



De La Salle University - Dasmariñas

**GEOGRAPHICAL INFORMATION SYSTEM
HISTORICAL PLACES IN CAVITE
GIS-HPC**

TSRG

An Undergraduate Special Problem
Presented to
The Faculty of Computer Studies Department
De La Salle University – Dasmariñas
Dasmariñas, Cavite

In Partial Fulfillment
of the Requirements for the Degree
Bachelor of Science in Computer Science

by

Mallon, Arnel T.
Tubale, Mark Anthony G.

March 2000

AKLATANG EMILIO AGUINALDO ARCHIVES



Abstract

Cavite has many historical places where heroes and forefathers sacrificed their lives to win back the freedom against the foreign aggressors during the Philippines' struggle for freedom from Spanish era until the Marcos' regime.

However, in this era of globalization, people tend to forget the victorious past. The proponents, therefore, created a Geographic Information System of Historical Places in Cavite (GIS-HPC) capable of bringing back the consciousness of the people especially the students. GIS-HPC uses a multimedia system that captures the interest of the user through the help of pictures, sound, videos and texts.

GIS-HPC is a multimedia application developed for Cavite Studies Center of De La Salle University - Dasmariñas. Its primary purpose is to educate the students on the historical places in Cavite.

It is considered as a significant contribution to the Cavite Studies Center of De La Salle University - Dasmariñas because this software will provide a substantial exploration to the historical places of Cavite.



TABLE OF CONTENTS

1.0 Introduction	1-1
1.1 Background of the study	1-1
1.1.1 What is GIS?	1-2
1.2 Statement of the Problem	1-2
1.3 Statement of Objectives	1-3
1.3.1 General Objective	1-3
1.3.2 Specific Objectives	1-3
1.4 Significance of the study	1-3
1.5 Scope and Limitation of the Study	1-4
2.0 Review of Related Literature	2-1
2.1 Books and Articles	2-1
2.1.1 GEOSchool	2-1
2.1.2 A Multimedia on Tourism Establishment in Cavite	2-1
2.1.3 GIS-FB	2-2
2.1.4 Multimedia System in Philippine Independence from Birth to Centennial Celebration	2-2
2.1.5 Multimedia on Tourist Spots of the Philippines	2-3
3.0 Methodology	3-1
3.1 Prototyping	3-1
3.2 Brainstorming and Storyboarding	3-4
3.3 Activities	3-4
4.0 Theoretical Framework	4-1
4.1 Statement of Assumptions	4-1
4.2 Operational Definition	4-1
4.2.1 Definition of Terms	4-1
4.2.2 Definition of Processes	4-2
4.3 Theories used in the Study	4-2
4.3.1 Software Engineering	4-2
4.3.2 Software Characteristics	4-2
5.0 Requirement Analysis	5-1
5.1 System Overview	5-1
5.2 System Objectives	5-2
5.2.1 General Objective	5-2
5.2.2 Specific Objectives	5-3
5.3 Scope and Limitation	5-3
5.4 Statement of Assumptions	5-3
5.5 User Requirements	5-3
5.6 Data Requirements	5-3
5.7 System Requirements	5-4
5.7.1 Development Phase	5-4
5.7.1.1 Hardware	5-4
5.7.1.2 Software	5-4
5.7.1.3 Peopleware	5-5
5.7.2 Implementation Phase	5-5
5.7.2.1 Hardware	5-5
5.7.2.2 Software	5-6



6.0 Design	6-1
6.1 External Design	6-1
6.1.1 User Interface	6-1
6.1.1.1 Main Program	6-1
6.1.1.2 Buttons	6-1
6.1.1.3 Labels	6-2
6.1.1.4 Color and Fonts	6-2
6.1.1.5 Icons	6-2
6.1.1.6 Mouse Driven Interface	6-3
6.1.2 Software Function	6-3
6.1.2.1 Main Program	6-3
6.1.2.2 Map	6-3
6.1.2.3 SSTab	6-3
6.1.2.4 Media Player	6-4
6.1.2.5 Rich Textbox	6-4
6.2 Architectural Design	6-4
6.3 Database Design	6-5
7.0 Implementation	7-1
7.1 Programming Language	7-1
7.2 Programming Style	7-1
7.3 Implementation of Multimedia	7-2
7.3.1 Text	7-2
7.3.2 Images	7-2
7.3.3 Video	7-2
7.3.4 Sounds	7-3
7.4 Program File Distribution	7-3
7.4.1 Executable Files	7-3
7.4.2 Database Files	7-3
7.4.3 Text Files	7-3
7.4.4 Picture Files	7-3
7.4.5 Video Files	7-4
7.4.6 Sound Files	7-4
7.4.7 Help Files	7-4
7.4.8 Icon Files	7-4
7.5 System Testing	7-4
7.6 Installation Plans	7-5
8.0 Cost and Benefit Analysis	8-1
8.1 Resource Requirement	8-1
8.1.1 Hardware	8-1
8.1.2 Software	8-2
8.2 Operational Setup	8-2
9.0 Conclusions and Recommendations	9-1
9.1 Conclusion	9-1
9.2 Recommendation	9-1