Thesis Title	Cross-Correlation Neural Network for Thai Printed
	Characters with No Head Fonts Recognition
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ABSTRACT

The relevant researches concerned with Thai Character Recognition in the past have been emphasized in ability enhancement in the recognition rate by considering the structure of the standard character pattern based on the Feature Characteristic. Thai characters which are composed of direct lines, curves, zig-zag lines and the beginning of writing with the head circle loop which is known as the head of character. The examples of Thai Characters without the head circle loop are "**n**" "**n**" "**n**" "**G**" "**G**" "**U**" "**U**"

Therefore, this thesis presents the new methodology utilizing the level classification and Hierarchical Normalization Cross-Correlation ARTMAP for recognizing Thai Characters that have pattern without head circle loop. This research applied with the cross-correlation method which is used to be a criteria function to measure the similarity between the input vector and the weight vector. The advantage of using cross-correlation function is that the similarity of the pattern in each part can be independently measured concerning the size of character because the method is to compare the similarity of each character regardless the same size of starting. The set of data used in training and testing sets compose of non-circle head loop 39 fonts and the characters from 506 vehicle license plates. The result from this new method is shown the average of 88.49 percent recognition rate. Moreover, the data set has been investigated by testing with the program ArnThai, ThaiOCR, and Fuzzy ARTMAP.