

ABSTRACT

Human signature identification is a process to recognize and decide the signature person. Signature identification technology include on biometric which use natural human behavior characteristics. Forgery of signature image is happened easily, so that is required by identification system to capable differentiate between genuine signature and forged signature.

Identification system implemented using Adaptive Resonance Theory (ART) neural network models. ART neural network is capable to receive new information without forgetting the previous information, like as the way of human brain work. To be able to identify signature, neural network need preprocessing and feature extracting. Extraction process with 2D Gabor Wavelet filter to get the important feature information from signature image and its value is taken as input to neural network. Learning of neural network is conducted to get the correct classification from data training a genuine signature. The signature can be recognized if it set in one of the class from training process.

From the testing result is obtained by level accuracy of signature identification system with the best classification is around 70% – 83.33% for can be recognized a genuine signature, and around 70% – 80% for reject a forged signature

Key word : Biometric, Adaptive Resonance Theory, neural network, preprocessing, feature extracting, 2D Gabor Wavelet filter.