DESIGN AND DEVELOPMENT OF 3-D VISUALIZATION OF COLLEGE OF EDUCATION

Thesis

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ABSTRACT

DAYMON, IVAN N., and **RESURRECCION, JONAREX G. Design and Development of 3-D Visualization of College of Education.** Undergraduate Thesis Bachelor of Science in Information Technology, Cavite State University, Indang, Cavite October 2012. Adviser: Mr. Michael Jeffrey Añonuevo.

The 3-D Visualization of College of Education was developed to help the students and visitors to navigate the College of Education through 3-dimensional system and help to gain all information about the college and the university such as history, mission, vision and goals, teacher's profile and events in the college.

The researchers used the Prototyping Methodology as a paradigm in the development of the system. Prototyping Methodology consists of the following phases: Planning Phase, Analysis Phase, Design Phase, Implementation, System Prototype, Implementation Phase and Software Deployment.

The 3-D Visualization of College of Education was developed under Google Sketch-up for developing 3-D environment, Microsoft Visual Basic was used for the backbone of the system, Microsoft Access for the database and Unity in rendering the 3-D environment. Microsoft Visio 2003 for designing the diagram, Adobe Photoshop and Flash were integrated as part of the software for the design, animation, interface and Microsoft Office Word 2010 for the documentation.

TABLE OF CONTENTS

Sections	Page
TITLE PAGE	i
APPROVAL SHEET	ii
BIOGRAPHICAL DATA	iii
ACKNOWLEDGEMENT	iv
ABSTRACT	vii
TABLE OF CONTENTS	viii
LIST OF TABLE	x
LIST OF FIGURES	xi
LIST OF APPENDIX TABLE	xii
LIST OF APPENDIX FIGURE	xiii
INTRODUCTION	1
Statement of the problem	3
Objectives of the Study	4
Importance of the Study	4
Time and Place of the Study	6
Scope and Limitation of the Study	6
Theoretical Framework	8
Definition of Terms	10
REVIEW OF RELATED LITERATURE	12
MATERIALS AND METHODS	18

Materials 18

Methods 18

RESULTS AND DISCUSSION 22

SUMMARY, CONCLUSION AND RECOMMENDATION..... 40

SUMMARY..... 40

CONCLUSION 41

RECOMMENDATION 41

BIBLIOGRAPHY..... 43

APPENDICES..... 44

Appendix A..... 45

Appendix B..... 48

Appendix C..... 54

Appendix D..... 57

Appendix E..... 66

Appendix F..... 69

Appendix G..... 73

Appendix H..... 77

LIST OF TABLES

Table		Page
1	Breakdown of the Tespondents.....	32
2	Frequency Distribution of the Perception of the Respondents for the Software Based on "Accuracy" Criteria	32
4	Frequency distribution of the Perception of the Respondents for the Software Based on "Consistency"Criteria	33
5	Frequency Distribution of the Perception of the Respondents for the Software Based on "Correctness" Criteria	34
6	Frequency Distribution of the Perception of the Respondents for the Software Based on "Reliability" Criteria	35
7	Frequency Distribution of the Perception of the Respondents for the Software Based on "Information in the Program" Criteria	35
8	Frequency Distribution of the Perception of the Respondents for the Software Based on "User interaction" Criteria	37
9	Average Perception of the Respondents on the Software Based on "Technical Aspects of the Software and Materials" Criteria.....	39

LIST OF FIGURES

Figure		Page
1	Theoretical framework Design and Development of 3-D Visualization of the College of Education.	8
2	Prototyping methodology.....	19
3	Sample screenshot of the main homepage	23
4	Homepage screenshot.....	24
5	Screenshot for the administrator homepage	25
6	Screenshot for the system management module..... .	26
7	Screenshot for the directory module.....	26
8	Screenshot for the information module.....	27
9	Screenshot for the navigation module.....	28

LIST OF APPENDIX TABLE

Appendix Table | Page

1 Frequency distribution of the respondents perception on the software based on "accuracy" criteria..... 58

2 Frequency distribution of the respondents perception on the software based on "consistency" criteria..... 59

3 Frequency distribution of the respondents perception on the software based on "correctness" criteri..... 60

4 Frequency distribution of the respondents perception on the software based on "reliability" criteria..... 61

5 Frequency distribution of the respondents perception on the software based on "information in the program" criteria..... 62

6 Frequency distribution of the respondents perception on the software based on "user interaction" criteria..... 63

7 Frequency distribution of the respondents perception on the software based on "technical aspects of the software and materials" criteria..... 65

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INTRODUCTION

Most of us have played a 3-D game before, be it on a PC, a game console or other gaming devices. However, most of us don't really know how a 3-D scene is created, and certainly don't have to know it in order to enjoy playing 3-D games.

If we compare 3-D graphics with the real world, the real world has the advantage of being infinite in size and detailed. Obviously, computing devices can only store and process a limited amount of data. So when attempting to model the real world, shortcuts are needed to be taken and if you look closely enough at any digitized picture, you will see flaws that are not visible in the real world.

According to Rene Froeleke, in order to maximize the level of detail while minimizing the amount of data to be stored and processed, the world is broken down into a set of objects which make up the 3-D scene. These objects are then broken down into a set of building blocks that are known as primitives. The most used 3-D primitives are