

## ABSTRACT

This project examines the theory of Queueing model in Internet Café service business. This service model can be viewed as a combination of a serial waiting line and number of servers (single-queue, multiple-servers). The waiting line represents number of customers while the servers are computers.

The purpose of this study is to find the optimum number of computers in the Internet Café service business located in Ngamwongwan Road that maximizes profit while keeping average queue length at minimal and utilizing computers as much as possible.

This study uses both analytical and simulation models. For average customer arrival rate of 5.16 persons per hour and average customer stayed in service of 0.78 hours in each server, it was found out that the optimum number of computers is 9. For the amount of computers, the yearly average revenue is 637,632 Baht, and the yearly profit is 530,832 Baht. The average number of computers waiting for a computer is 0.88 person per hour while the average computer utilization is 74 percent. It will take about 11.16 months before the investment can be recovered.