ABSTRACT

Communication over the packet-switched network such as IP network is far more efficient and cost-effective than the circuit-switched network such as PSTN (Public Switched Telephone Network). It is therefore desirable to use IP Network as transport for circuit-switched applications such as voice, data and video.

IP communication is a viable technology that can be implemented today. By converging existing voice and data network onto a single IP-based network, an enterprise can lower its total cost of network ownership by reducing expenditures associated with equipment and maintenance, network administration, and network carrier charges.

Implementation of IP Network System can take many forms, but some operator's strategies generate greater benefits than others. Finally, IT managers must begin to evaluate IP communication on its own terms rather than as merely replacement for the existing system. The major problem is how to select appropriate operator to implement IP Network System.

In this study, I propose model for selecting the appropriate operator to implement IP Network System. The model is described as *neural network perceptron single layer*. The perceptron generated great interest due to its ability to generalize from its training and learn from initially randomly distributed connections. The perceptron are especially suited for simple problems in pattern classification. They are fast and reliable networks for the problems they can solve.

Moreover, the analysis in information both from survey and interview was taken to find out about IP Network user's requirement, IP operator's performance in Thailand, the strong and weak point of each operator.