

**DEVELOPMENT OF A THREE-DIMENSIONAL DIRECTORY
OF THE STUDENT UNION BUILDING**

THESIS

LANA ANGELA T. YAMBAO

College of Engineering and Information Technology

CAVITE STATE UNIVERSITY

Indang, Cavite

March 2013

**DEVELOPMENT OF A THREE-DIMENSIONAL
DIRECTORY OF THE STUDENT
UNION BUILDING**

**An Undergraduate Thesis
Submitted to the Faculty of the
College of Engineering and Information Technology
Cavite State University
Indang, Cavite**

**In partial fulfillment
of the requirements for the degree
Bachelor of Science in Information Technology**



*Development of a three dimensional
directory of the student union building
526.22 Y1 2013
T-5083*

**LANA-ANGELA T. YAMBAO
March 2013**

ABSTRACT

YAMBAO, LANA ANGELA T., Development of a Three-Dimensional Directory of the Student Union Building. Undergraduate Thesis. Bachelor of Science in Information Technology. Cavite State University, Indang, Cavite. March 2013. Adviser: Ms. Vanessa G. Coronado.

The study was conducted to provide direct assistance to the individuals entering the Student Union Building in finding their way to an office, and to present immediate basic information especially to those who are inquiring about simple admission policies.

In order to fulfill this study, certain goals and methods were followed. The Prototyping Life Cycle Method was utilized since the software is centered on the users' judgments. Initially, the problems were identified through the use of structured interviews and questionnaires. The gathered information were then analyzed using the Fishbone diagrams to classify the necessary requirements. Afterwards, the design of the software was created including the user-interface and the three-dimensional model of the building. The System Sequence and Use-Case Diagrams were used in designing the software to easily plan the connection between the functions and pages. And then the software was developed accordingly using different applications in multimedia, graphics, and programming. Acceptance testing was conducted to evaluate the whole system by random individuals entering the building.

The figures were tallied and calculated in accordance with the value of the mean and standard deviation. The results provided an average total mean of 4.70 out of 5, an excellent rating for the system.

Use-case Diagram.....	14
Prototyping Method.....	15
Review of Related System.....	15
MATERIALS AND METHODS.....	17
Materials.....	17
Methods.....	17
RESULTS AND DISCUSSION.....	21
System Overview.....	21
System Functions.....	23
System Scope.....	24
Software Testing.....	29
Statistical Analysis.....	30
Respondent Assessment.....	31
SUMMARY, CONCLUSION, AND RECOMMENDATION.....	39
Summary.....	39
Conclusion.....	40
Recommendation.....	41
REFERENCES.....	77

LIST OF TABLES

Table		Page
1	Perception of the respondents on the software based on its accuracy	31
2	Perception of the respondents on the software based on its consistency.....	32
3	Perception of the respondents on the software based on its correctness.....	33
4	Perception of the respondents on the software based on its reliability.....	34
5	Perception of the respondents on the software based on the information in the program	35
6	Perception of the respondents on the software based on the user interaction	36
7	Perception of the respondents on the software based on the technical aspects of the software and materials.....	38

LIST OF FIGURES

Figure		Page
1	Theoretical framework of the development of a three-dimensional directory of the Student Union Building	5
2	Prototyping life cycle method.....	15
3	Screenshot of the Home Page.....	22
4	Screenshot of the Information Page.....	23
5	Screenshot of the Administrator Page.....	24
6	Screenshot of the Information Page.....	25
7	Screenshot of the Directory Page.....	26
8	Screenshot of the Directory Page (linked).....	27
9	Screenshot of the Navigation Page.....	27
10	Screenshot of the Log Page.....	28

LIST OF APPENDIX TABLES

Appendix Table		Page
1	Frequency distribution of the respondents' perceptions on the software based on its accuracy	63
2	Frequency distribution of the respondents' perceptions on the software based on its consistency	63
3	Frequency distribution of the respondents' perceptions on the software based on its reliability	64
4	Frequency distribution of the respondents' perceptions on the software based on its information in the program.....	64
5	Frequency distribution of the respondents' perceptions on the software based on its user interaction	65
6	Frequency distribution of the respondents' perceptions on the software based on its technical aspects of the software and materials	66

LIST OF APPENDIX FIGURES

Appendix Figure		Page
1	Fishbone diagram of difficulty in finding an office or person in the building	45
2	Fishbone diagram of constraints in updating organization information	45
3	Fishbone diagram of the lack of personnel or organization member tracking	46
4	Use-case diagram of the study.....	48
5	Sequence diagram for administrator subsystem.....	50
6	Sequence diagram for logs subsystem	50
7	Sequence diagram for directory subsystem	51
8	Sequence diagram for navigation subsystem	51
9	Sequence diagram for information subsystem	52

**DEVELOPMENT FOR A THREE-DIMENSIONAL
DIRECTORY OF THE STUDENT
UNION BUILDING**

LANA ANGELA T. YAMBAO

An undergraduate thesis manuscript submitted to the faculty of the Department of Information Technology, College of Engineering and Information Technology, Cavite State University, Indang, Cavite, in partial fulfillment of the requirements for the degree of Bachelor Science in Information Technology. Contribution No. CEIT 2013-021. Prepared under the supervision of Ms. Vanessa G. Coronado.

INTRODUCTION

The final surface of a three-dimensional (3D) image is a set of polygons (Radoff, 2008). As a result, it has been conveyed that 3D is still considered as a form of image since it has been believed to be a group of multi-sided flat images.

From what Neo et. al (2001) have indicated, multimedia is the combination of various digital media types, such as images, texts, sounds, and videos, into an integrated multisensory interactive application or presentation to convey a message or information to an audience. From the given explanation, it could be assumed that multimedia have various purposes and have been widely developed not just by highly technical individuals, professional designers, or artists but even ordinary students in a university.

Different universities in the United States, like the University of Pennsylvania and University of Boston, have been offering numerous courses pertaining to computer graphics from certificate programs in 3D Animation & Interactive Media to master's