

REAL TIME IRIS RECOGNITION WITH FPGA-BASED TOUCH SCREEN GUI

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ABSTRACT

Biometric identification provides special identification based on physical characteristic of a person. There are several types of biometric system for example, face, fingerprint, iris and signature. Every person has their own biometric trait that very tough to be stolen or duplicated. This unique characteristic can be recognized and extracted for the purpose of identification. Iris recognition technology determines the identity of an individual after capturing the person's iris. The iris pattern was extracted and recognize, then it will be compared to database and identity of the individual determined. The objective of this work is to study the available techniques and reveals how the system can be applied in developing an iris recognition system using FPGA development board. This paper describes implementation of iris recognition with FPGA based GUI Touch Screen. User can interact with the system graphically using touch screen and control the processes which is part of the image processing of iris.

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CHAPTER 1

INTRODUCTION

1.1 BACKGROUND OF STUDY

Iris recognition is based on unique biometric of the eye, regarded as the most reliable identification system available [1]. It formed as accurate identification compared to other physical biometric such as fingerprint and voice, as it is impossible to be duplicated.

Iris of an eye is an internal organ which the design is unique and complex [2] and can be used as identification of a person and it also being well protected when the eye closed. Unlike other biometric scheme like fingerprint and face which is an external structure that can be easily injured and damage.

Iris recognition technology determines the identity of an individual after capturing the person's iris. This unique characteristic can be recognized and extracted for the purpose of identification. It will be compared with images from database and the identity of the individual can be determined.

The purpose of this system is to process the image of an eye through several related processes in identifying the pattern of the image itself.