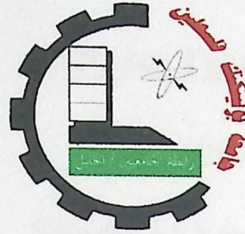


بسم الله الرحمن الرحيم

Palestine Polytechnic University



College of Administrative Science and Information System
Information Technology Department

Admin 3D

Project Team:

Bhaa Amro

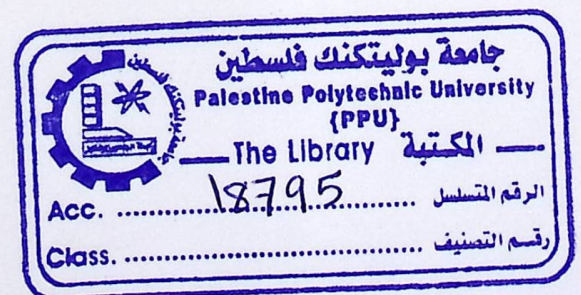
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A Project Submitted in Partial Fulfillment of the requirements for the degree
B.Sc. in Graphic Design & Multimedia in Palestine Polytechnic University

January 2006



Admin 3D

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Graduation Project

**Submitted to Information Technology Department in the College of
Administrative Science & Informatics**

Palestine Polytechnic University

Approved by chairperson supervisory comments



Date 30/1/2006

Dedication:

To: my mother who provided all best encouragement, endurance.

My dear father who supported me.

My brother who helped me

And my friends.

shada

To: my parents, sister, brothers, friends, teachers, and every one granted me the encouragement and support.

bhaa

Acknowledgement:

We would like to thank every one who granted us support and help.

Our deeply indebted and gratitude to Mrs. Sozan Sultan our supervisor for her kind help, encourage, and helpful suggestions on the project.

We would to express our deeply gratitude and thanks to Eng: Ahlam Qure'e, Eng: Moataz Rfae'eh, Mrs: wesam shded,
Special thank to graphic Design and multimedia students for being good friends.

Abstract

This project is a computerized three dimension preference for the administrative science's and information systems building.

This comprehensive preference can help the new students and the visitors to know about the building outside and inside; its departments, laboratories, and class rooms. It also provides help in tracking the outside area without the need of walking through all of the distances.

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Introduction

Chapter Content

Introduction

1.1 The Motivations

1.2 The Objectives

1.3 The limitations

Introduction

There is no doubt that the technology is in continuous progression more than the technology's creatures themselves anticipate. The modern technology is not excluded for the present time by itself, but it exceeded the levels to make people think more about what would be in the future. We all can see the future picture by stimulation of the real situation and representing it before its existence.

Now, we can interpret the fiction and the future picture which was so difficult to predict at the past three decades. This miracle now is coming real especially after the wide use of the computer and the multimedia which is originally consisting of more than one element such as; sound, vision, script, animations, video, stimulation, and the virtual reality.

We can tell that the multimedia and what it has from the tools to the materials are a massive technology that has high power in drawing the fiction and converting it into visionary elements that our eyes can see and our minds can believe.

The studies have showed that a man can understand 20% of what he hears, 40% of what he hears and sees, and 70% of what he sees, hears, and does. These percentages rise if the man had the motivation and interaction of what he is seeing, hearing, or doing.

1.1 The Motivations

When choosing this project, many motivations were the main goal behind what we are doing or what we will be achieving by the time of launching the project.

Our motivation is to get advantage of the massive abilities that we will have when using the services in the multimedia and graphic design field. Using such a technology has become the major business nowadays. Therefore, this project in our country is a new idea that has not been used by many institutions yet.

We have to encourage our society for applying these modern and advanced technologies. Another motivation is that this system can be used by visitors and students to know more about the college buildings and departments. It can be used as preference for the visitors and the new students. People concerns about the booklets and the flyers started to decline, so using this technique could help in attracting the people about the university ID.

1.2 The Objectives

- Providing the ease of implementing the imaginary pictures of any project into computerized system and clearing the desired future image for that project
- Applying the image of the real situation and trying to enhance its future picture and value via the use of the system's virtual implementing abilities
- Using the technology for the architecture purposes through drawing maps for the future figures and allowing investors to implement suggestions and possess constraints
- Polytechnic university's buildings are huge buildings, especially the administration science college building which is considered one of the biggest campus buildings among the universities in West Bank, and implementing these building into computerized systems would make it easier to pass through these massive hallways, class rooms, and laboratories. Therefore, it could provide help to the user to explore the whole building without the need to pass through its actual positions.

1.3 The limitations

Some of the limitations of this project that we will not include the offices and some of the classrooms because of the rendering process and load size will be very huge according to the limited hardware capability.

The project is organized as the following: Chapter 2 presents background information about the graphical user interface, and computer graphical software packages; Chapter 3 reviews the preparatory study and the cost evaluation; Chapter 4 describes the requirements and design process; Chapter 5 describes the system implementation and the obstacles we faced; Chapter 6 includes test and evaluate the system; Chapter 7 presents the conclusion and recommendations.

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Chapter Content

Background

2.1 Computer Graphical Software and Evaluation

2.2 Summary

The concept behind 3D is relatively simple and has been known for almost 100 years. 3D is based on the fact that humans have two eyes which are physically about two inches apart. This means that the two eyes see the same image from a slightly different perspective. Our brains put the two images together and as part of the process provide an estimate of how far away the object is. This vision also allows us to figure out how far things are when it is on the line of our sight (depth perception). If there are multiple objects, we can tell which objects are closer and which are farther based on what our brains interpret from the vision.

In the traditional 3D movies, to get a proper 3D vision, people were required to wearing special glasses. These glasses filter out some of the light that comes up a photographic image. Because the lenses filter out different colored light rays (Red and Blue, or Red and Green), the image as represented to the brain was a bit different. Also, as the images were viewed from a slightly different perspective, what we used to see in the mind eye was an image that appeared to have depth. The downside of this filtering process, which resulted from blocking some colors that we couldn't see. Now, here are some of the most common 3D applications, features and capabilities.

2.1.3 Form Z (V 5.5)

Form Z is a 3D application that can be used in designing such as activities as modeling and painting, architecture design, product design, and mechanical design.

- In Form Z, the ease of the interface makes it more helpful to learn and use in comparison with other applications.
- The models in Form Z are much simpler than other heavy models in other applications because it focuses on five different types of object.

Background

This chapter consists of the graphical software packages and the advantages and disadvantages of each one.

2.1 Computer Graphical Software and Evaluation

2.1.1 3D graphical Software

What do we mean by 3D? (3D referred to 3 dimensional- Height, width and depth). Regular photographs have two dimensions, height and width.

The concept behind 3D is relatively simple and has been known for almost 100 years. 3D is based on the fact that humans have two eyes which are physically about two inches apart. This means that the two eyes see the same image from a slightly different perspective. Our brains put the two images together and as part of the process provide an estimate of how far away the object is. This vision also allows us to figure out how far things are when it is on the line of our sight (depth perception). If there are multiple objects, we can tell which objects are closer and which are farther based on what our brains interpret from the vision.

In the traditional 3D movies, to get a proper 3D vision, people were in need of wearing special glasses. These glasses filter out some of the light that mixes up a photographic image. Because the lenses filter out different colored light rays (Red and Blue, or Red and Green), the image is represented to the brain was a bit different. Also, as the images were viewed from a slightly different perspective, what we used to see in the mind eye was an image that appeared to have depth. The depth was the downside of this filtering process which resulted from blocking some colors that we couldn't see. Now, here are some of the most common 3D applications, features and capabilities.

2.1.1.1 Form Z (V 5.5)

Form Z is a 3D application that can be used in designing such as activities as moving and gaming, architecture design, product design, and mechanical design.

- In Form Z, the ease of the interface makes it more helpful to learn and use in comparison with other applications.
- The models in Form Z are much simple than other heavy models in other applications because it focuses in five different types of object

creation modes. Therefore, the same tools that can be used in 2D models can be used in 3D too. Thus, Form Z is more flexible.

- Form Z provides different kinds of light sources that give more reality to the environment.
- Form Z runs on both the Macintosh and Windows platform.

Though, there are some limitations in the form:

- Form Z has a very limited set of libraries for building components.

2.1.1.2 Maya 3D Software

If you need to make 3D effect, animation, game graphic, films, multimedia (for print or web), or 3D modeling, Maya is the best choice.

- Maya is widely used for extraordinary visual effects and realistic animation, games.
- Dynamic simulation is one of Maya's distinguished strengths.
- It has powerful animation tools.
- The disadvantage of using Maya is that Maya 3D consumes a lot of the CPU's power.

2.1.1.3 3D-Studio Max (V. 6)

If you are interested in designing three dimensional designs, especially designing buildings, houses, or architectural designs, 3D-max has strong tools and capabilities to do it for you.

- You can create and design 3D games, animations effects, and multimedia.
- Designs the houses and buildings as it appear in the real ground, and simulate these buildings and any thing around the area.

2.1.1.4 Software evaluation

After we discussed the most common 3D graphic software, we will evaluate these applications according to the main features and capabilities for each one.

Table (2.1) shows these features and capabilities

Software	Portability	Learn ability	Free Resources	Capability
Form Z	Macintosh and Windows Platform.	It takes 25 day to learn in it. But in general the interface is easy.	Available	-easy to run in most home PC's -improved lighting, texturing
Maya-3D	Macintosh and Windows Platform.	At least it took 4 month to learn in this software.	Not available	-have powerful animation tools -strong in dynamic simulation -strong in curved
3D-max	Macintosh and Windows Platform.	It took at least 1 month to learn in it but the interface slightly easy.	More available	-strong for architectural designs and angles rather than curves.

Table (2.1) the software evaluation

As a result, and because 3D-max is strong in architectural design we choose 3D-max to implement our module.

2.1.1.4 Software evaluation

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As a result, and because 3D-max is strong in architectural design we choose 3D-max to implement our module.

2.1.2 Other Graphical Software

This section is including information about the 2D Graphical software, application for image processing and 2D animation, and applications that could support audio/video editing.

2.1.2.1 Adobe Photoshop 8CS

Photoshop is professional software that is commonly used in image processing, designing, and “still image” creation.

- In Photoshop you can get the benefit of the great customization features and the innovative tools that help achieving wonderful results.
- You can also get the benefit when using this software in graphic design. Photoshop helps designers to make advertisement, magazines, and other media publications. Using Photoshop improves the ability of getting better results.
- Photoshop have powerful tools that help designers to design more easily.
- Photoshop is important for image, editing, storyboarding, and still photographs.

2.1.2.2 Adobe Premier (V 1.5)

This software is for video editing, which has a powerful real-time video and audio editing tools. You can edit separate single composition and make combination between them by the wonderful transition plug-ins in the program. Also you can create your own home videos like a director by Adobe Premier’s tools that make it more easy and interesting.

2.1.2.3 Adobe Audition (V 1.5)

This software specializes in audio-editing environment, which can offer audio mixing, editing, and effects processing capabilities. User can mix more than one audio and match them in one. He can also add any part from another part; delete any part he does not like. Therefore, it is easy to be controlled in the audio that has been edited. The tool provides the power to create attractive audio with highest quality.

2.1.2.4 Adobe After effect (V 6.5)

It is software professional in motion graphic, video editing, and visual effect for film, and the web.

You can use this program to integrate it with another program such as Adobe Premier, Adobe audition, Photoshop to make a good advertisement, film, or either video.

2.1.2.5 Macromedia Flash MX

This software is primarily strong in 2D animation and provides the whole tools designing web content and application. It is used to create cartoons and games through Macromedia Flash. The tools help in achieving great result and designing motion graphic in media (for print or for web).

2.1.2.6 AutoCAD 2004

AutoCAD is a powerful application that includes powerful tools for drawing 2D with some added capabilities for 3D modifying and rendering.

You can draw a 2D maps and covert it to 3D maps, the customized tools help you in drawing such as toolbars and menus.

2.2 Summary

This chapter has included all the different types and techniques regarding the user interface, and how these types differ in the way of implementing and the results that could be achieved.

- 1.1 Defining the Situation
- 1.2 The necessity for the study
- 1.3 Alternatives / Solutions
- 1.4 The optimal solution
- 1.5 Costing

Preparatory study

Chapter Content

- 3.1 Define the Situation
- 3.2 The necessity for the study
- 3.3 Alternatives / Solutions
- 3.4 The optimal solution
- 3.5 Costing
- 3.6 Risk evaluation
- 3.7 Project Planning and scheduling

3.2 The necessity for the study

- 1- for the Target audience
- 2- for the society
- 3- for the framework

3.2.1 for the Target audience

- Giving a future visionary picture for the administrative science college building for the coming five years.
- Changing the traditional manual way in doing the business into computerized one.
- It is a computerized reference for the college's student to be able to export the college's divisions and departments.
- To get information about the college's department in more attractive and interactive way.

3.2.2 for the Society

- Preparing the idea of automation and its importance in the individual's minds.
- It is necessary to start going through the first step in moving forward especially in our Palestinian society.

3.1 Define the Situation

Palestine polytechnic university include four different colleges, one of the colleges is the college of administrative science and informatics.

This college consists of two departments; one is the department of information technology that offers information technology, and graphics & multimedia.

The other is the department of administrative science that offers information system, and contemporary business administrative.

The college of administrative science and informatics considered one of the biggest campus buildings among the universities in west bank.

This campus exists in Hebron in west bank, exactly in Abu-roman and encompasses offices, labs, teaching halls, library, and cafeteria.

3.2 The necessity for the study

- 1- for the Target audience
- 2- for the society
- 3- for the teamwork

3.2.1 for the Target audience

- Giving a future visionary picture for the administrative science college building for the coming five years.
- Changing the traditional manual way in doing the business into computerized one.
- It is a computerized reference for the college's student to be able to explore the college's divisions and department.
- To get information about the college's department in more attractive and interactive way.

3.2.2 for the Society

- Persuading the idea of multimedia and its importance in the individual's minds.
- It is necessary to start going through the first step in moving forward especially in our Palestine society.

- To start encouraging our Palestine society, engineers, and business men for applying such systems in their job fields.

3.2.3 for the Teamwork

By the time we finish implementing the results, we would be finishing the practical implementation of our study, which would make it easier to enter the real business life in larger confidence.

3.3 Alternatives/ Solutions

3.3.1 Booklets / Catalogs / student guide

What distinguishes the college booklet is:

- It must be written in a language that the student could understand.
- Easy to carry and handle.
- Easy to create without the need of high technology.
- Reader is able to look at the catalog without using computer system.

Limitations:

- Difficulty to change and adjust.
- Difficult to update changed information.
- Absence of the advanced voice and visual effects like animation.

3.3.2 Creating 3D computerized model of the college

It determines the three dimensions' figures of the buildings in a way that show the buildings look very close to the actual ones.

Advantages:

- Combining all the multimedia effects at one time including (sound, image, text, video, animation, and simulation).
- The ease of adjusting and adapting the changes.
- Easy to update the information.
- Ease of adding voice and animated options.
- High performance, advanced and comparison capabilities.
- It is open project, this means other people can develop it and make changes according to the changes happen to the building.

3.4 The optimal solution

We had chosen the 3D computerized module to design the project because of its large area of benefits and advantages over the other alternative.

In this case we need one or two persons at maximum to design the booklet, and use simple programs that don't need high credits and advanced designs.

Resource	Quantity	Unit Cost	Total Cost
Designer	2	\$50/hour	\$100

Table (3.1) human resources for the 1st alternative

• Hardware requirement

Hardware	Quantity	Unit Cost	Total Cost
PC Pentium 4	1	\$300	\$300
Scanner	1	\$150	\$150
Printer	1	\$192	\$192
Total			\$642

Table (3.2) H/W requirement for the 1st alternative

• Software requirement

Software	Quantity	Unit Cost	Total Cost
Windows XP Professional	1	\$200	\$200
Microsoft Office 2003	1	\$300	\$300
Adobe Photoshop CS	1	\$400	\$400
Adobe In-design CS 2	1	\$420	\$420
Adobe Illustrator	1	\$350	\$350
Coral Draw 11	1	\$350	\$350
Total			\$2020

Table (3.3) S/W requirement for the 1st alternative

• Other costs

The cost for print the booklet:

For 2000 copy the cost is \$1000

3.5 Costing

3.5.1 The cost of the booklet

- **Human resource**

In this case we need one or two persons at maximum to design the booklet, and use simple programs that don't need high creative and advanced designers.

source	Number	Salary	Total
designer	2	\$5 p/hour	\$ 10 p/h

Table (3.1) human resource for the 1'st alternative

- **Hardware requirement**

Source	Number	Cost
PC Pentium 4	1	\$ 900
Scanner	1	\$ 159
printer	1	\$ 392
Total		\$1451

Table (3.2) H/W requirement for the 1'st alternative

- **Software requirement**

Source	Number	Cost
Widows XP Professional	1	\$ 200
Microsoft Office 2003	1	\$ 100
Adobe Photoshop CS	1	\$ 499
Adobe In-design CS 2	1	\$ 420
Adobe Illustrator	1	\$ 350
Corel Draw 11	1	\$ 350
Total		\$ 1919

Table (3.3) S/W requirement for the 1'st alternative

- **Other costs**

The cost for print the booklet:

For 2000 copy the cost is \$ 1000

• **Total cost of the first alternative**

Source	Cost
Human Resources	\$ 2400
Hardware Requirement	\$ 1451
Software Requirement	\$ 1919
Other costs	\$ 1000
Total	\$ 6770

Table (3.4) cost of the 1'st alternative

• **Hardware Requirement**

Item	Quantity	Description	Cost
PC Pentium 4	1	Hard disk 50GB	\$400
		Processor 3000MHz	
		CD Rom	
		RAM 1024 MB	
		Cash memory 2MG	
		Matrix video card	\$1050
		Keyboard & Mouse	
Scanner		Scan Jet 5570C 44ppm 60x10*600 TR	\$ 150
Printer		Laser J41200 14 ppm 1200dpi A4	\$ 392
Total			\$2992

Table (3.5) covering H/W requirements for the 2nd alternative

- **Software Requirement**

Software	Cost
Windows XP Professional SP2	\$ 200
Microsoft Office 2003	\$ 100
Adobe Photoshop CS	\$ 499
Adobe Premier (V. 1.5)	\$ 400
Adobe Audition (V. 1.5)	\$ 200
Macromedia Flash MX	\$ 300
AutoCAD LT 2004	\$ 250
3D-max studio (V. 6)	\$ 300
Total	\$ 2249

Table (3.7) executing S/W requirement for the 2'nd alternative

- **Total cost**

Source	Cost
Human Resources	\$ 5760
Hardware Requirement	\$ 2501
Software Requirement	\$ 2249
Total	\$ 10510

Table (3.8) total cost for the executing for the 2'nd alternative

Operational Cost

- **Hardware Requirement**

Device	Characteristic
PC Pentium 4	-RAM 256 M -Hard disk 40G -15 screen -CD-ROM
Total	\$ 1000

Table (3.9) operational H/W req. for the 2'nd alternative

- **Software Requirement**

Software	Cost
Windows XP Professional	\$ 200
Windows Media Player	Free
Total	\$ 200

Table (3.10) operational S/W req. for the 2'nd alternative

- **Total Operational cost**

Source	Cost
Hardware Requirement	\$ 1000
Software Requirement	\$ 200
Total	\$1200

Table (3.11) total Operational cost for the 2'nd alternative

- **Total cost of the computerized model**

Source	Cost
Executing Cost	\$ 10510
Operational Cost	\$ 1200
Total	\$ 11710

Table (3.12) Total cost of the 2'nd alternative

Although the less cost of the booklet alternative than the 3D model but the 3D alternative have larger area of benefits than the booklet.

- 4.1 Functional Requirements
- 4.2 Nonfunctional Requirements
- 4.3 Data Dictionary

***Requirement &
Design***

Chapter Content

- 4.1 Functional Requirement
- 4.2 Nonfunctional Requirement
- 4.3 Data Dictionary
- 4.4 Navigation Map
- 4.5 The Storyboard

4.1.1 Browsing by:

- view the entire building from external vision.
- view the building from internal vision.
- view the internal college's divisions and dept to view
- explore some of the class room and laboratories.

4.2 Nonfunctional Requirements

In this section we describe the nonfunctional requirements that should be achieved in our prototype.

- **Learnability:** The 3D prototype should be easy to learn for the new user and allow the novice user to understand how to use the system and how they could be enhanced with it.

- **Predictability:** The user should predict and determine the future action and there must be a link between what user see and what he has expected.

- **The 3D prototype should support generalizability and apply the system to other similar models.**

- **consistency:** The 3D prototype should provide consistency in behavior in input and output responses in the interface.

- **efficiency:** The system should be efficiency in the interface and its components.

- **Portability:** The system support portability and make the project easy to carry.

- **Speed and performance:** The system should support speed and performance features, the system should reduce the time needed and increase the performance.

This chapter discusses the requirements of what the system should provide and how it will provide the expected services from it.

We discuss the functional requirement and nonfunctional requirements for the system. This chapter includes also the navigation map that shows the logical flow of the interface, and the storyboards of the interface.

4.1 Functional Requirement

In this section we describe the functional requirement of the system that provide the service that the system should achieve in this prototype.

4.1.1 Browsing by:

- view the entire building from external vision.
- view the building from internal vision.
- view the internal college's divisions and departments.
- explore some of the class room and laboratories.

4.2 Nonfunctional Requirements

In this section we describe the nonfunctional requirements that should be achieved in our prototype.

- **Learnability:** The 3D prototype should be easy to learn for the new user and allow the novice user to understand how to use the system and how they could be enhanced with it.
- **Predictability:** The user should predict and determine the future action and there must be a link between what user see and what he has expected.
- The 3D prototype should support generalizability and apply the system to other similar models.
- **consistency:** The 3D prototype should provide consistency in behavior in input and output responses in the interface.
- **efficiency:** The system should be efficiency in the interface and its components.
- **Portability:** The system support portability and make the project easy to carry.
- **Speed and performance:** The system should support speed and performance features, the system should reduce the time needed and increase the performance.

- **Interactivity:** The system should provide interactivity in the appearance of the interface and it should be attractive.

4.3 Data Dictionary

This section consists of the elements of multimedia that we put in our project

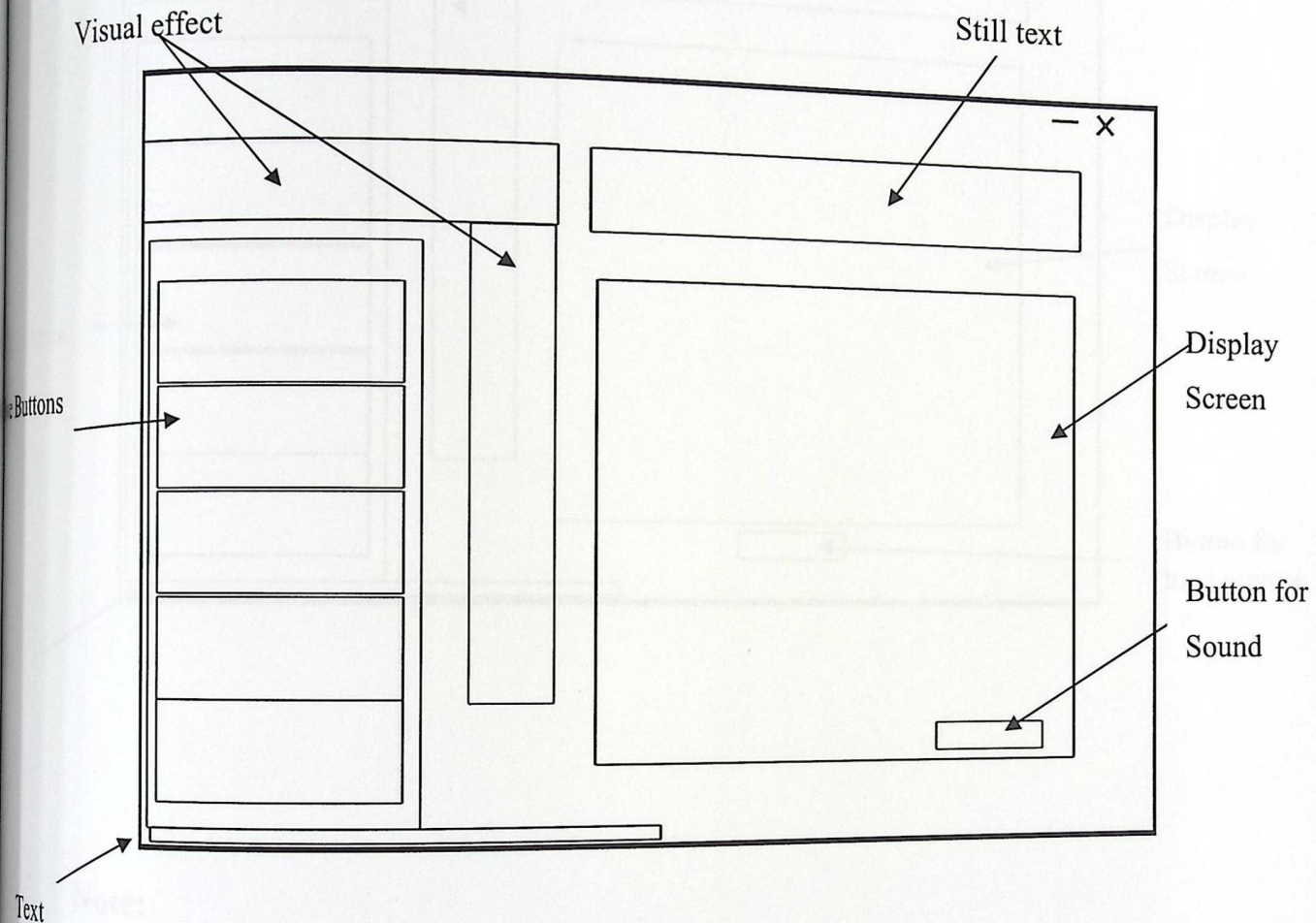
Type	File name	File format	Range Size	Notes
Image	Admin 3D	-JPEG (Joint Picture Expert Group)	100-180 KB.	-in Background interface. -in Montage process.
	Admin 3D (1)			
	Admin 3D (2)			
	Admin 3D (3)			
	Admin 3D (4)			
	Admin 3D (5)			
	Admin 3D (6)			
	Admin 3D (7)			
	Admin 3D (8)			
	Admin 3D (9)			
3 d animation	- Final Project 2	MPEG (Motion Picture Expert Group)	10-40 MB.	-use as the original source for the CD.
	- Introduction WMV			
	- Photo gallery			
	- title Name finish2			
	-Introduction.	SWF (Shock Wave Flash).	10-400 KB.	-Using as visual effects on the CD interface
	-my file			
	- my file2			

Table (4.1) the expected data dictionary

4.5 The storyboard

This section includes the storyboard for our interface that shows the interface with its details for the buttons, the screen before rendering.

Card 1:



System

Implementation

Chapter Content

5.1 Introduction

5.2 System Infrastructure

5.3 The Obstacles

5.1 System Infrastructure

5.2.1 When using the compact disk (CD)

- The computer

We can not implement the project using a PC with the specs of less than Pentium 4 because of the need of high advanced speed and compatibility. We used a Pentium 4 PC with the same features required and had been mentioned earlier on chapter three.

- The operating system

Our project's system can not give us the desired outputs without using an operating system. We used the "Windows XP Professional" operating system. One of the project's best side that it does not need the use of any other operating software except for the (Windows Media Player) which comes as an accessory with the "Windows XP".

- Other Software programs

 - 1-AutoCAD 2004

We used for the structure of the two dimension 2D-drawings maps of the college building.

5.1 Introduction

Previously, we have talked about the way of execution and analyzing the system and its requirements, the turn comes now to talk about the system implementation. We will also talk about the infrastructure for installing the system and the other required operating systems that we need for the benefit of our project implementation.

5.2 System Infrastructure

5.2.1 When using the compact disk (CD)

- **The computer**

We can not implement the project using a PC with the features of less than Pentium 4 because of the need of high advanced speed and compatibility. We used a Pentium 4 PC with the same features required and had been mentioned earlier on chapter three.

- **The operating system**

Our project's system can not give us the desired outputs without using an operating system. We used the "Windows XP Professional" operating system. One of the project's best side that it does not need the use of any other operating software except for the (Windows Media Player) which comes as an accessory with the "Windows XP".

- **Other Software programs**

1-AutoCAD 2004

We used for the structure of the two dimension architected maps of the college building.

2- 3D studio Max (V6)

We used this program to convert the two dimension graphs into three dimension ones for the sake of our project's goals. We used it to design the outside area gardens and backyards. We used it also to cover the insider area with the required materials and tools, the offices, classrooms, and labs desired furniture.

3- Adobe Photoshop CS (V8)

It has been used to process some of the photos and still images that we used in the project, and we used it in designing the interface.

4- Macromedia Flash MX

We used Macromedia Flash in designing the flash pictures and 2D animations that have been used in the interface.

5- Adobe Audition (V1.5)

We used it in processing and editing the audio and adding the special sound effects that have been used in the interface.

6- Adobe Premier (V1.5)

It has been used in the video editing and montage process for the interface of the project.

7- Auto Play (V6.5)

Used for the final CD production

• Data dictionary for 3D animation

File name	File format	fix Size	Duration Time	Notes
-Final Project 2	WMV (windows Media Video).	30.1 MB.	3.59 m/h	- In film that display on the CD.
-Introduction WMV		5.93 MB.	.47 s/h	
-Photo gallery		8.30 MB.	1.37 m/h	
-title Name finish2		5.61 MB.	.50 s/h	
-Introduction	SWF(shockwave flash)	226KB.		- Using as visual effects on the CD interface
-my file		8.48 KB.		
-my file2		1.92 KB.		

Table (5.1) data dictionary for 3D animation

• Data dictionary for 3D animation

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-Introduction	SWF(shockwave flash)	226KB.		- Using as visual effects on the CD interface
-my file		8.48 KB.		
-my file2		1.92 KB.		

Table (5.1) data dictionary for 3D animation

• Data dictionary for Image

File name	File format	fix Size	Notes
-Admin 3D	JPEG (Joint Picture Expert Group).	125 KB.	-In Background interface. -In montage process -In project picture file inside the CD.
- Admin 3D (1)		90.7 KB.	
- Admin 3D (2)		76.4 KB.	
- Admin 3D (3)		88.9 KB.	
- Admin 3D (4)		105 KB.	
- Admin 3D (5)		225 KB.	
- Admin 3D (6)		159 KB.	
- Admin 3D (7)		195 KB.	
- Admin 3D (8)		168 KB.	
- Admin 3D (9)		170 KB.	
There are more pictures have the same features.			

Table (5.2) Data dictionary for Image

5.2.2 When using the Internet web pages

1- Personal Computer

2- Other Software Programs

It uses the same programs we listed earlier this section, but it takes into account the file size during the saving process. Its resolution is a bit low to let the file size problem more flexible on the web pages, and the downloading required time would be less.

5.3 The Obstacles

We have faced some obstacles when we implemented the project. We either tried to solve the original problem or adapt our conditions and processes procedures to ensure that the project will work properly. Some of the obstacles are:

- The great difference between what was existed on the actual ground and the architected maps of the project. We have found that there was a difference between the real buildings and what was originally intended to be built and vice versa. Some of the designs was not existed on the real ground or the others were not existed on the maps.
- During the applying process, and when we have reached the rendering stage, to make the video scenes which had been designed on the 3D studio max program, we have faced large difficulties. One of these difficulties was the high cost of the programs that must be installed in the personal computers such like the monitor card which must be a Matrox card, or the required RAM that must be at least 512 MB.

6.1 Testing the System

6.2 Evaluating the System

*Testing &
Evaluating*

Chapter Content

6.1 Testing the System

6.2 Evaluating the System

6.2.1 Testing the system

The system must be tested to ensure that it is clear of errors and flaws. This process has to be implemented through the following levels:

1. Unit test

In this level, each part of the system is going to be tested individually. This testing process must be applied during the project's designing and implementation stage. In this project, we have implemented the "unit test" on the part of designing the project by the AutoCAD to switch it to a three-dimensional project. This part has been tested and we can assure that it is clear of flaws.

2. Sub-system test

In this level, we have to test a group of stages together. It is another kind of the testing process that requires group of stages to be clear of any implementation mistakes. In our project when we finished designing the project on the AutoCAD and by the time of exporting the project to the 3D studio that has to be checked, we tested the system. Most of the errors have been found in the system. We realized that these errors happened because of the changes between the maps and the actual designs on the ground. We dealt with this problem and we solved it perfectly.

3. Integrating test

The testing process goes through the over-whole project. We have tested the project on the integrated project to ensure that the project is totally perfect. After the testing we could have been able to apply any recommended suggestions about the project's

In this chapter, we will go through the system testing process, which is considered one of the most important levels in launching the project. We will also go through the evaluation process under the standard calibrations that must be assured for achieving the project's higher quality.

6.1 Testing the system

The system must be tested to ensure that it is clear of errors and flaws. This process has to be implemented through the following levels:

1. Unit test

In this level, each part of the system is going to be tested individually. This testing process must be applied during the project's designing and implementation stage. In this project, we have implemented the "unit test" on the part of designing the project by the AutoCAD to switch it to a three dimensional project. This part has been tested and we can assure that it is clear of flaws.

2. Sub-system test

In this level, we have to test a group of stages together. It is another kind of the testing process that requires group of stages to be clear of any implementation mistakes. In our project when we finished designing the project on the AutoCAD and by the time of exporting the project to the 3D studio max has to be tracked, we tested the system. Some of the errors have been found in the system. We realized that these errors happened because of the changes between the maps and the actual designs on the ground. We dealt with this problem and we solved it perfectly.

3. Integration test

This testing process goes through the over whole project. We have tested the project as one integrated project to ensure that the project is totally perfect. After the testing we would have been able to apply any recommended suggestions about the project's

enhancements. We were able to edit any more desired parts and erase the undesired ones. The testing process has been applied using two ways:

- **Alpha testing:** made up by kind friends who can provide positive criticism which would be a feedback for us to move forward better project implementation. We applied this process during the “unit process” and the “sub-system test” which we have mentioned earlier in this chapter.
- **Beta testing:** experts and novice personnel can be used in applying this test by filling out the following report sheet.

Bug Reporting Form

Please E-mail complete forms to:

Bahaa Amro

Shada Alkaraki

Phone: 0599-225447

Tel: 22544811

Beta Program Contact

Name: khames Al-jamal

Title:

Address:

City: Hebron

Phone: 2255880

Fax:

E-mail: khames@yahoo.com

System Configuration:

CPU: 2800 MH

Hard disk capacity: 80 GB Currently available : 64 GB

RAM: 256 MB System software: windows XP

Monitor: 17 inch, 64 MB built-in

Summary of the problems:

After I saw the project, I suggested some changes of the outside materials.

Description of the bug:

6.2 Evaluating system:

In this section we will evaluate the project and interface by follow the basic standard that must be assured for achieving the project's higher quality.

- **Evaluate the Interface**

-The human eye can recognize the dynamic motion on the middle of the interface, so we displayed the data on the middle of the interface to get more interface human interactive.

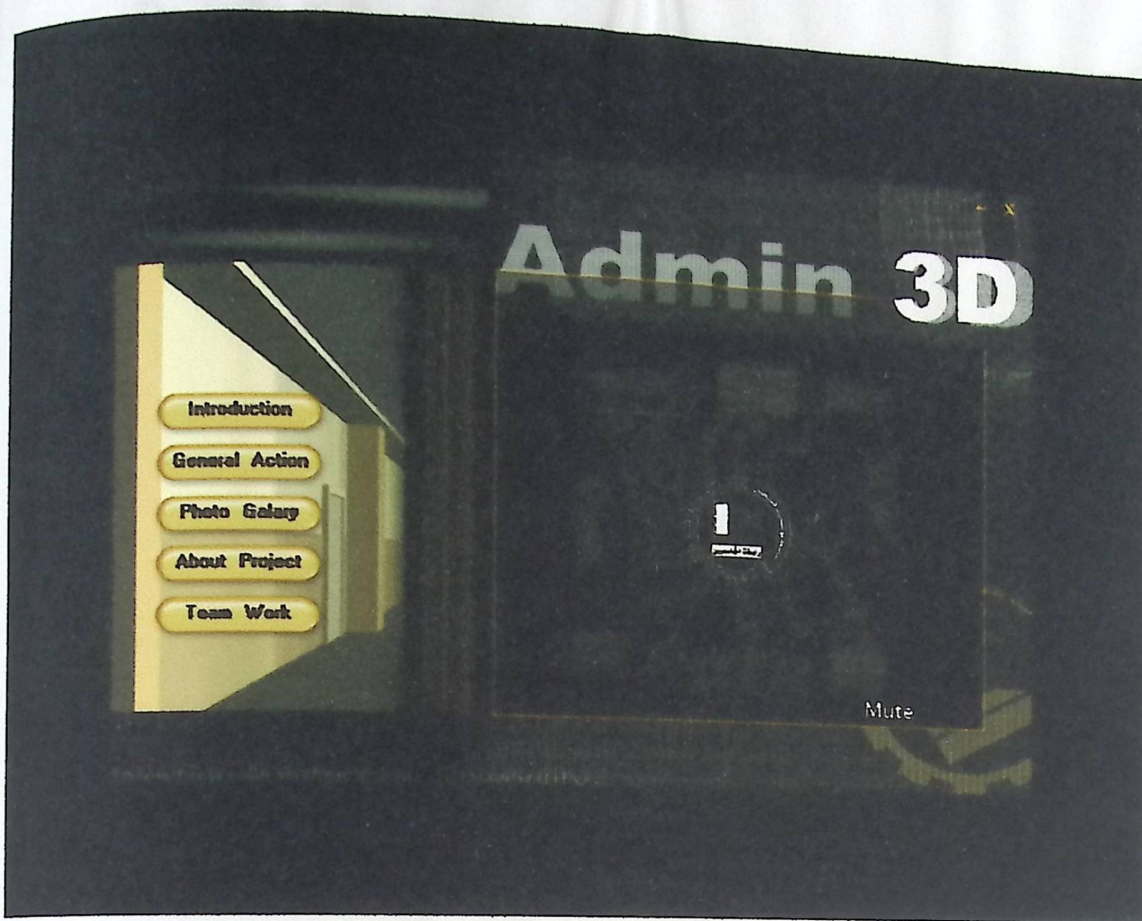
- Because human eye recognize the static object on the edges, so we put the control button on the left side of the interface.
- We use the most common font type which is **Arial Black**
- The color: there is three types of colors

The harmony color: it is a group of colors which effect on the eye in an active way or in a good way and described as a unit, and it concern in one color but it different between each others by add the white and black color

The complementary colors: it means select two complementary colors in color circle like green, red and blue, orange.

The natural colors: the colors that drive from nature.

In our interface we use the orange and black color with gradients, and contrast color by used white and black color. We use the Natural color.



We evaluate the interface according to the basic standards that discussed in chapter 4 and they are:

- Learnability
- Predictability
- Generalizability
- Consistency
- Efficiency
- Portability
- Interactivity
- Speed and performance

There are some examples of these standards:

- We apply the **Predictability** by give impression that it is a 3D model, and this achieved by the name that use in the interface and the 3D background image that use below the buttons.
- We apply the **Efficiency** by easy to reach the interface components.

- The **Interactivity** achieved on the interface from the special sound effects that use on the background main menu and video, color that used on the interface give impression of high class design

Conclusion

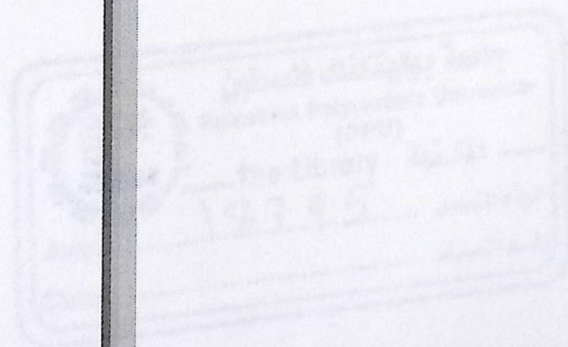
&

Future work

Conclusion

&

Future work

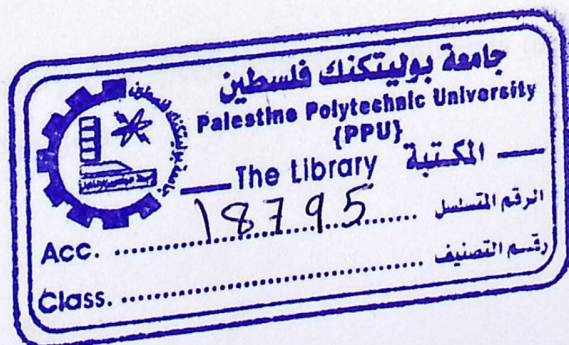


Chapter Content

7.1 conclusions

7.2 Recommendations

7.2.1 Recommendations



After finishing the design and implementation phases, we will talk about the conclusions that have been achieved, and then talk about the recommendations.

7.1 The conclusions

- There was ability to plan the strategies and future plans in a theoretical way, but today we can also plan these strategies in a visual way that clear the desired future image.
- Giving a future vision for the administrative college.
- This technique could save the user's time and effort.
- It is a new idea to get information about the college's department in more attractive and interactive way.

7.2 Recommendations

Now, and after going through the designing process, and facing all of the difficulties that discussed in chapter 5, we can recommend the followings:

- We recommend for who will work on this project after us or who wants to improve more than what we did, that they should try to enhance the process to achieve more interactive environment between the user and the system. We need the user to be the controller instead of the system.
- We recommend implementing 3D prototypes like this prototype because of its ease of helping visitors and new students to know more about the buildings divisions.
- We recommend that graphics and multimedia students must start taking courses in using the AutoCAD program, and the university should start offering them these courses, because of its importance in drawing and designing graphs that need to be converted into 3D graphs.
- We recommend opening a laboratory that specializes for the students to help them in finishing their graduation project

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