Project: Circular Strife Paper Prototype Play-test

IAT 410 - 2007

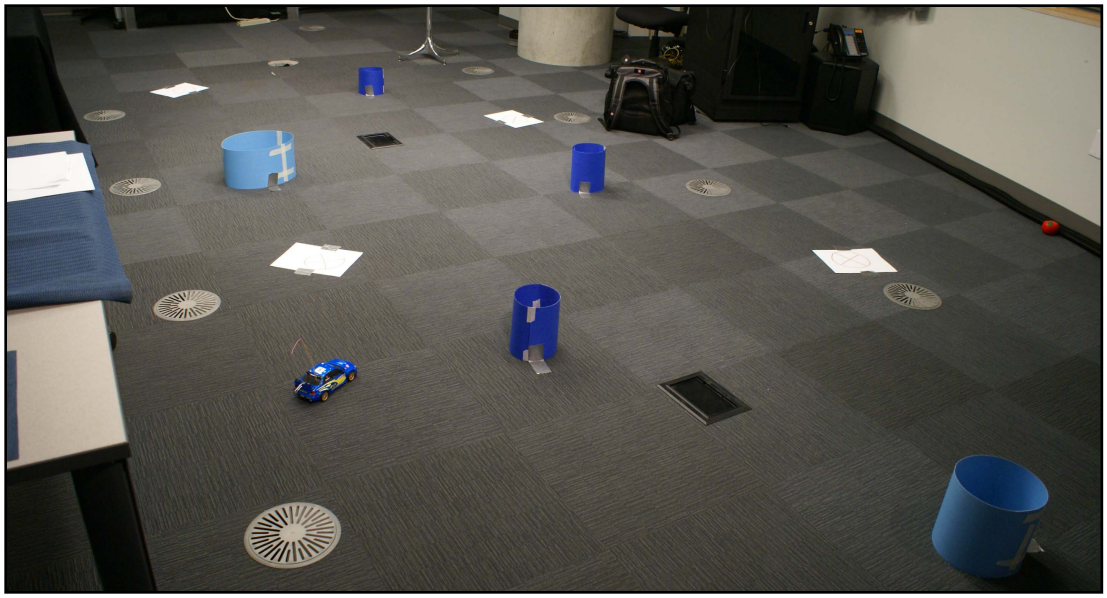
Team Members:
Cody Church, Lawson Lim, Matt Louie, Sammpa Raski, Daniel Jagger

Play-testing Goal

Our goal was to test the physical game mechanics that will be in our final game. The game concept includes 3D, real-time movement and constant action, and our paper prototype had to reflect and permit a simplified, simulated version of this gameplay. By doing this we would allow players to test and provide comments on the central gameplay mechanics our game is built on.

Paper Prototype: Physical Setup

All the play-tests were conducted in the observational room 3950.



Our playing field.

Our paper prototype was built around a remote control car that was used to represent the user's in-game vehicle and emulate the challenge to maneuver the vehicle in a quick and effective manner.

> In the final game, the user will be able to navigate a full 3D space (but restrained to a specific area). They will be flying a small, plane-like craft.

Attached to the back of the RC car was a hook that we hung a growing chain of plastic balls from. The balls each possessed another hook, so they could be attached to one another to form a longer chain. The maximum number of balls the RC car could drag behind it was 7. Each ball is meant to represent a 'bomb', and will be called as such from now on in this report.

> The number of bombs the player can drag behind them in the final game will be greater: enough will be needed to fully encircle large, floating structures meant to be 100 meters in diameter.

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Sammpa, attaching a bomb to the RC car.

Taped to the ground in specific locations were pieces of paper marked with a red circle. Each time the player moved the RC car over the red circle, another bomb is attached to the back of the RC car to extend the chain of bombs. Team members were standing by to manually attach these bombs.

> Bomb sites in the game will provide locations for additional bombs to be gathered by the player, and the placement and number will change depending on the difficulty of the level.

Also placed on the ground were cylinders of cardboard that the player could collide with and/or maneuver around. These cylinders varied in size, using the length of a chain of bombs to measure their circumference. The smallest ones could fit within 3 bombs chained together, the medium sized one could fit within 4, but the largest took 6 bombs to be fully encircled. They were all designed to be encircled with less than the maximum numbers of bombs the player's RC car could carry, which was 7. The total number was 3 small structures, 1 medium and 1 large.

> The game includes floating 'ruins' that require the player to fly around while dragging a trial of bombs. Once the trail of bombs is linked into a circle around the ruin, the bombs explode and destroy the floating structure.

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Play-testing Procedure

We conducted 4 sessions with the test players. The first 3 sessions each tested a single player, and the 4th was a timed competition between the 3 testers.

Prior to each tester's first play-through of the game (sessions 1 through 3), they were each given the following explanation of the game story:

> You are a freelance demolitions worker, and your job is to use your vehicle to destroy these ancient, free standing structures.

We then brief them individually on the rules and guidelines for the play-test:

1. The player is able to freely drive a remote controlled car around the playing field.

2. The player's goal is to destroy 3 structures of their choice on the playing field, with structures being represented by cardboard cylinders placed on the floor.

3. A player can destroy a structure by fully encircling it with bombs, which are dragged in a chain from the back of the RC car. The circle counts as being 'complete' when the user touches the front of the RC car to the chain of bombs it is dragging.

4. The player begins with no bombs, but each time they drive over a red circle placed on the floor, 1 bomb is attached to the back of the RC car. The user cannot use the same red circle consecutively.

5. The player earns demerits for each bomb used over a structure's minimum required number of bombs. Example: using 5 bombs on a 3-bomb structure will yield 2 demerits.

6. The player earns a demerit each time they crash directly into a structure OR if they attempt to destroy a structure and leave before it is destroyed (in other words, they fail to encircle it with the number of bombs they were currently carrying).

7. Each demerit is totaled at the end of the play-test, and compared to subsequent players.

We then conducted the sessions and record the results, which follow.

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Session 1

Subject Name: Andrew Wong
Age: 21
Occupation: Student, School for Interactive Arts, Majoring in New Media
Socio-economic Status: Middle Class, living at home

Play-test Gameplay Results

- 5 bombs to destroy small structure - 2 demerits
- 1 failed attempt on medium structure with 4 bombs - 1 demerit
- 6 bombs to destroy large structure - no demerits
- 4 bombs to destroy small structure - 1 demerit

Total Demerits: 4

Subject Observations & Comments

- Moving and maneuvering around the structures often caused inertia to whip the trail of bombs around instead of staying in a perfect line behind the RC car. We may want to implement this in the final game is the physics will allow it, or purposefully avoid it.
- The carpeted floor caused some difficult in controlling the car, but regardless of that a great deal of precise control was required to encircle a structure with bombs.
- In his opinion, the game was “fairly easy to grasp,” and felt that, “what is important is planning on the player’s behalf.”

Session 2

Subject Name: Zac Bush
Age: 19
Occupation: Student, School for Interactive Arts, Majoring in New Media
Socio-economic Status: Middle Class, living at home

Play-test Gameplay Results

- 1 failed attempt on medium structure with 4 bombs - 1 demerit
- 1 failed attempt on small structure with 3 bombs, used a whipping action - 1 demerit
- 2 head-on collisions with small structures - 2 demerits
- 5 bombs to destroy medium structure - 1 demerit
- 4 bombs to destroy small structrure - 1 demerit
- 5 bombs to destroy small structure - 2 demerit

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Total Demerits: 8

Subject Observations & Comments

- Zac took several different approaches when using the bombs to encircle a structure: he first attempt to use the speed of the RC car to quickly tun and whip the bombs around a structure instead of slowly encircling the structure. He did not succeed in destroying any structures while using the whipping technique, but came quite close.
- In his opinion, the game had a "good foundation, good concept to build on," and that we should "improve or create a hand-brake function to whip bombs around structures."

Session 3

Subject Name: Nathan Tseng
Age: 18
Occupation: Student, Major Undeclared
Socio-economic Status: Middle Class, living at home

Play-test Gameplay Results

- 4 bombs to destroy small structure by going backwards instead of forwards - 1 demerit
- 5 bombs to destroy small structure - 2 demerits
- 3 head-on collisions with large structure - 3 demerits
- 6 bombs to destroy large structure - no demerits

Total Demerits: 6

Subject Observations & Comments

- Nathan had more difficulty controlling the RC car than the previous 2 players.
- In his opinion, he found it was "easy to get caught in stuff," and "good controls are very important." He also requested a way to go backwards in the final game, as he used that technique to destroy one of the structures.
- All in all, he found the game to be "pretty fun."

The final session was a timed competition between the 3 testers to see who could destroy the medium-sized structure in the least amount of time, and see how imposing a time restriction affected the player's experience.

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Session 4

Subjects: Andrew, Zac, Nathan

Changes to Procedure:

- Time Trial: the testers were now given the new goal to destroy the lone, medium sized structure as quickly as possible.
- All regular rules applied.
- Time was kept on a stopwatch, and would only be paused when new bombs were attached to the player's RC car. This is because it required additional human input, and could not be relied on to be consistent or infallible.

Our testers: Andrew, Zac and Nathan during the time trials.

Play-test Time Trial Results

Andrew: finished in 33 seconds
Zac: finished in 45 seconds
Nathan: finished in 1 minute 20 seconds

Subject Observations & Comments

- Andrew: "It required you to think on your toes," there was a "more urgency" in the gameplay.
- Zac: "Multiplayer would be fun," you could "race for the bombs."
- Nathan: Had no additional comments on the timed aspect, but stressed the importance of tuned controls (he had the most difficulty controlling the RC car in the time trial.)

We thanked the testers for their contributions, then reflected on what we can summarize and surmise from the play-testing results. This follows on the next page.

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Reflections

Base on the input of our testers, we broke down the feedback into these key points:

1. Having finely tuned controls is very important: the testers all agreed that have a greater degree of control over the player's vehicle would have led to a more fulfilling game experience. We were constrained by having to express the final game's control mechanics in a physical form, but we will still have to put special emphasis on developing and programming the game's controls.

2. Planning out the collection of bombs and using the correct number when destroying each structure. Each structure had a minimum number of bombs needed to destroy it, and over the course of the tests the players were able to establish just home many bombs were needed to destroy specific structures. For example: each time the large structure was destroyed by a player, they always used the minimum amount of bombs (6) our of the maximum the RC car could carry (7). However, any time the small structure was destroyed, more bombs were used than needed.

   When all the players attempted the time trial, they understood that having to get less bombs meant using less time and achieving a greater score. In session 4, they all used exactly 4 bombs, the minimum needed to destroy the medium sized structure.

   It seems we have definitely succeeded in designing the planning aspect of the game: players intuitively understood the importance of managing how many bombs were needed to take down which structure, and plan their actions accordingly. This is an important part of the final game, so we're very glad that players can quickly grasp the concept.

3. Allowing the player to come to a dead stop by braking seemed very important to the players when attempting to encircle a structure. At the time, we had not intended to allow the player to stop during gameplay, as the planned control scheme would encourage constant movement. If this proves to be too difficult to handle in the final game, we shall definitely consider adding brakes to the game's vehicle.

4. Circling structures with bombs was originally planned to work like the game Snake, in which the bombs would follow the exact path of the player. However, Zac expressed that adding the ability to whip bombs around a structure using sudden movements would add a whole new element to the game. This is something to consider, but we'll need to throughly test it on top of the basic gameplay mechanics we need in the game. It would be a very advanced addition.

5. The timed version of the play-test represents a basic gameplay mechanic that is our reward system: the faster and more efficiently the player progresses through a level, the more money they will receive at the end of the level. They have been hired to do a demolitions job, so money makes for a realistic reward within the game. The testers responded very positively to the timed aspect, and felt that it added to the game experience. Based on this input, it should be an integral part of the game.

6. The idea for multiplayer modes in the game was also expressed, but the idea is likely far too complicated to accomplish on top of all the other work there is to be done. Some of the game mechanics would work very well with the idea, such as racing to pick up bombs before another player can reach them, but is far beyond the scope of our development time.

7. The idea was well liked by the players: they didn't have any difficulty in picking up on the concept, they appeared to enjoy the game and felt challenged by the game's design. I feel confident our idea will be successful once fully implemented, and it is only a matter of time before it is finished.