

3/8/2006

Team #7: Pez

Project: Empty Clip

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Document: VVR

1. Introduction and overview

1.1 Purpose of this Document

This purpose of this document is to evaluate the verification and validation plan.

1.2 Definitions, Acronyms, and Abbreviations

None

1.3 Overview of Document

Section 2 summarizes the overall success.

Section 3 discusses results from reviews, walkthroughs, inspections, and audits.

Section 4 discusses the testing results.

Section 5 reflects on how the testing process went, and how it could be improved.

Section 6 describes the outcome of the acceptance test.

Section 7 is a summary of open issues.

Section 8 contains additional information.

2. Summary of Results

Some of the issues that we encountered was the layout of the code. We ended up changing from the original format several times. This costs time that could be spent in other aspects. We would have been well to have planned the layout and design of our coding before we started, this would have saved time and energy. We believe the layout is appropriate now, so things are moving more smoothly. The component tests went smoothly, it was pretty easy for each group member to test their own code and make sure that it was in working order before submission, we never ran into major integration issues. The lighting became an issue for the graphics. We have taken it out for now, we may add it later, but to make it high enough quality it will take a lot of time. The menu mostly had issues with layout of the code. As we wanted to add more features it became apparent that the way the code was laid out wasn't good enough. Some specific issues were, getting the correct char values from keystrokes, double clicking, and drag and drop. Audio is having some issues with timing on the playing the files. The audio we started the week of the release, so we don't expect it to be up to scale yet. Networking wasn't worked on for this release.

3. Results from reviews, walkthroughs, inspections, and audits

We didn't have any formal walkthroughs, but every week we have reviewed progress on the game and ensured that it is progressing as planned.

Team leader has inspected the code regularly to make sure that it meets coding standards, and that all known bugs are addressed.

4. Results from testing

The testing consisted of each individual testing each component they implemented. This seemed to work out well, and we rarely missed any issues by the time the changes were submitted for others to see.

4.1 Summary of component test

<i>Component</i>	<i>Setting</i>	<i>Who</i>	<i>How long</i>	<i>Comments</i>	<i>Problems</i>	<i>Work not completed</i>
Graphics	In game play	Alan	20 hours			
Menu	Runing application	Travis	10 hours	Getting the correct input keystrokes was a difficult task. Also getting double clicking and drag and drop to work.	The correct logical flow wasn't always followed. A strategy before hand would have saved some time.	Background image.
Audio	Game Play	Thos	5 hours	Getting the music to match up with the actions is still needing a lot of work.	Timing.	Timing, appropriate music and sound files.
Animation	Game Play	Steve	10 hours	Learning new tools took some initial time.	New tools.	Complete array of monsters and tile sets. Although we have a very good base to work from at this time.

4.2 Summary of integration test / testing product as a whole

<i>Project</i>	<i>Setting</i>	<i>Who</i>	<i>How long</i>	<i>Comments</i>	<i>Problems</i>	<i>Work not completed</i>
EmptyClip	Game Play	All members	40 hours	Our integration testing was set up well from the beginning. Since each component was working	Layout changes to the code, and storage of	Networking, fully working audio, and story line.

<i>Project</i>	<i>Setting</i>	<i>Who</i>	<i>How long</i>	<i>Comments</i>	<i>Problems</i>	<i>Work not completed</i>
				well before being submitted we never ran into major issues.	database objects took some time to update all the code.	

5. Evaluation of the process

5.1 Evaluation of test cases

- **Gameplay**
We only had one beta tester this time, but more would be better. It would also be an improvement to allow the beta testers to play alone, as opposed to receiving instruction from the developers. It was easy to test – the beta testers simply needed to sit down and play the game.
- **Balance**
In order to better test balance, we need to have more developed and finalized levels, instead of the current levels, which are more for testing. However, we have been able to improve some monster stats, as well as improve general level design. It is too early to really test the balance of the system, since this is more applicable to the final level design of the game.

It would have been good to have the beta testers stress test the system, e.g. mash the keyboard, try things that a normal player wouldn't do, etc.

5.2 Results from defect tracker

We can determine the percentage of fixed and open defects, the number of hours spent fixing defects, and how many defects each person has fixed.

5.3 Lessons learned

We need more beta testers, including anonymous testing. Longer, limited beta testing periods would also be useful. The program was easy to test, and the beta testers had fun doing so.

A current trend gleaned from testing is the apparent issue of memory leaks.

6. Outcome of acceptance test and delivery

- Currently no major bugs are known in the project. This is the result of each person using proper

defect tracking and detection before submission.

- None of the new features slowed down game play, frames per second are still at 60 (which is our goal), there have been no known crashes added to the project, all the interactions are appropriate for what we are expecting it to do, and nothing has interfered with other components.
- The installation is working for people with and without .NET installed. The only issue we have at the current time is the program wants to install for all users, so if you are on a machine and you don't have privileges for installation for all users it won't install.
- We have also had multiple people play the game and give us feedback.

7. Summary of open issues

All defects that are open are not a high enough priority for us to spend our time on at this point. The memory leaks only show up when doing stress testing, which will never happen during game play. Later as the levels get longer and we have more and more monsters we will need to address the memory leak issues. Also, the fact that the monsters sometimes stop and reconfigure their path isn't a big deal, we will only address that if we have enough time and if real users complain enough about it. The unwanted reloading will be addressed and fixed by the next stage release.

8. Additional information

N/A