

Thesis Title      Thai Character Recognition Using Back Propagation of Neural Network

Author              Mr. Surayoot Prachya

M. Eng              Electrical Engineering

Examining Committee:

Asst. Prof. Dr. Kiti Likitanuruck	Chairman
Assoc. Prof. Kajornsak Kantapanit	Member
Assoc. Prof. Dr. Akachai Saeng-In	Member

### Abstract

The aim of this research is to analyse the application of a BPNN to learn and recognize Thai Characters and find limitations of the process. In order to implement the process , a BPNN is designed and developed using Delphi language. The BPNN is then trained to learn and recognize the bitmaps of six sizes of six patterns of Thai characters derived from the output of a scanner. The appropriate set of weights from the hidden layer and the output are then calculated and stored. The trained network is then tested to its in recognizing the Thai characters.

The results from the tests show that a BPNN can learn and recognize the Thai characters bitmaps of six fonts of six sizes each. The percentage of accuracy is 99.813 where the input patterns are designed at the matrix size 50 x 50 and prototype of size 20 points. The percentage is reduced to 76.779 when the matrix size is 10 x 10 and prototype of size 20 points.