LITERATURE SURVEY

INTRODUCTION

Character recognition is becoming more and more important in the modern world. It helps humans ease their jobs and solve more complex problems. An example is handwritten character recognition [4] which is widely used in the world. This system is developed for zip code or postal code recognition that can be employed in mail sorting. This can help humans to sort emails with postal codes that are difficult to identify.

WHAT IS HANDWRITTEN DIGIT RECOGNITION?

Handwritten digit recognition is the ability of computers to recognize human handwritten digits. It is a hard task for the machine because handwritten digits are not perfect and can be made with many different flavors. Handwritten digit recognition is the solution to this problem which uses the image of a digit and recognizes the digit present in the image

AUTHORS AND THEIR PROPOSAL

1. A novel method for Handwritten Digit Recognition with Neural Networks MALOTHU NAGU*1, N VIJAY SHANKAR#2, K.ANNAPURNA

Character recognition plays an important role in the modern world. It can solve more complex problems and makes humans' job easier. An example is handwritten character recognition. This is a system widely used in the world

to recognize zip codes or postal codes for mail sorting. There are different techniques that can be used to recognize handwritten characters. Two techniques researched in this paper are Pattern Recognition and Artificial Neural Network (ANN). Both techniques are defined and different methods for each technique are also discussed. Bayesian Decision Theory, Nearest Neighbor rule, and Linear Classification or Discrimination are types of methods for Pattern Recognition. Shape recognition, Chinese Character, and Handwritten Digit recognition uses Neural Network to recognize them. Neural Network is used to train and identify written digits. After training and testing, the accuracy rate reached 99%. This accuracy rate is very high.

2. Hao Y., Shi Y., Zhang D., Zhu X. 2001, "An effective result-feedback neural algorithm for handwritten character recognition' International Journal of Neural Parallel & Science Computations, Vol. 9z No. 2, Pp.139~150

In this paper, a new algorithm of handwritten character recognition based on result feedback is proposed. It is designed as an effective neural network by adding confidence back-propagation and input modification, thus both pre-processing and recognition operations are closely integrated together. The convergence of the algorithm is proved and many experiments show that the error rate in such a result-feedback neural network (RFNN) can be greatly reduced as well as the robust to environmental noise

3.Kimura, F. and Shiridhar, M. (1991). Handwritten numerical recognition based on multiple algorithms. Pattern Recognition, no. 10, vol. 24, pp. 969-983

In this paper, the authors developed two algorithms for application to the recognition of unconstrained isolated handwritten numerals. While both algorithms yielded very low error rates, the authors combined the two algorithms in different ways to study the best polling strategy and realized significant improvement in performance.

4. M. Shridhar and A. Badreldin, Recognition of isolated and simply connected handwritten numerals, Pattern Recognition 19, 1-12 (1986).

In this paper, the authors describe the results of their investigation into the development of a recognition algorithm for identifying numerals that may be isolated or connected, broken or continuous. Using a structural classification scheme, the recognition algorithm is derived as a tree classifier. In an extensive test experiment, an accuracy of 99% was realized with isolated numerals. When connected numerals were also included a recognition accuracy of 93% was obtained.