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Design Document for:

Chili Pow!

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About the Design Document

This design document was created as a tool and point of reference for the participants of the project called Chili Pow! It will have all the data the team has collaboratively designed and brainstormed during the project, and thus hopefully aid our producer keep every detail organized as the project goes on. This document will also serve as a our Lead Game Designer's structural concept of his thesis. As previously stated, the following paragraphs are mainly focused to keep all the data indexed for the team's purposes, but we hope it can also provide useful information to any reader interested in game production and design.

Game Concept – Overview

High Concept

There is a blank page in history books where tales of ancient China should be found. Were those pages ever discovered, they would tell a story of a brave pair of dragon brothers, who saved the first dynasty from a vicious attack of the huns!

The dragons, Chi and Li, are sent to protect the chinese people and warn them of the rampaging huns, who are led to the Great wall of China by the feared Ghengis Chan himself! The dragons' only option is to travel through China and use their abilities to light up fireworks within time limit in a spectacular light show!

That was the backstory of a game that we will be doing on iPhone console during an estimated time period of 4 months. The game will be a fast-paced action game that the player controls by drawing routes for game characters (the swirling dragon brothers) on the iPhone touch screen. The game will have several levels which we will generate using an exclusive level editor made especially for Chili Pow!

Reasons for Making the Game

In the summer of 2009, our producer and artist/modeller had an idea for an iPhone game. They pitched the idea for the rest of the team, and thought it had enough potential to be made a game of. The main reason to make Chili Pow for the team is to have the experience and a good project to show on their CV. All the members of the team aim to work in the game industry after graduation, and one good complete application is worth its weight in gold when applying for a job.

The game seemed to have a unique idea, and especially the controls were innovative in a way that the team didn't recall seeing in any other iPhone game.

Unique selling points:

- Our game is fast, addictive single player game that has a good replay value.
- Chili Pow! has a unique and easy to learn control system.
- We put as much effort on making an interesting story as good quality graphics.
- With minimal to no violence at all, our game can entertain a large target group.
- Having an experienced, motivated team behind a game project separates Chili Pow! from regular student projects.

The uniqueness and replay value comes from the colorful and memorable scenery of ancient China. The feeling of discovery and interesting levels are key features in our game and constantly emphasized in every gameplay decision throughout the production pipeline. Our game is based on quality of game design and immersion of the storyline.

Challenges and Goals

The greatest challenge for the team is to keep all the content organized and not let all the ideas and features run free in the game. We have designed a game that is flexible in a way of adding content, but with a time table of only 4 months, we are in danger of making this game too large for us to handle. When we have the final product in our hands, one of the challenges is to make the game available for consumers as well.

Our goal is to have our game ready to be released in the end of March 2010.

Execution

Platform

We chose iPhone as platform for many reasons. It is ideal for a casual gaming, it's portable and it has enough power to run beautiful particle effects of fireworks on screen.

Game Characters

Our characters of the game are stereotypical, snake-like dragon brothers, who despite of their pranking natures, are sent to protect people of ancient China by the Guardians. The dragons personalities are different, which doesn't affect game play in any way.

Chi

A humorous dragon kin, who's youth manifests in practical jokes and pranks alike. Chi is not too picky on the targets of its pranks, and everybody from common mortal to celestial god figures can be victims of its childish acts. Chi is usually the initiator of the devious jests, and Li follows his brother with an equal enthusiasm.

Li

Wherever Chi goes, Li follows. He is the more quiet one of the dragon brothers, but what he lacks in long speeches and poetic haikus, he makes up with ruckus and mayhem. Li enjoys seeing things up in flames, chaos where should be order and expensive decorative items shattered in pieces.

Genre

Chili Pow can be categorized as an action single player iPhone game.

Technology

The game and its level editor will be coded with C++. The platform will be iPhone, of which touchscreen technology will be the main focus of controls. The other features of the platform ie. GPS and accelerometer will not be used to enhance the gaming experience.

Audio

Chili Pow will have a traditional Chinese music playing on the background, spiced up with rhythmic beat to keep the player's heart rate above 130. We plan to hire a sound designer later in the project, when we have a lot of visual material for designer to get inspired of. There will also be a number of explosion sounds for the fireworks.

There will be separate audio scores on menu screen and levels, inspired by GTA: Chinatown Wars and other distinctive casual games.

Essential Game Mechanics

The goal of each level is to light up fireworks in the given time, after which the player can proceed to the next level. The level design is inspired by stereotypical Chinese landscape, with rice fields and traditional houses.

Movement

The dragons are controlled by sliding your finger across the iPhone's touchscreen, and drawing a route for dragons to move. In case of collision with surrounding objects, the dragons lose speed and have to start gaining momentum from zero. This influences the final time and score player receives in the end of each level.

Splitting

Player can divide the dragons by pulling his fingers apart, and guiding each dragon on their separate paths. This allows player to navigate quickly between obstacles, and lighting up fireworks without sacrificing momentum. The range of separation depends on how far the player moves his fingers on touch screen. After the fingers are released, the dragons return to their original lineup.

Step 1.

Dragons are flying straight forward

Step 2.

Player gently places his or her thumbs anywhere on the touch screen. As long as the thumbs are close together.

Step 3.

Player slides his or her thumbs apart, causing dragons to separate from their spiral motion. The distance between fingers corresponds the separation distance between dragons.

Step 4.

Player releases his or her thumbs from the touch screen

Step 5.

Dragons return to their original positions and continue to fly along the drawn line. (check part above called Movement)

Rockets

The color of the fireworks define how big of a score they award the player. The points are scaled according to the size of the rocket. If player can set the bombs off in a conjunction to one another, he is awarded combo points as well.

	Length of fuse	Points multiplier
Red firework	2 seconds	0,5
Blue firework	3 seconds	0,4
Yellow firework	4 seconds	0,3
Green firework	5 seconds	0,2

Rocket Mechanics

The dragons race towards a red rocket. They collide with a rocket, and run through it. A fuse starts to emit particles initiating a timer. After the timer reaches zero the rocket flies off the screen leaving a trail of particles behind. Also a puff of Windwaker-smoke leaves on the ground.

The rocket leaves the screen with a column of windwaker smoke behind. After a 2 second delay, the ground is lit with a corresponding color as the rocket, and 1 second later the player hears the sound of explosion. With this effect we can explain the lack of on screen particles as the rockets are flying so high, that even the light and sound effects are off-sync.

Collisions

The obstacles between the dragons and finishing a level are time and environment. The dragons collide with their surrounding hindering their movement and stunning them for a brief period.

Step 1.

Dragons are on a path toward a bamboo forest model.

Step 2.

Dragons' and model's hitboxes collide

Step 3.

Dragons disappear in a cloud of smoke accompanied by a crashing sound effect.
Dragons are stunned for 1 second.

Alternatively dragons spawn at their starting location after each hit!

Step 4.

Smoke fades and curled up dragons continue their journey after player draws them a new path.

Narrative and Starting Point

Detailed introduction

We have a number of different ideas how to introduce the game to a player. We debated from a cartoon-like layered intro animation to simplistic “one picture with text on it” -ideas. The final form of introduction animation will be a short background story of the world, and a still picture of dragon brothers ready to set on an epic quest to warn emperor of the looming threat.

Starting Point

The first level of Chili Pow will have unlimited time, so player can concentrate on learning the movement and Chili abilities. At this point, dragon brothers can divide in two and light up fireworks that are scattered all over the level. The basics of timing fireworks and scoring are taught to the player.

Story in general:

-Game starts. Dragons learn movement and splitting abilities.

-3 levels to practice

-first cutscene: Hun leader reveals his plans to conquer China. He gives an assignment to a scout to bring orders to his trusty general in Qi Pang village. He also orders his own men to distribute fireworks around. The orders are simple, scatter fireworks around Chinese countryside to make escape easy as possible.

-5 levels between cutscenes

-second cutscene: Dragons are on their way to the next village as they come across a tipped over carriage. From the debris they locate orders indicating the devious plan of the hun leader, and decide to act upon it. What could be more rewarding than create chaos all around China? They continue their journey to set off all the fireworks they can get their paws on.

-5 levels between cutscenes

-third cutscene: Hun leader receives word that his orders never reached his generals, and lets out a furious roar! They have come too far to change their plans now, but he wants to make sure everything goes smoothly so he doubles the number of fireworks they leave behind.

-2 levels between cutscenes

-third level after cutscene: Dragons find a huge tree surrounded by dozens of

fireworks. This level is all about blowing up a certain amount of rockets in given time.

-*fourth cutscene*: The huns notice a huge green flash of light in the horizon behind them. After a moment of eerie silence an epic sound wave reaches the savage mob, and throws them all off balance. The hun chief immediately realizes someone is sabotaging their escape plan, and order his men to create traps for the pursuers.

-? levels between cutscenes.

-during the next levels the dragons are faced with booby trapped fireworks that explode as soon as they are touched. Booby traps have same stun effect when dragons hit walls. You can tell booby trapped fireworks from regulars by slightly misplaced top cones.

-? levels in between

-*fifth cutscene*: The huns reach the emperor's palace, ready to storm in and claim the throne of the emperor. Dragons spot the huns on top of a high mountain, and rush down to attack!

-*the final level*: The dragons need to set off fireworks like in previous levels, but they have to dodge mortar fire from huns at the same time. Incoming mortar rounds are shown as shadows on the ground.

-*alternative final level*: A long canyon with no fireworks. The mission is to reach the end of the level before the timer runs out. At the end of the level waits a huge load of fireworks which needs to be launched at incoming hun army.

-*the ending screen*: The royal guards find the huns bound together and arrest them, as the dragons return to their mountain, until they are summoned again.

User Interface

When designing game for an iPhone, the basis of user interface has to be as informative as possible, but plain enough to leave room for the actual game objects. Player's index finger mustn't block vision to game world in a fast moving game, yet the controlling should feel accurate and natural. It all depends on the final point of view in which we lock the camera, and how much room it leaves for the player to move the protagonists.

Menu (game starts)

-new game

-continue

-scores (per level)

-exit game

Menu (after level complete):

- retry
- world map
- next level

Mandatory elements we need in the GUI:

- score
- time countdown
- fireworks queue

Optional elements in GUI

- level number
- fireworks left in level
- pause button -> menu screen

Visuals

Design team watched a number of movies and searched the internet for inspiration for the game. Taking in consideration the limitations of iPhone, we have to keep the number of polygons very low, and try to amp up the eye candy with particles. That's why it is important to us to have an able particle engine in our game.

Effects

Dragons:

- spawnpoint effects
- drawline particle path
- tailsparkles on dragon movement

Rockets:

- fuse lit particles
- smoke colums on liftoff
- smoke on ground pre liftoff
- light effect on explosion

Collisions:

- smoke particles on dragon - obstacle collision
- particles on dragon - firework collision

Level end / begin

- Level ending explosions on point count screen

World Map

Our world map has three themes, that are visible in each level. First theme is a Mongolian plain, second is situated high in the mountains, and the last levels are played in a bamboo-forest. After every level the dragons return to the world map and move to the next level node. The map itself and the borders resemble the same shape and size of an old dynasties in 120 B.C.

The path of the dragons is linear on map, and it doesn't have any crossroads or alternative paths.

Concept art of the levels



The Mongolian Plains

The game begins in the plains theme. Player is taught all the basic movement abilities in this area, and it doesn't have many dangers or obstacles to hinder player's advancement. The terrain is rugged, and the real difficulty of these levels consist of mostly time-based challenges and building up combos with fireworks.

There are a total of 8 levels situated in the plains area. The first 3 practice levels before the actual story mode begins, plus the next 5 levels after first cutscene. After the cutscene, the theme is shifted to bamboo forest.

Objects in plains:

- cottages
- wells
- fences



The Bamboo Forest

The bamboo forest is more colorful and vibrant than the previous level, and has a lot more obstacles for the player to dodge. The most common objects in the level are small bamboo thickets the player can circle around using the split ability. The difficulty of forest levels are lifted as the story places much more fireworks to blow up in the forest theme.

Player spends 10 levels in forest area. There are going to be 2 cutscenes before the theme changes to mountains.

Objects in forest:

- shrine
- buddha statue
- stonehenge (wat)
- bamboo thickets
- bushes



The Mountain Pass

The player enters mountain level after the cutscene where the huns notice a green flash in the distance. In the mountain scape the terrain is rocky, and the difficulty is formed of booby trapped fireworks the huns leave behind.

Objects in mountain:

- rock formations
- booby traps
- tents

An example of Gameplay

This example of gameplay takes place in sixth or seventh level of the game. Player enters the level. Camera zooms to the player, showing the whole level first. At this point player gets a general idea where different fireworks are located. Timer starts to count backwards and dragons are able to start moving after “get ready, set, go” fades off the screen. Player draws a line across the screen, guiding the dragons to move forward in level. Player notices there are two red fireworks located on both sides of a tree. Player draws a line through the tree and dragons start moving faster, maintaining their momentum from the first draw. As the dragons approach the tree, player separates the dragons using his chosen fingers, and the dragons go around the tree lighting the fuses of the fireworks. Player knows that he gets a lot more points if he can combo simultaneous fireworks, and keeps in mind that the red ones only have 2 seconds in their fuse. Player has 2 seconds to search for either green or yellow fireworks, that have 5 and 4 second fuses. He locates a blue firework, that only has a 3 second fuse, and lights it up when the firework queue on the right side of the screen shows that there is only 1 seconds left before the initial red fireworks set off. Player makes combo of 3 explosions and scores a multiplier accordingly. There is still 15 seconds game time left, and 4 fireworks to find. The player searches for the last fireworks but can't set them off in a combo. The previous combo luckily is enough to score enough points to move to a next level, and the game goes on.

Game testing

It is important to us to have an objective audience to test our game before publishing, so we will organize a game testing session using our fellow colleagues from TAMK as test subjects. During the test we will see how things like level design, difficulty curve and the sense of progress are transmitted to the player, and which parts of the game still need more sandpaper. Our test group will be approximately 4-6 persons with their own iPhones. After the test, we will have a short briefing of the experience and hand out forms with targeted questions of the game.

Extra Features

- instant replay
- when the level ends, camera zooms up and shows all the rocket explosions.
- a level with a giant firework in the middle which need to be blown up by circling it many times
- animations in menus
- stationary particle emitters
- layered cutscene animations
- mined fireworks (booby trapped)
- random voice-acted comments for dragons
- at one point the huns blow up a bridge behind them so dragons need to find an alternative route to continue their quest
- idle animations
- animations on world map