Abstract

This research is aimed to study and develop a process that substitute hardcopy-answer-sheets using with OMR computer, along with to develop an examination database system and paperless electronic answer sheets for education institutes. A technology that is suitable, easy-to-use, low maintenance, low cost per sheet and flexible to use than an old style computer-answer-sheet is chosen. From a research of (Nonglak, 2544), Image Processing Technology has been used for checking images of multiple choice answer sheets with accurate results. Not only is cost per an answer sheet of this technology low since the answer sheet can be produced from a low quality paper with a general printer but also storage cost because the answer sheets can be recorded as image files and stored with electronic media such as CD-RW, DVD-RW. This research develops software, based on Nonlak’s research, for designing, checking the computer-answer-sheet which is able to print out from a multifunction and general printer and develops a data collecting system which can store and search back promptly. From testing result, efficiency of Nonblank’s method is decreased when using an auto-feed scanner, due to image distortion which is happened because of unstable straight down force of rollers of the scanner feeder and unable to use a compensating angle method for the whole paper. Therefore, an independent searching and analyzing circle area of answer technique is developed. The technique is increasing accuracy, but decreasing processing time. The technique and software, developed in this research, can be applied to using in education institutes both primary and secondary level by working with general equipments in order to replace the OMR answer sheet.

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