ABSTRACT

Telkom Institute of Technology is a technology-based institution where it is proper for IT Telkom to provides technology-based services. One of the problem frequently encountered is when filing a scholarship where in this case the data recap scholarship applicants still relies heavily on manual processes in terms data inputting and verification, so it takes a relatively long time.

This final project aims to implement a detection system that is able to identify characters from the data that is written in the scholasrship form. The system is made using a scanner as a medium for acquiring images and MATLAB as software to build an application program from the system are made. The acquired image then extracted by the PMMC method and converted into text data, then stored in Excel.

From the results of performance testing system, it is known that an increasing number of databases affects the accuracy improvement, but this is inversely with the computation time duration. In this system, maximum accuracy is obtained when the number of database systems is 60 per characters with accuracy about 91,7003 % for image written by database authors and reached about 77,0745 % for image written by different authors, with the computing time spend time about 129,890 second. In addition, in comparative testing between 2 regions, 4 regions and 8 regions obtained the highest accuracy about 82,281 % by using the distribution of four regions with 60 databases per character, and 30 test images. On the test using folded and scratch form, will be obtained the greatest reduction in accuracy about 6,8756 % for the folded image with the number of databases as much as 60 per characters, and about 5,2244 % for the scratch image with the number of databases as much as 15 per characters.

Keyword : *detection system, scholarship form data, PMMC method*