

Thesis Title	An Automatic Multiple Choice Checking System
Student	Mr. Krisana Chinnasarn
Thesis Advisor	Asst. Prof. Dr. Yuttapong Rangsanseri
Level Of Study	Master of Science in Computer Science and Information Technology King Mongkut's Institute of Technology Ladkrabang
Year	1997

ABSTRACT

In this thesis, an image-processing oriented multiple choice checking system is developed based on PC-typed microcomputer connecting to a flatbed scanner. The input of the system is an binary image from the scanner by mean of threshold. This system is classified into 2 steps. First, Noise Reduction and Skew Detection are processed for preprocessing step. Second, the multiple choice checking is processed. There are 3 substeps. To start with, Model of form is constructed, and stored to form library. Horizontal lines are used for classify a form document and cross-lines are located to form rectangular area. The next step, correct answer database for each subject is created. The number of black pixels for each circle in each answer block are counted, and selected the maximum position stored to list of correct answer database. Finally, multiple choice checking step, it is the comparision choice marking position between list of correct answer database and input form document. From this thesis, we obtained an efficient and flexible multiple choice checking system. Such a system can support many styles of choice marking, and also varity of answer sheets.