RoleplayTalk Studios presents

design document for

Space Invaders

The clone war

All work Copyright © 2010 by RoleplayTalk Studios

Written by Michael Barth  
Version 0.2

Contents

[Design History & Planned Milestones 3](#_Toc267902836)

[Version History 3](#_Toc267902837)

[Upcoming Milestones 3](#_Toc267902838)

[Milestone 1 3](#_Toc267902839)

[Milestone 2 3](#_Toc267902840)

[Milestone 3 3](#_Toc267902841)

[Milestone 4 3](#_Toc267902842)

[Game Overview 3](#_Toc267902843)

[Philosophy 3](#_Toc267902844)

[Get it done! 3](#_Toc267902845)

[Common Questions 3](#_Toc267902846)

[Production cycle 4](#_Toc267902847)

[Feature Set 4](#_Toc267902848)

[The Game World 4](#_Toc267902849)

[The Physical World 4](#_Toc267902850)

[Scale 4](#_Toc267902851)

[Objects 4](#_Toc267902852)

[Time 4](#_Toc267902853)

[Rendering System 4](#_Toc267902854)

[Camera 4](#_Toc267902855)

[Game Engine 4](#_Toc267902856)

[Collision Detection 4](#_Toc267902857)

[Lighting Model 5](#_Toc267902858)

[The World Layout 5](#_Toc267902859)

[Game Characters 5](#_Toc267902860)

[Player 5](#_Toc267902861)

[Enemies 5](#_Toc267902862)

[User Interface 5](#_Toc267902863)

[Idea Pool 5](#_Toc267902864)

# Design History & Planned Milestones

## Version History

None, but that will change

## Upcoming Milestones

### Milestone 1

* Sprite in game and moving
* Background
* Graphical style
* Basic game architecture

### Milestone 2

* Capture player input
* Enemies in-game and moving
* Shooting including Collision detection
* Menus

### Milestone 3

* Gradually increase game speed
* Award points for kills
* Sounds
* High Score

### Milestone 4

Fancy stuff?

# Game Overview

## Philosophy

### Get it done!

That’s our philosophy and that is what we will do. This is about a simple, no butterflies-and-rainbows Space Invaders clone to get started, so let’s get started!

## Common Questions

#### What is the game?

Simple Space Invaders clone. Maybe we’ll add some spice later, but first let’s focus on the fundamentals.

#### Why create this game?

To get started and gain some first-hand experience in creating games. Everybody has to start somewhere and this is where we will start!

#### Where does the game take place?

In the year 2345, far far away from earth in space where there are aliens. Kill them. Simple as that!

#### What do I control?

A cool space fighter.

#### What is the main focus?

Create a fun space shooter game from start to finish.

#### What’s different?

It’s made by US!

## Production cycle

We will use a scrum-like approach: short, iterative production cycles called sprint. In scrum a single sprint takes 24 hours, but as we don’t work full-time on this project **our sprint will be 4 weeks**. In this 4 weeks you should be able to dedicate some time to the project.

After every sprint there will be a sprint meeting. This meetings will be Tuesdays at 20:00 o’clock and will take place in Skype. A sprint meeting should take around 30 minutes.

# Feature Set

Following is a list of features we plan to implement into the game. This is a complete list showing all features that the final version may contain. To get there we will release several intermediary versions with a partial feature set, continuously working on getting the full feature set implemented.

* Um, a 2D Sprite ship, rendered with D3D10!
* 2D Sprite Enemies, hahaa!
* Maybe a nice background
* And some different types of enemies that award for a different amount of points
* Highscore List
* Some nice graphical pew pew laser effectz!
* GUI and Menus
* Sounds

# The Game World

Provide an overview to the game world.

## The Physical World

The physical world is rather simple in that it contains only 4 bunkers and nothing else. ;)

### Scale

It’s only about a laser canon and alien space ships, so the scale is rather small. I would suggest Sprite sizes ranging from something around 50x50 to 75x75 pixels.

### Objects

Four bunkers blocking enemy fire distributed evenly before the laser cannon of the player.

### Time

The game starts at a slow pace with the invaders moving left and right and will speed up a little bit for each invader ship the player kills.

## Rendering System

We’ll be using Direct3D 10, planes and textures to simulate a 2D game engine.

## Camera

Fixed view from above.

## Game Engine

Describe the game engine in general.

### Collision Detection

Simple bounding boxes, nothing fancy.

## Lighting Model

We’re using the default lighting.

# The World Layout

Four bunkers blocking enemy fire distributed evenly before the laser cannon of the player.

# Game Characters

## Player

The players controls a laser cannon, mankinds last hope!

## Enemies

There are four types of enemies, which simply award different points when killed.

But we could also implement some specials like different kinds of shots or something like that. But first let’s get the basic idea down.

Beginning from the lowest pointing invaders which also start in the lowest row, I’ll list the invaders.

#### Alpha’s (Codename: Chicks)

Points: 10

#### Beta’s (Codename: Noms)

Points: 50

#### Gamma’s (Codename: Squids)

Points: 100

#### Zeta’s (Codename: Mystery Ship)

Points: 500

# User Interface

All we need is the following:

* Score
* High Score
* Lives

# Idea Pool

* Different weapons that can be picked up
* Aliens with different weapons