PROJECT REPORT

GEOMETRY IDENTIFICATION WITH POINTS RECOGNITION METHOD

ADINDA FEBRIANTI
15.K1.0031

Faculty of Computer Science
Soegijapranata Catholic University
2019

APPROVAL AND RATIFICATION PAGE

IDENTIFICATION OF GEOMETRY ON 2-D PICTURE WITH THINNING AND EDGE DETECTION METHOD

by

ADINDA FEBRIANTI – 15.K1.0031

This project report has been approved and ratified by the Faculty of Computer Science on January, 23, 2019

With approval,

Supervisor,

Shinta Estri Wahyuningrum, S.Si., M.Cs
NPP: 058.1.2007.272

Examiners,

1.)

Suyanto EA, Ir., M.Sc
NPP: 058.1.1992.116

2.)

Robertus Setiawan Aji Nugroho, ST., MCompIT., PhD
NPP: 058.1.2004.264

Dean of Faculty of Computer Science,

Erdhi Widyarto Nugroho, ST., MT
NPP: 058.1.2002.254

ii

STATEMENT OF ORIGINALITY

I, the undersigned:

Name : ADINDA FEBRIANTI

ID : 15.K1.0031

Certify that this project was made by myself and not copy or plagiarize from other people, except that in writing expressed to the other article. If it is proven that this project was plagiarizes or copy the other, I am ready to accept a sanction.

Semarang, January, 23, 2019

ADINDA FEBRIANTI
15.K1.0031

ABSTRACT

The geometries that will be analyzed in this research is a geometry that only has a straight line and has no curved lines. The geometries which were analyzed are square, rectangular, triangular and trapezoidal.

To identify geometries, the images must be converted from the colored image into a monochrome image then after obtaining a monochrome image, a point searching must be done so the object can be analyzed whether the object is geometry or not.

This testing process uses 44 images as testing data. This 44 images consists of 10 square images, 10 rectangular images, 14 triangular images (5 of 14 triangles is rotated), and 10 trapezoidal images (2 of 10 trapezoids is rotated).

The result of this program is that most of the images were successfully identified as geometries and the others were not identified as geometries as it should.

Keyword: geometries, thinning, edge detection, image processing

PREFACE

This program identifies flat shapes with images. The flat builds identified by this program are square, rectangular, triangular and trapezoidal. This program can identify flat builds by detecting 4 points on the object. In addition, the program can still identify flat building even though the flat build has been rotated.

TABLE OF CONTENTS

ILLUSTRATION INDEX

INDEX OF TABLES