Game Design

**SeaQuest**

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Copyright Information

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# Section I - Game Overview

## Game Concept

It is an action, shoot-them-up, horizontal game where the player controls a submarine and needs to rescue divers while avoiding being hit by enemies’ submarine missiles and sharks.

## Design History

The design concept follows the main bases from the original Atari SeaQuest Game. This means the world is a sea image with a fixed width, but, different from the original, the height is larger, allowing the view to move up and down following the player’s movement.

Additionally, this version has several types of enemy subs, sharks, and divers’ textures to make the game more interesting. Some are larger/shorter than others, making the chances of hitting them easier or harder.

## Feature Set

## Genre

All genres

## Target Audience

The game is free for all ages

## Game Flow Summary

The player can move freely through the water. The player movement is limited to the screens’ bottom, left, and right. The sea surface is the highest vertical position the player can move.

All underwater enemies will move in a left-right or right-left way. They are going to spawn outwards the screen and cross it until they leave the screen by the opposite border they entered the screen.

Some sharks will swim on a sin-format path.

Only the first one can push the diver if enemies appear in groups. The same applies to groups of missile-shooting subs: only the first can launch missiles. If the first one got killed by the player’s fire, the second becomes “the first” in line, and then it starts to shoot if the player sub is in sight.

The patrol submarine also can change its direction randomly. It only moves horizontally (x-axis movement).

The enemy submarines can only shoot if no diver is before them.

There are virtual lanes that define in which world’s height the enemy or diver will spawn.

The number of lanes can be changed through parameters. By default, the game will be launched with ten virtual lanes.

One Enemy Submarine can spawn in any free lane or lane where one diver is swimming.

The same applies to the Sharks. They can spawn in any free lane or lane where one diver is swimming.

## Look and Feel

The basic look for the game is an underwater scenario showing the usual ocean blue in the background and a bright sky above the sea surface

## Project Scope

A summary of the scope of the game.

### Number of locations

Only one location and one scenario

### Number of levels

Unlimited levels. Every new level will increase enemy speed, spawn rate, and enemy count in enemy groups

### Number of NPCs

At least two types of sharks, at least two types of the enemy underwater sub, a kind of patrol sub and one type of diver.

### Number of weapons

Only one weapon (missile shooter) for the main player and one weapon (missile shooter) for some enemy subs

### Etc.

# Section II - Gameplay and Mechanics

## Gameplay

### Game Progression

The game starts with a pretty calm pace. Large enemy spawn intervals, enemies spawning in small groups or alone, no patrolling sub at the surface.

Every time a player successfully refills oxygen by going to surface and unloading at least one diver, the game level goes up with an increase in enemies movement speed and spawn rate.

The enemy speed increases at a 10% rate per level. From level 3 onwards, enemy subs and sharks spawn in groups. Being possible to reach up to groups of 8 enemies spawning at a time

### Mission/challenge Structure

n/a

### Puzzle Structure

n/a

### Objectives – What are the objectives of the game?

To stay alive, rescuing divers and killing enemies to gain points.

### Play Flow – How does the game flow for the game player

n/a

## Mechanics

What are the rules of the game, both implicit and explicit? This is the model of the universe that the game works under. Think of it as a simulation of a world. How do all the pieces interact? This can be an extensive section.

### Physics

There is no particular physics involved.

### Movement

#### General Movement

The player can move freely on the x and y axis underwater and only on the x-axis while on the surface (or submerging by going down direction)

#### Other Movement

n/a

### Objects

#### Picking Up Objects

n/a

#### Moving Objects

n/a

### Actions

#### Switches and Buttons

Besides arrow keys (and WASD keys), the player can use Left-Ctrl, Left-Shift, or Spacebar to fire missiles.

It is possible to use any Microsoft Windows-compatible Joystick. Movements using the joystick are smooth, and the gameplay is funnier. They are highly recommended.

#### Picking Up, Carrying and Dropping

The player can pick up only the divers. And if the sub is on its maximum capacity of 6 divers, the player will pass through any other diver without colliding with them.

#### Talking

n/a

#### Reading

n/a

### Combat

Collisions make the combat.

Missiles can kill entities with only one shot. That means the player will die with any single enemy shot, and enemy subs and sharks will die with any single player’s shot.

Also, one single collision between a player and enemies will kill both.

### Economy

n/a

## Screen Flow

### Screen Flow Chart

There is only the main menu screen and the game screen.

There are not several game screens. The game scenario will remain the same the whole game.

### Screen Descriptions

What is the purpose of each screen?

#### Main Menu Screen

The purpose of the main menu is to let the player chooses to play the game, to view the top 10 high scores, or to go to settings to toggle music and sound effects playing

#### Options Screen

The only available option is to toggle the sound effects and music on or off

#### Etc.

## Game Options

What are the options, and how do they affect gameplay and mechanics?

The only options available are to toggle the sound effects and music on/off.

## Replaying and Saving

n/a

## Cheats and Easter Eggs

n/a

# Section III – Story, Setting and Character

## Story and Narrative

Specific details like scripts and cut scenes may not be in this document but in the Story Bible.

### Back story

As the commander of a high-tech submarine, your mission is to rescue divers in distress and protect them from the dangers of the deep sea. But you’re not alone in the ocean. Hostile enemy submarines and deadly sharks are constantly prowling, looking to sink your vessel and eliminate the divers under your protection.

As you navigate the treacherous underwater terrain, you must use your submarine’s advanced technology and weapons to outsmart and outmaneuver your enemies. But be careful: your oxygen supply is limited, and you’ll need to surface to refill your tanks and repair your submarine.

As you complete rescue missions and gather valuable intel, you’ll uncover a sinister plot by the enemy to exploit the ocean’s resources and dominate the seas. It’s up to you to stop them and save the divers before it’s too late.

As the story progresses, the player must make strategic choices on using the limited resources, such as rescuing more divers and refilling the oxygen tank.

This game offers a thrilling and challenging experience with action, strategy and survival elements.

### Plot Elements

n/a

### Game Progression

n/a

### License Considerations

This game was created by the NBCC’s Gaming Experience Development student, Thiago Marques, whose purpose is only academic. All textures, images and sounds were found in free online repositories.

The game is not meant to be sold or commercialized by any means. It isn’t meant for financial profits and must not be used for this purpose.

### Cut Scenes

n/a

#### Cut scene #1

##### Actors

##### Description

##### Storyboard

##### Script

#### Cut scene #2

etc.

## Game World

### The general look and feel of the world

Just an image of a portion of the ocean sea.

### Area #1

#### General Description

#### Physical Characteristics

n/a

#### Levels that use area

n/a

#### Connections to other areas

n/a

### Area #2

n/a

## Characters

### Character #1

#### Back story

#### Personality

#### Look

##### Physical characteristics

##### Animations

#### Special Abilities

#### Relevance to the game story

#### Relationships with other characters

#### Statistics

### Character #2

etc.

# Section IV – Levels

## Level #1

### Synopsis

### Introductory Material (Cut scene? Mission briefing?)

### Objectives

### Physical Description

### Map

### Critical Path

### Encounters

### Level Walkthrough

### Closing Material

## Level #2

etc.

## Training Level

n/a

# Section V - Interface

## Visual System

### HUD - What controls

### Menus

n/a

### Rendering System

### Camera

Fixed 2d sided view camera

### Lighting Models

n/a

## Control System

How does the game player control the game? What are the specific commands?

Besides arrow keys (and WASD keys), the player can use Left-Ctrl or Left-Shift or Spacebar to fire missiles

## Audio

## Music

Only three pieces of music can be played in the game: the main title music, the gameplay music and the game over music.

## Sound Effects

Several sound effects represent the player firing missiles, enemies firing missiles, diver loading, diver unloading, oxygen dropping to give bonus, extra-life, player dying, enemy subs killed, sharks killed, low-level oxygen alert, and bonus points—also the navigating through menus sound.

## Help System

n/a

# Section VI - Artificial Intelligence

## Opponent AI

The active opponent that plays against the game player and therefore requires strategic decision making (for example, Civilization or Chess, how is it to be designed?

## Enemy AI

Villains and Monsters

## Non-combat Characters

## Friendly Characters

## Support AI

### Player and Collision Detection

All entities that have collision features must be spawned with the CCollision component. Using this component, we can check for any collision needed to implement any game rule.

### Pathfinding

# Section VII – Technical

## Target Hardware and operating system

Any X86 processor that supports Windows 7 OS

## Supported game controllers and peripherals

PC Keyboard or Windows-compatible joystick (optional)

# Section VIII – Game Art

Only show concept art here (rough sketches)

## Concept Art

## Style Guides

## Characters

## Environments

## Equipment

## Cut scenes

## Miscellaneous