Design Document for:

Ring Breakers

Fast Flying Action

"Breaking is better with friends."™

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Design History

This is a brief explanation of the history of this document.

In this paragraph describe to the reader what you are trying to achieve with the design history. It is possible that they don't know what this is for and you need to explain it to them.

Version 1.10

Version 1.10 finished up the bare bones document including:

1. Fleshing out technical sections.
2. Cleaning up story sections.

Game Overview

Philosophy

'Flying' Game Genre

This game is a rear-camera flying game in the style of Starfox 64 and Panzer Dragoon Orta. Both games were major successes, partially due to the unique camera style and gameplay, which is rarely used. This style of game is perfect for a fast paced, action-oriented game. See next point for even cooler details…

Cooperative Multiplayer

The best part of Ring Breakers is the fact it supports up to 4-player cooperative multiplayer. The challenge in the game really begins to show itself as more players play together and really makes the game more fun. Partner this with the unique genre noted above and this game becomes a truly unique and exciting game experience.

Common Questions

What is the game?

Ring Breakers is a cooperative based flight shooter where players need to work together to survive in a disorienting environment. Both the difficulty and level of enjoyment both go up as more players are added to the game (up to 4-players).

Why create this game?

This style of gameplay really hasn't been done before (rear camera, 'rails shooter' with cooperative multiplayer). Previous games doing a rear-based camera are almost always favorably received due to the uniqueness of the genre that isn't used as often as it should be.

Where does the game take place?

The game takes place in a sci-fi atmosphere more in the style of the Matrix series where it's not only about universes and spaceships but science tied to the human mind. With a story implementing this idea we can have levels where the breakers pilot physical ships (universe, ship style sci-fi) or pilot a more abstract item like a cell through a human body or an idea through another human psyche (abstract sci-fi).

What do I control?

The player controls one of the flyers in Team Breaker, a team of 4 pilots given various missions that include piloting and air fights. There are 4 possible pilots to choose, each based on a color (Red, Blue, Green, Yellow). In game, the pilots are referred to by their color and the word 'Breaker' (ex: Red Breaker, Blue Breaker, etc…)

How many characters do I control?

The player only ever controls one pilot in the game (unless the player is multi talented and can use more than one controller by themselves).

What is the main focus?

Each level will focus on the pilots going through a stage littered with colored rings (based on the colors of the pilots in the level). There will be different 'back stories' for every level ranging from simple flight simulations to more abstract ideas like cracking a code in the dream of a character in the game story (see story design for more detailed information).

The player's main goal is to complete the level by navigating through the rings of their color and avoiding rings of other colors. During the levels there will be different colored hostile forces shooting at the players. The player's secondary goal (other than avoiding enemy fire and staying alive) is to destroy enemies of their same color.

What's different?

There are several key points that make this game unique and different from anything that has been in the market up to this point in time. First, the rear-based camera flight system is only used in a handful of games (especially considering games where it is the primary game style) but that doesn't make it fully unique. This is where the cooperative multiplayer comes in. Adding cooperative multiplayer to this game transforms it into a completely different experience from anything done before.

Feature Set

General Features

Track (Rail-based) levels
Rear-based camera flight system
Levels (rings and enemies) are dynamic based on players
3D graphics
32-bit color

Multiplayer Features

Support for 4 players at once
Difficulty increases with more players
New enemies
New level layouts

Editor

Editor can edit level backgrounds as well as ring paths
Should be easy to customize things like enemy 'randomness' (some levels may have less rare instances of rare enemies; see Game Characters section for information about enemy rarity)

Gameplay

4 different pilots to use
Requires team communication to destroy enemies and complete levels
Player needs to follow their ring path while interacting with other players
Different player and item configurations provide different experiences each time
Ring path colors aren't hard-coded so playing the same level with the same color character will produce different results and increase replayability

The Game World

Overview

Provide an overview to the game world.

Ring Paths

Each level will have pre-defined ring paths however the colors of the paths won't be pre-defined. When the level loads the game will randomly assign a player color to each path so the paths aren't always the exact same. The game should make sure to only use the colors for players currently joined (obviously it wouldn't make sense to make Red rings if the only player is Yellow). However, Gold and Black rings will be in the same spot each time.

World Feature #2

Same thing here. Don't sell too hard. These features should be awesome and be selling the game on its own.

The Physical World

Overview

Describe an overview of the physical world. Then start talking about the components of the physical world below in each paragraph.

The following describes the key components of the physical world.

Key Locations

Describe the key locations in the world here.

Travel

The flyers will be on a fixed path through the world and will automatically be given a speed on that path. The player will be able to move along the screen 'X, Y' coordinates (though in 3D space) but not forward/back.

Scale

Describe the scale that you will use to represent the world. Scale is important!

Objects

Standard objects include the standard 4 colored ships, enemies (see Characters section), and scenery which will change based on which level the user is playing but obviously should have reusable assets across levels.

See the "Objects Appendix" for a list of all the objects found in the world.

Weather

Weather will be created in the level and will always be that style in that level (pre-defined). Dynamic weather isn't a concern in this game as the levels resemble racetracks where dynamic weather isn't a major component in short races.

Day and Night

As with weather, day/night will be pre-defined in the level and will not change. Think of the level like a race track level, since the player isn't in there for very long it doesn't make sense to focus on dynamic day/night.

Time

Describe the way time will work in your game or whatever will be used.

Rendering System

Overview

This game will be rendered in 3D from behind the players (possibly a bit offset above) as if the players were flying down a corridor.

2D/3D Rendering

A custom built engine will be utilized, preferably built on top of Microsoft XNA using C#. The engine should support rendering of 3D objects in a 3D space with an overlay consisting of 2D sprites (HUD).

Camera

Overview

The camera will be fixed behind the players at a pre-defined distance and follow them at that distance as they pass through the level.

Gentle Sway

As players move left and right the camera should gently sway a small amount in the direction the player is moving as they get near the screen edge. In a game like Super Smash Bros the camera will zoom out as players move toward the screen edges but moving out or in with this game could distort how the players perceive the movement of their breaker ship. However, this sway should only move slightly and we need to be cautious if there is a player on the other extreme of the screen. Maybe a slight zoom backwards is appropriate, not on the scale of Super Smash though!

Game Engine

Overview

Describe the game engine in general.

Game Engine Detail #1

The game engine will keep track of everything in the world like such and such.

Water

Any water in the game will be part of the background and probably doesn't need to be specially rendered (this is assuming any water is in the game at all really).

Collision Detection

Our game engine handles collision detection really well. It uses the such and such technique and will be quite excellent. Can you see I am having a hard time making up stupid placeholder text here?

Lighting Models

Overview

Lighting in this game can vary quite a bit however the majority of the game the lighting will be a little more abstract. To imply a sense of speed we want to see lights blurring and streaking by. Lots of very bright colored lights (bright blues, pinks, and greens) streaking by against a background of space or planets should define a lot of the game.

Lighting should be editable (whether static or dynamic) in the editor.

Static Lighting

Each level should have some amount of static lighting such as a generic ambient amount combined with a directional light. Even in space we should have some of this, not much of a visual game with a solid black screen!

Dynamic Lighting

'Dynamic lighting' such as point lights that cast shadows and color on passing objects should permeate the levels. Whether it's the yellowish tint from a streetlight or a bright blue blast from a massive engine as you pass under it, to see that color and shadows extend across the ships and enemies is cool!

Note on Shadows

Shadows will cast from the ships as they pass lighting and should be cast over things like enemies and other players. However, typically this will always happen from dynamic lighting unless there is a direction light pointing at a 90-degree angle from the player (ie. Directly above or below).

The World Layout

Overview

There are two basic categories of the world, the interactive part and the non-interactive part. The non-interactive part is simply the scrolling background scenery and has no real effect on the game other than to define where the player is and make the game look pretty. The interactive part is made up of Rings (see below) and Enemies (see Game Characters section).

Rings

The colored rings the player needs to fly through are the primary goal of the game. In fact, they are so distinct they could almost be considered a character to themselves. There are several types of rings:

- Standard Ring – (Uniqueness: Extremely common) The standard ring has a defined color based on one of the player colors found in the level. The player of that ring color should be the only player that flies through this ring.
- Black Ring – (Uniqueness: Common) The black rings should be avoided at all costs, they are bad news bears.
- Gold Ring – (Uniqueness: Rare) The gold ring requires all players to be within the ring area as it passes by.
- Grey Ring – (Uniqueness: Extremely rare) The grey ring only appears as part of the Colorless Bomb weapon and can be flown through by any colored ship.

Destruction Sections (Blaze of Glory)

In select spots of the level, if the players destroy an enemy there will be an animation of the enemy ship crashing into the environment and causing (very pretty) destruction to the background environment. These sections should be invisible in game and built in the editor. It should also be determined whether the section is always there or is randomly active (to avoid knowing exactly where the sections all are every time through).

For example, Red Breaker destroys a standard red enemy inside a destruction section (note, the player doesn't know where these sections are). That red enemy spirals toward the ground and slams into a building which then topples and pulls down a massive freighter flying above the level.

Notice, this has no impact on the player however serves two purposes: 1) suddenly the background isn't just a scrolling item, the player can actually interact with it via these sections; 2) the explosions and destruction will add to the chaos happening on the screen and make cooperation even more vital between players.

FUTURE ITEM: Maybe the size of the destruction is based on the enemy taken down in the destruction section? What if a simple red enemy only takes down a light post where a Spectrum causes a chain reaction resulting in the planet below totally going critical and imploding!

Game Characters

Overview

There are 4 pre-defined characters in Team Breaker:

- Red Breaker
- Blue Breaker
- Green Breaker
- Yellow Breaker

Each player will only control one of these pilots at a time. On-screen, the player will control both the physical ship and the crosshairs for that pilot (see controls section for more).

Creating a Character

When choosing a character, the player is given the choice between 4 differing items that provide different additional powers. Each item can only be selected once and based on the item the power can be used between one to infinity times in the levels. See the Weapons section of this document for details on the equippable items.

Enemies

The enemies in Ring Breakers are colored enemy ships and depending on the level, could vary on what they actually are. The main point is that each enemy has a distinct color and the only person who can destroy that enemy is the player of that color. So, for example, if Blue Breaker is being chased and shot at by a Red enemy, only Red Breaker can save them by shooting at the enemy.

- Standard Enemy – (Uniqueness: Extremely common) Every standard enemy has a distinct color that matches one of the player colors. Only the player of that color can destroy this enemy.
- Changers – (Uniqueness: Uncommon) Changers are like the standard enemy where they have a given color however after a certain amount of time the color will change, thus changing who can destroy it. The time a color lasts differs between changers.
- Spectrums – (Uniqueness: Rare) Spectrums are the most difficult to defeat because they require the most teamwork to defeat. Unlike the standard and Changer enemies, a Spectrum doesn't have a given color; they are a blend of several colors. As such, it requires more than a single player to destroy it. A Spectrum will resemble something like a rainbow of up to 4 colors; the colors on the Spectrum define which players need to attack it before it is destroyed. The easiest Spectrum would be a blend of 2 colors whereas the hardest is a blend of all 4.

User Interface

Overview

The UI will be very minimal; we don't want to cover the screen up with useless information, especially in a game where every little piece of screen 'real estate' is crucial to show to the player.

Health Meter/Bar

Each player will have their own health meter/bar which will be the color of their ship. The bar will appear on the bottom of the screen (top will block incoming stuff). When the meter is empty, that player explodes and is removed from the level.

Unique Weapon Ammo Left (Optional)

This piece of UI only applies to the players who select unique weapons like the Colorless Bomb where the player is limited to a certain number of shots. Each remaining shot will be denoted by a small symbol (unique to the weapon) next to the health meter mentioned above.

Weapons

Overview

Overview of weapons used in game. Each player has a standard weapon on their ship used to destroy enemies of a similar color. When choosing their color the player also chooses one of 4 different items/weapons that can be used (usage amount and effect differs). Also, weapons can be very easily used together to provide a very deadly combination and turn the tide of a battle in favor of the players. The offensive weapons tend to favor more experienced players who are able to navigate through the rings and defend against incoming enemies at the same time.

Colorless Bomb

The colorless bomb is a one-time (per stage) usage weapon that turns everything on the screen a colorless grey for 5-10 seconds. This means all rings and enemy ships all turn grey and can be flown through or destroyed (respectively) by any player regardless of pilot color. Obviously a very powerful offensive weapon.

Super Bullets

Super bullets just strengthen the power of the player's standard firepower. Instead of several shots to destroy enemies it only takes one or two shots but the color restrictions still apply (unless the colorless bomb is used by a teammate). Offensive weapon.

Color Shield

The color shield is an enhancement that provides more cover from enemy ships of different colors. The amount of damage a player takes from an enemy of a differing color is reduced. Note, enemies of the same color still do regular damage. This item is activated during a stage and lasts about 5 seconds before needing to recharge before another deploy. Defensive weapon, good for newer players focusing on ring flying. FUTURE ITEM: Determine length of recharge.

Ring Shield

The ring shield is similar to the color shield but lessens the amount of damage taken when missing a ring of the ship color or flying through a ring of a different color. This item is activated during a stage and lasts about 5 seconds before needing to recharge before another deploy. Defensive weapon, good for newer players focusing on combat. FUTURE ITEM: Determine length of recharge.

Musical Scores and Sound Effects

Overview

This should probably be broken down into two sections but I think you get the point.

3D Sound

Talk about what sort of sound APIs you are going to use or not use as the case may be.

Sound Design

The game is primarily based in spacey and abstract type levels. As such, the audio will probably sound rather futuristic and or 'techy'. Lots of laser shot sounds, bleeps, bloops, and zaps (no zips though, I hate zips!)

Core Game Details

Overview

The single player game is pretty much a carbon-copy of the multiplayer, just the rings and enemies will all be mostly the player color (with the exception of things like the Black, Grey, and Gold rings). Make sure we don't use enemies the player can't kill.

Single Player Game Detail #1

Single Player Game Detail #2

Story

Describe your story idea here and then refer them to an appendix or separate document which provides all the details on the story if it is really big.

Hours of Gameplay

The single-player game should be the same size as the multiplayer as they will share levels, probably about 15-20 levels or so depending on length and complexity. Guessing each level takes 5-10 minutes the game could last from just around an hour to over 3 hours. As the game has single player and multiplayer, we could double this and say around 6 hours of unique gameplay but probably is longer due to experimentation with ship colors, unique weapons, and cooperation techniques.

Victory Conditions

To win the single player game, the player needs to successfully finish each level without dying (potential hazards include missing rings and being shot by enemies). After all levels are completed, the player has completed the single-player game.

Multiplayer Game

Overview

Describe how the multiplayer game will work in a few sentences and then go into details below.

Max Players

Up to 4 players can play at one time; players are unique based on their color (Red, Blue, Green, Yellow).

Servers

No server support, game is completely local right now (localhost server anyone?).

Customization

There are 2 ways to customize your player and is very reminiscent of arcade style co-op. First, the player chooses their primary color (Red, Blue, Green, Yellow); each color can only be selected once. Secondly, the player chooses a unique weapon/item to outfit their ship with.

Internet

Again, only local multiplayer supported for now.

Gaming Sites

Any more questions about online multiplayer and I'm going to lose it…

Persistence

Alright, I'm losing it.

Saving and Loading

The game should require a user to sign in as 'Player 1' whether it's PSN network, Xbox Live, or developed in-house (start campaign with a name maybe?). During the game, auto save will save the game between levels (probably right after completing a level, maybe during a cutscene). Starting the game with that user profile should automatically load the most recent saved game.

Character Rendering

Overview

Provide an overview as to how your characters will be rendered. You may have decided to include this elsewhere or break it out to provide more detail to a specific reader.

Character Rendering Detail #1

Character Rendering Detail #2

World Editing

Overview

Provide an overview about the world editor.

World Editing Detail #1

World Editing Detail #2

Extra Miscellaneous Stuff

Overview

Drop anything you are working on and don't have a good home for here.

Junk I am working on…

Crazy idea #1

Crazy idea #2

"XYZ Appendix"

Provide a brief description of what this appendix is for and then get down to business and provide data to the reader.

Here are a few examples of some of the appendices in my latest design…

"Objects Appendix"

"User Interface Appendix"

"Networking Appendix"

"Character Rendering and Animation Appendix"

"Story Appendix"