LIST OF FIGURES

Fig No	NAME OF THE FIGURE	PAGE NO
1.1	Sample process for Bio-metric recognition	1
3.1	The basic algorithm for face recognition system using neural networks	12
3.2	The steps in pre processing a window	13
3.3	Images with the above threshold values are indicated by boxes	14
3.4	Examples of face images randomly mirrored rotated, translated and scaled by small amounts	15
3.5	During the training	17
3.6	Multiple detections from a single network	19
4.1	Multi layer neural network	22
4.2	Face recognition using MNN&EMNN	25
4.3	EMNN with 3T decision rule	26
4.4	EMNN with 4T decision rule	27
5.1	Examples of the data base of faces	32

LIST OF TABLES

Table NO	NAME OF THE TABLE	PAGE NO
4.1	Result of method to Accelerate back propagation	29

LIST OF FLOW CHARTS

Chart NO	NAME OF FLOW CHARTS	PAGE NO
6.1	Flow chart indicating the sequence of implementation	36
6.2	Flow chart for training	38
6.3	Flow chart for testing	40

ABSTRACT

We present a neural network-based upright frontal face recognition system. A rationally connected neural network examines small windows of an image, and decides whether each window contains a face. The system arbitrates between multiple networks to improve performance over a single network. We present a straight forward procedure for aligning positive face examples for training. To collect negative examples, we use a bootstrap algorithm, which adds false detections into the training set as training progresses. This eliminates the difficult task of manually selecting non face training examples, which must be chosen to span the entire space of non face images. Simple heuristics, such as using the fact that faces rarely overlap in images, can further improve the accuracy. Comparisons with several other state-of-the-art face recognition systems are presented, showing that our system has comparable performance in terms of recognition and false-positive rates.