represents the name of call center service which is serving all segment of Telkomsel products. Call Center is the unit which is directly connected to the customer, so it has the important role to make customer comfort. But, to determine the number of operators in every shift is still conducted without using special method. So, it causes the number of operator which are determined, are not always optimum. It is proved by value of utility system which is more than 100%. Utility system with more than 100 % means that the system is unable to handle the incoming call because call arrival comes faster than service rate. It affects the increasing of abandon call (call which is refused by the system) which exceeds maximum abandon call specified by Telkomsel. The Company specifies the maximum abandon Call of 8% for the service of simPATI call center.

By increasing number of Telkomsel's customers, it is important to have a better performance, either in product, technology, or service. Thus, it is necessary to conduct a call center performance evaluation which is used to determine the optimum number of operator in every shift. It is conducted with linear programming optimization method by considering arrival rate, services rate, and work load of operator which has been specified

This research determines the schedule of operator base on per hour shift and existing shift using linear programming. This result will be compared with the existing method.

Conclusion which can be taken from this research is the determination of the number of operator by shift per hour is better the than using existing shift. The optimum operators obtained from the call arrival and level of service in time interval of 1 hour are : 41 operators for the utilization of 81,25% and 37 operators for the utilization of 89,25%. Based on this result, the company do not need to add new operators, but by empowering and placing the existing operator as optimum as possible.

Keyword : *operator of call center, call, service time, abandon calls, linear programming*