

# GBR Design Diary

## Contents

1. GBR Design Diary
  1. Wednesday April 24 - Tuesday April 29 - Oh Noes...Our Game Is Too Hard!!
    1. Goals
    2. Obstacles
  2. Wednesday April 30 - Basic Physics
    1. Lifeguard
    2. Swimmer
    3. Sharks
    4. Game Speed
    5. Screen
  3. Thursday May 1 - Pygame Experimentation
    1. Beach
    2. Waves
  4. Sunday May 4 - Gameplay Additions
    1. Sprint
    2. Beach
    3. Sprites
    4. Enemies
    5. Waves
  5. Tuesday May 6 - More Gameplay Additions
    1. Jellyfish
    2. Lives and Score
    3. Swimmers
  6. Saturday May 10 - Boring Game?
    1. Improvement Thoughts
    2. Level Design
    3. Graphics
    4. Game Interaction
    5. Swimmers
    6. Log
  7. Sunday May 11 - Gameplay Feel Improvements
    1. Game Interaction
    2. Graphics
    3. Goals
    4. Waves
  8. Monday May 12 - Last Minute Fixes/Additions
    1. Lives
    2. Game Interaction
    3. Levels
    4. Speech Bubbles
  9. Tuesday May 13 - Level Tuning
    1. Levels

## **Wednesday April 24 - Tuesday April 29 - Oh Noes...Our Game Is Too Hard!!**

Getting feedback after the pitch we realised that the game we were trying to make was too ambitious. We were taking too many different Australian elements and trying to mash them into one "big idea". This does NOT make a good game, as we realised from the reaction we got from the pitch. We decided that we need to cut down on what we have and focus on a core idea. We settled that our main game would be about life saving and decided that we would focus on what a lifesaver does, saving people from the ocean.

### **Goals**

- Save people and bring them back to shore
- Do it within a certain time limit

### **Obstacles**

- Sealife as obstacles
- Swimmers have different states of drowning
- Currents which can affect player movement

## **Wednesday April 30 - Basic Physics**

Started off trying to make the most basic implementation of the different types of objects and getting them to interact. The idea was to be able to draw the basic background and representational shapes of the lifeguard and swimmer in order to get a feel of pygame and what we could do with it. Using this base we could implement the rest of our mechanics into the game.

### **Lifeguard**

- Represented by a rectangle, graphics to come later
- Can swim around the ocean, moving forward and turning left right and backwards. We had the lifeguard swimming backwards for a while but realised it did not make sense for the lifeguard to be able to swim backwards
- Decided the lifeguard would die if he left the screen
- Added in another lifeguard for testing purposes. We realised having two players could mean that we could incorporate co-op and competitive player later on so we left it in.

### **Swimmer**

- Represented by circles
- Swims around the ocean set by a random initial vector.
- Bounces off the walls for ease of testing
- Swimmers have 4 phases of swimming. This was decided to give the player information about the amount of time that a swimmer has to live.

## Sharks

- Represented by a grey square
- Swims around the ocean in a random pattern
- Eats swimmers that it collides with

## Game Speed

- Reduced game speed from 75 FPS to 30 FPS so that we could increase the velocities of objects and alleviate the amounts of rounding errors that caused problems

## Screen

- We used an 800 x 600 screen. We tried 1024 x 768 but decided it was too large.

## Thursday May 1 - Pygame Experimentation

Spent the time working out more of pygame's library experimenting with surfaces and textures. Mostly graphical changes were made today.

### Beach

- Added a sand texture to the beach

### Waves

- Implemented small circles following a sin curve to simulate waves

## Sunday May 4 - Gameplay Additions

The sprint feature was added to give more interaction to the player when rescuing swimmers. Textures added to increase the sensory feel of the game.

### Sprint

- Discussion on how the sprint bar regenerates. The two options were over time and when rescuing a swimmer. We chose to replenish the bar when rescuing a swimmer as it seemed that replenishing for no reason didn't make much sense.
- Sprint gets used up at a rate of 1/10 of the bar per second
- Added sprint bars for both players.

### Beach

- Added the beach texture that was drawn
- Rescaled the beach. Had a discussion on how big the beach should be and

what size the screen should be. In the end we decided to increase the screen size to 1024 x 768 in order to accomodate a bigger beach

## Sprites

- Increased the size of the sprites as it was decided they were too small to see properly on the 1024 x 768 screen

## Enemies

- Made the sharks stop when they ate someone to simulate the process of eating a swimmer
- Sharks move in a slightly random pattern after eating someone to add more randomness to the game
- Added jellyfish that stunned the player when they collided and made the swimmers start to drown when they collided

## Waves

- Increased the radius of waves to make it seem more wave like.
- Discussion on whether to texture the ocean and waves but decided it was too hard to get right, so it was better off leaving it as a standard colour

## Tuesday May 6 - More Gameplay Additions

Since we had the core physics working mostly right we started to implement some of the other features of the game. These changes were designed to improve gameplay in areas of teamwork, competition, replayability and challenge.

## Jellyfish

- Added Jellyfish to create more obstacles for the player since it seemed like sharks weren't enough.
- The idea was to create a different type of obstacle that the play has to face (i.e the stun).
- The jellyfish initially made the swimmers go straight to drowning. This was changed to make them go to struggling since it seemed to be not enough time to save people.
- Found that the jellyfish created more drama than the sharks since they caused swimmers to drown which meant you had to go save them, as opposed to being helpless when the sharks ate someone

## Lives and Score

- Lives were also implemented for continued gameplay.
- A score for the player for each person saved in order to encourage some competition between the players.

## Swimmers

- Some AI was added to the swimmers to introduced some randomness into the game in order to increase replayability.
- Swimmers would try and swim away from sharks and sharks some of the times
- Swimmers sometimes tremble when near a shark instead
- Added pretty images for the swimmers. Size of the sprites was an issue as we were unsure of the correct balance
- Image size and colours made it hard to tell the difference between struggling swimmers and drowning swimmers

## **Saturday May 10 - Boring Game?**

Steve thought our game was too boring so many suggestions were made to improve it. Vivian found it exceedingly trivial to be just picking up swimmers from the water and the challenges were not enough. A large part of the problem was that our game relied on randomly generated swimmers, sharks and jellyfish. Playing randomised levels and saving people at constant time intervals of drowning made the game monotonous. We had no goals such as saving a quote of swimmers, or a time limit to do it in and with no scripted levels and real goals, we couldn't introduce dramatic situations where the player would have to be forced to make interesting choices. Some other ideas were to introduce more mechanics such as killing sharks, but Vivian stopped us from doing it. A large part of the reason why our game was boring was because it was only mechanics. The gameplay didn't offer any mechanic support, such as rewards for achieving goals or any sort of feedback. We had to sit back and say what is our game and why is it fun.

### **Improvement Thoughts**

- Build levels
- Visual timer
- Kill sharks
- Add goals - a quota saved or a time limit
- AI shark that chases the lifeguard
- Sharks should swim faster
- Display the score
- Rewards
- Pick ups

### **Level Design**

- A level building API was made to help increase our feel of the game as a finished product and to test whether level design would make our game more interesting.

### **Graphics**

- Added in many more graphics, to increase the sensory feel of the game
- Added a graphical sprint bar to the top of the screen. This was moved down to the bottom and separated for each player to make it easy to see

- Added text to the graphics bar to show whose sprint bar it was

## **Game Interaction**

- Added a start screen to make it feel more like a game
- Multiple levels could now be played in one instance of the game

## **Swimmers**

- Lifeguards actually picked up the swimmers in their hands instead of carrying them underneath them

## **Log**

- After the discussion on playtesting in the lecture we added a Logger that logged the actions of the user when played

## **Sunday May 11 - Gameplay Feel Improvements**

We thought that it currently didn't feel like a game. People weren't getting enough information about what they had to do at each stage and that things were happening too fast and it became disorientating. We tried to fix this by displaying the goals on the screen, essentially giving the players more information about what they were doing and why they were doing it. Another thing that we wanted to add since the beginning were currents or waves that would affect how the swimmer would move. However we never really had the time to implement it

## **Game Interaction**

- Added a start level screen which was designed to give the user some information on what their goal was and to give them time to adjust instead of just being thrown straight into a new level

## **Graphics**

- Fixed transparencies for the images

## **Goals**

- Added a graphical timer to give more information to the player as they were playing on how much time they had left to complete the level
- Added a graphical quota display showing how many people had been saved at a given time
- Added a graphical lives display
- We at first decided that the goal was to reach a quota before you could progress to the next level. However after playing a few times we changed it so that even if you hit your quota, you could still save more people to get more points, until there was no one left to save or until time ran out
- If the time ran out, the level would be restarted for the players to try again

## Waves

- Added the waves graphics with the idea that they would affect the swimmers
- Waves would push around swimmers and the lifeguard could use them to get little speed boost back to the shore
- This was not implemented this day

## Monday May 12 - Last Minute Fixes/Additions

We decided it would be good to have some positive feedback for the player so we added in gaining lives for every 1000 points earned. We also made some more changes to make it feel like people were playing a game and not only a prototype. Another problem we had was that it was still kinda of difficult to tell when swimmers changed states and how long they had to drown. In order to solve this we added some speech bubbles to try and make it clearer to the players that someone needed rescuing. Levels were designed in order to help test our games at various levels of difficulty.

### Lives

- One life is gained every 1000 points

### Game Interaction

- A level complete screen was added to show the player that they achieved the goal
- A game over screen was added
- Added a level failed screen
- Game now reboots to the start on Game Over

### Levels

- Designed some levels to test how the gameplay felt with specific goals in mind

### Speech Bubbles

- Added speech bubbles to help make the players see the adjustment between states

## Tuesday May 13 - Level Tuning

The levels we made were higher than game developers skill curve (on equal level with Dave's curve) and not really conducive for prototyping purposes so we reworked the levels using our knowledge of why a level was hard.

### Levels

- The levels' difficulty was tuned down

SteveCossell/Assignment2/Design Diary (last edited 2008-05-15 00:21:55 by JamesKong)