Design, Development, and Implementation of a 2D Puzzle-Platforming Adventure Game

A Senior Project Submitted to the

Department of Computer Systems Engineering Technology

of the School of Engineering, Technology, and Management at the Oregon Institute of Technology

in partial fulfillment of the requirements for the Degree of

**Bachelor of Science**

Christopher Horenstein

© June 2011

**Senior Project Approval Page**

The senior project of Christopher Horenstein for the Bachelor of Science degree was accepted by the evaluation committee and the Department of Computer Systems Engineering Technology at the Oregon Institute of Technology.

COMMITTEE APPROVALS:

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Jay Bockelman, Program Director (Oregon Institute of Technology)

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Reviewer 2 (Oregon Institute of Technology)

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Reviewer 3

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Reviewer 4

**abstract**

The abstract for the project goes here. The abstract serves as an executive summary of your project. It should include a brief introduction to the project, state its relevance, describe the design features, and provide a short summary or conclusion. The abstract should be structured in three or four paragraphs and it should not be longer than a page. It is typically written after you have completed the project. (1 page)

**acknowledgements**

The acknowledgements go here. You may want to check some acknowledgement sections in books or textbooks to get an idea of the tone and content of the typical acknowledgement. It may also be a good idea to take a look at some Master’s Thesis, Doctoral Dissertations, or other Senior Projects to get a sense of the tone and language typically used in the acknowledgments section. It is typically written after you have completed the project. (1 page)

**List of Acronyms**

**Acronym** Definition (The acronyms should be listed in alphabetical order)

**XNA** XNA’s Not Acronymed

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# Introduction

## Overview

Provide an overview of the chapter here.

[This section should be written during the first term of the senior project sequence.]

## Product Description

Explain and clearly define the problem you are addressing in your project/product. Include a specification of the characteristics. (2 pages)

[This section should be written during the first term of the senior project sequence.]

## Existing Products

List the existing products that perform similar tasks to yours. Contrast the features. Show pictures. (2 pages)

[This section should be written during the first term of the senior project sequence.]

## Summary

A short pitch as to why your project has merit and should be accepted. (1 page)

[This section should be written during the second or third term of the senior project sequence.]

## Report Outline

Provide an outline of your report.

[This section should be written during the first term of the senior project sequence.]

# Background

## Overview

Provide an overview of the chapter here.

[This section should be written during the first term of the senior project sequence.]

## Background Information

Provide any background details necessary to understand your project. (1-2 pages)

[This section should be written during the first term of the senior project sequence.]

## State of the Art

Provide an overview of the state of the art. (1-2 pages)

[This section should be written during the first term of the senior project sequence.]

## Summary

Summarize the chapter

[This section should be written during the first term of the senior project sequence.]

# Functional Description

## Overview

Provide an overview of the chapter here.

[This section should be written during the first or second term of senior project sequence.]

## Functional Description

Provide a functional description of your design. (1-2 pages)

[This section should be written during the first or second term of senior project sequence.]

## Block Diagram

Include a block diagram of your design and explain it. (1-2 pages)

[This section should be written during the first or second term of senior project sequence.]

## Summary

Summarize the chapter

[This section should be written during the first or second term of senior project sequence.]

# Detailed Description

## Overview

Provide an overview of the chapter here.

[This section should be written during the second or third term of senior project sequence.]

## Detailed Description

Provide a functional description of your design. Make sure to include pictures and figures of your design. (3-5 pages including figures)

[This section should be written during the second or third term of senior project sequence.]

## Architecture

Include relevant architecture elements of your design and explain them. (3-5 pages including figures)

[This section should be written during the second or third term of senior project sequence.]

## Summary

Summarize the chapter

[This section should be written during the second or third term of senior project sequence.]

# Test Results & Validation

## Overview

Provide an overview of the chapter here.

[This section should be written during the second or third term of senior project sequence.]

## Test Plan

Describe your test plan and validation study.

[This section should be written during the second or third term of senior project sequence.]

## Test Results

Include figures, screen shots, usability results, etc. of your test results. (3-5 pages)

[This section should be written during the second or third term of senior project sequence.]

## Discussion

Provide a discussion of your test results. Does your design meet all the specifications? (2-5 pages)

[This section should be written during the second or third term of senior project sequence.]

## Summary

Summarize the chapter

[This section should be written during the second or third term of senior project sequence.]

# Economic and IP Analysis

## Overview

Provide an overview of the chapter here. For some projects, this chapter may not be relevant.

[This section should be written during the second or third term of senior project sequence.]

## Engineering Economic Analysis

Include the details of a basic engineering economic analysis. Make sure to include the cost of parts, R&D, engineering time, etc. (1-2 pages)

[This section should be written during the second or third term of senior project sequence.]

## Intellectual Property Analysis

Address any issues related to intellectual property here. These may include Copyright, Trademark, Patent, or Trade Secret considerations that have affected your project or should be taken into consideration. (1-2 pages)

[This section should be written during the second or third term of senior project sequence, but issues should be checked during the design process.]

## Summary

Summarize the chapter

[This section should be written during the second or third term of senior project sequence.]

# Summary

## Overview

Provide an overview of the chapter here.

[This section should be written during the third term of senior project sequence.]

## Project Summary

Provide a summary of the project. (1 page)

[This section should be written during the third term of senior project sequence.]

## Future Direction

Discuss potential future directions or possibilities for improvement. (1 page)

[This section should be written during the third term of senior project sequence.]

## Concluding Remarks

Include some concluding remarks.

[This section should be written during the third term of senior project sequence.]

References

Include references using IEEE transactions citation format here.

Appendix

Use the appendix to attach additional schematics, code, and other relevant reference material that has not been included as part of the report. If these documents are to be printed separately and attached with the rest of the report *a posteriori,* please use this section to create a table of contents and provide a short explanation/overview of each of the documents attached.