

ABSTRACT

The library is a physical building where books are collected and arranged according to specific systems or user needs, in libraries containing a collection of books either in print or in digital books. Common problems that often occur in printed books are damaged or missing parts of the book because of the book's Age factor, so that when the book is reopened, the Back.

Based on common problems that often occur then the system is established information that can return information on the books in detail as a solution, in this final project will be established a book information system by object, Color and serial number based image processing. The system used is object identification.

In this final project it has been created an application that can identify the shapes, colors, and numbers containing the information that has been stored in the database that has been created, in working on this final project using the MATLAB application. The way the application works is, smartphones are used to capturing the objects on the front or the first page of the book, and the system will automatically identify which objects include the shapes, colors and numbers on the book, from the test results Book information system, based on the best conditions for the process of object identification i.e. distance of 5 cm to 7 cm and the ideal angle of retrieval is 180 °, then with the ideal brightness level of light on system testing of 40 lux to 150 to Can be processed by the system, the average process time obtained by the system from the start of the process to the end of the process approximately 0.56 second, the minimum resolution limit on imagery is 302 x 170 and the maximum resolution limit of 1280 x 720 image on system tests, the system does not Can identify markers that have natural noise such as rips on the marker, there are liquids and folds on the marker.

Keywords: objects (shapes, colors, and text), books