Fangs and Friends
Design Document

By:
Alessia Ianni-Palarchio
Anisha Rohra
Erika Davis
Jacob Rosenberg
Martin Briand
Pablo Gonzalez
Tonya-Leigh Escalante

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Introduction

One, a master of water and a bearer of the old magic. The other, a master of fire and a lord of darkness. These two unlikely allies will be forced to face their worst nightmare - working together - in order to escape their eternal confinement. Will the mage and the vampire combine their supernatural abilities to defeat the horde of obstacles that await them, or will their irreconcilable hatred lead to their mutual demise?

Fangs and Friends is a co-op puzzle game focused on short, asynchronous game-play in order to solve puzzles and continually work towards escape.

Team Roles

Alessia: Lead Level Designer and Producer.
Anisha: Project Manager and Creative Writing Lead.
Erika: Lead Environmental Designer and Modeller.
Martin: Lead Effects and Lighting Programmer.
Pablo: Lead Assets Animator.
Tonya: Lead Character Designer and Animator.
Character Bios

Mage

Our water-elemental mage is a creature of magic and purity; they’re well-known for their kind soul and good-naturedness. Their sole source of bad energy exists in their relationship with the Vampire - filled as it is by petty anger and an irrational need to irritate.

However, in order to escape the dungeon, the Mage must learn to resist the urge to prank and annoy the Vampire. Instead, they must use their renowned kindness in order to help the Vampire so that they can escape together.

The initial reaction to the Mage may be one of wonderment and joy due to their bubbly and enthusiastic nature. After time however, the player may discover some secrets about the mischievous and competitive nature hidden below the Mage’s surface.

Vampire

The lord of the night, our vampire, has fire in his undead soul and a burning desire to rid the world of the infuriating Mage. His passion for drinking blood is only matched by his passion for knitting black capes - though don’t let him know that you know that.

While working with the Mage will be challenging enough, the Vampire will face a greater internal struggle in learning how to accept help and give help in return, for it is only through teamwork that the two stand a chance at surviving their eternal doom.

While the Vampire appears dark and grumpy at first, and the player may struggle to connect to his extreme cynicism, it will soon become clear that they are truly charming and adorable on the inside. After all, how dark could the Vampire be when they frequently say things like “My favourite colour is black - like my soul”.

Story Plot

The game begins with a short textual cutscene, briefly introducing our two protagonists and their current predicament. From there, they begin the first level, separated by water and unable to leave without working together. While providing minimal help with regards to the solution to the puzzle, we will include UI elements and flavour text that neither involves a cutscene, nor an interruption of their gameplay. Once the first level is completed, there is a brief exclamation about how the characters managed to escape by using their combined abilities, before a transition is made into the next room and therefore, the next puzzle.

As the flavour text will slowly reveal in the first three levels, the characters have been trapped in the dungeon, but they do not remember how or by whom. However, whoever has trapped them must be aware of their animosity and therefore, would not have expected for them to be working together in any form.

By the end of the first stage, the players will have an understanding of how the characters were trapped and a hint at the reasoning for their dislike of one another, exclusively through non-interruptive text in some part of their screen as they play. They then ascend to the next stage, at which point there will be a brief text-based cutscene, encouraging the player of their progress and announcing that they have arrived at stage two, and the difficulty will likely increase.

This pattern continues stage by stage, with each stage revealing more and more about the abilities of our characters, their past interactions with each other, and their quirks and personality traits. The hope is that the players slowly become more attached with their characters, and thus more involved in their quest to escape their prison.

Our game ends with a final confrontation as our protagonists face the very thing that imprisoned them in the first place. This final boss battle will test all those cooperation-based skills that the two characters should have developed throughout the game. As they claim victory by defeating their enemy, the two will be free once more, walking hand-in-hand out the door to the castle and into the moonlight.
Gameplay Description

Fangs and Friends is a two-player game in which the players use controllers to play their respective character, the Mage or the Vampire, and work together to solve puzzles. By using their abilities and movement capabilities alongside their interactions with one another, the players will have to find their way out of each level. The level may take the form of a room that they are stuck in, a bridge they must pass, or any other part of the castle-like dungeon in which the characters are trapped.

In order to solve the puzzles, the players must be cognisant of their respective abilities, their interactions with one another, and the environment around them. The Mage can use their water elemental ability to freeze objects such as water while the Vampire can use their fire elemental ability in order to destroy objects such as wooden doors. Both can push and pick up objects, including one another, and both can target their abilities at one another in order to create interesting interactions.

However, both characters have limitations that make the puzzles more challenging and make cooperation essential. The Vampire is unable to visit areas with sunlight, while the Mage is inhibited by a reaction to a very particular type of poisonous flower as an example.

The players will learn to not be scared of failing (or of “accidentally” hitting one another), as any death will result in an automatic regeneration to the beginning of the level, and thus, an infinite amount of chances to try and try again.
Artistic Style Outline

The art style for the game will be slightly gothic but simple, with low-poly 3D models of stone architecture characterized by Ghibli-inspired painted textures. The style aim is to be fantasy-esque, invoking a sense of adventure and curiosity to the viewer. The colour scheme is slightly colourful but not overly saturated and will be relatively dark to fit in the setting of a cave, with some areas of bright light for contrast. The stone environment consisting of many arches and pillars will be lit with various lamps. Some areas will have moss and foliage which will be especially prominent in the areas of light.
Characters are gender neutral, elements of their clothing covering their faces. The mage’s clothes are very flowy which allows for magical animations when casting spells. Its bright, iridescent cloak allows the character to stand out from the background. The vampire, similarly has its signature collar and bright red coat.

We took into consideration some feedback to stylize the two characters further from our initial pitch. These turnarounds are how we envision stylizing the characters - they have stronger silhouettes and match up to our environment, while also reducing the load
on animations and modelling needed for both of them. Their colour palettes are still kept to traditional red and blue, to align with their abilities and to ensure it is easy to tell for each player which character is theirs.

Moodboard and Inspiration

Following are a number of works that were looked to for inspiration in the art style:

![Moodboard Images]

For the environment, we combined the fantastic elements with very gothic architecture alongside glowing crystals, buttresses, stairs and arches. The atmosphere is dark and unwelcoming, but mystical.
For the colour scheme, we chose to lean toward a balance between warm and cool colours, with mid tone textures to mimic traditional paintings such as what can be found in studio Ghibli films, saturated with in game lights. Ni no Kuni is a great reference for the artstyle of the environment, as it utilizes traditional-esque painting that work harmoniously with in-game lighting over fantastical structures. However, the game will be overall darker to fit the underground setting, and there may be higher contrast areas to show the clear architectural silhouettes against beams of light.

For the characters, we opted for a low poly, minimalist aesthetic with flowing capes.
Control Scheme

Systematic Breakdown of Components

- 3D renderer
- Load system
- Physics system
- Autosave system
- Respawn system on death
- Player UI
- Main Menu UI
- Settings UI
- Collision system
- Audio system
  - Level audio
- Interaction audio
- Lighting system
  - Differentiate between atmospheric light and hazard light
- Interaction system
  - Effect of interaction
  - Display of interactable elements
- Spell-casting system
- Camera change effects - Cinemachine and Post-Processing stack
- Particle system - built in Unity to generate

**Spellcasting**

These GIFs demonstrate the abilities of our characters as they are currently animated. The mage has an ice ability, the vampire has a fire ability.

**Environmental Interaction**

The vampire is able to melt the ice block, and able to push it. The mage is able to make the ice block grow, and is also able to push it.
The vampire can light up the candles, while the mage can turn them off. Both characters are able to interact with water to differing effects, as well as the platforms.

The vampire will die if exposed to sunlight. However, they can use shadows to their advantage in order to navigate sunny areas.
Player Interaction

The vampire can pick the mage up and throw them, and vice versa.

Asset Breakdown

Art Assets

3d assets
Player Characters

There will be two player characters:

1. The vampire
2. The mage

They each have their own models, as depicted in the art style overview, and they each have the same number of planned animations:

1. Walk cycle
2. Spellcast
3. Idle animation
4. General interaction animation - reach out to touch
5. Death animation for non-fall hazards
6. Freezing/Burning (for the vampire and mage respectively)
7. Fire and ice collision

Player animations are being completed in Maya, as are the character models. Texturing will be done in Photoshop and Illustrator.

Models

The least modular component of each level is foreseen to be the base floor tiles. Because the layouts of the levels are pre-determined, and shaped according to the puzzles, these will have to be done individually.

The rest of our models are intended to be extremely modular. Many of these models are intended to be re-usable items, such as doors and walls. These can be simple, and re-textured to suit the placement in the environment. An example being that regular, burnable doors could be textured like wood, while silver doors, which are unburnable and cannot be touched by the vampire, use the same model but in silver. These also include things such as buttons, platforms, traps, and water.

Other items are miscellaneous. They provide no real impact on the puzzle itself, but do add to the feeling of the world to make it plausible. Items like these, included in the rough sketches above, can provide flavour text to say something
about the space around them, but also are there to populate the world and make it feel lived in.

These will be modeled in a combination of Blender and Maya, and textured using Illustrator, Clip Studio Paint and Photoshop. Most animation states are being done with tweens and simple transformations, or shaders.

Some examples of these are:

- Paintings (same frame model, different flat texture used for the ‘painting’ inside
- Decorative weaponry
- Cabinets
- Skulls (both vampire and human)
- Crystals, as natural formations in the underground space
- Mosses and foliage
- Tables, and furniture
- Chains and restraints
- Crates and barrels
- Books
2d Assets

UI

The UI in Fangs and Friends is intended to be very minimal, as shown in the mockups below.
Inspired by the usage of fonts in the game Undertale to provide characters with their own ‘voice’ when lacking a voice actor, both characters each have their own font that sets the overall tone of their voice, as well as instrumental sound unique to them. These are also depicted in colour, and each set of text will have the character’s icon displayed next to it for an easy indicator of who the text belongs to. The text will be largely flavourful and therefore non-essential to those interested in reading it. However, for those interested in storytelling and character development elements, it will provide some flavour and depth to our characters.

To indicate which objects can be interacted with, they each have their own highlight indicator. This gives the player some feedback as to what object they would be affecting with their actions, as well as a prompt to remember which buttons can be used on that object. User testing is still needed to find the style of indicator that conveys the message the best to the player.
Both of these will be done using flat icons/2D assets only. Lastly, the UI will contain a single icon used to depict saving after each puzzle is completed.

Backgrounds

Hand drawn blurred backgrounds will be placed as the skybox to add refracted light to the elements within the environment and enhance the game’s fantasy atmosphere. This technique is inspired by the blurred backgrounds used in Hollow Knight. Not only will this compliment the models within the game, but it will provide some areas of light to contrast the darker structures to clearly exhibit their gothic forms.

Text Assets

There are three foreseeable types of text assets to be used in Fangs and Friends:

1. Tip text - this will hover over the actionable object in question, providing small hints (such as the button itself that needs to be used)
2. Flavour text - non-essential text provided to the player as a result of their interactions with the world, and each other
3. Menu text - any UI elements part of the menus will require brief text descriptions

Sound Assets

For the music of Fangs and Friends, Jacob is taking an approach that attempts to preserve the “spooky” Transylvania-esque sound associated with vampires while also considering more “magical” and synthetic sounds. In the main theme, this is accomplished mainly by combining minor harmonic modes with frequent more tension focused accidentals. The instrumentation pays homage that of classic Transylvania films, with a hint of synthetic sounds to add a magical feel. The sound effects associated with the game are intended to feel surreal, so most of them will be a combination of real sounds and synthesized sounds.

One song of the soundtrack can be found here.

Our list of sound assets is made up of:

1. World songs
2. Spell sound effects
3. Environment sound effects
   a. Interaction-based sounds (with objects, each other, etc.)
   b. Event-based sounds (when a level is done, etc.)
Level Design

All of our levels were based around a few core concepts:

1. They should be short, which makes death not too punishing
2. They shouldn’t teach the player too many things at the same time, if anything new was introduced to the level
3. There should be an equal amount of participation for both players. None of the levels were intended to feel one-sided when it came to completing them.

While making our designs, levels were intended to be a room or set of rooms that a single puzzle was comprised of. Each stage would be a ‘floor’ of puzzles. At the end of the stage, the player was intended to advance to the next one by moving to a different floor. That next stage would then contain the next set of levels.

Our first five levels are all intended to be stage one of Fangs and Friends, with level five moving to the next stage.
Level One
Level One is our introductory level

As our first level, we introduce the main mechanics of each character. Ice for the Mage and fire for the Vampire. We also introduce our first trap, water. If either player falls into the water, they die. The Mage is expected to use his Ice spell to freeze the water and walk to the other platform, where he will encounter a door he cannot unlock. His only remaining option being helping the Vampire over the water, the Vampire will burn the door down, letting them progress to the next level.
Level Two

On this level, the players will encounter two blocks of ice, which they’re expect to push up the slope and onto the buttons. If they try to go straight for the door instead, they will get impaled by the spike traps on the floor and die. Alternatively, if they try to use their spells on the blocks, they will discover the Ice makes the block bigger, while the Fire makes the block smaller until it melts, and a new one respawns.
Level Three

Level Three introduces the throwing mechanic and moving platforms.

The way to solve this level is the Vampire throws the Mage over the edge, so the Mage can step on the button and lift the platform so the Vampire can go through. Then they reach a second platform, which the Mage can use Ice to slow down, making it easier to traverse.

Another way to solve this is for the Vampire to throw the Mage over the gap once the first platform is raised, the Vampire will still have to walk through the moving platform, but the Mage won't have to.
Level Four introduces the players to multi-objects buttons. These buttons move two or more platforms at a time, and it is built so that after pushing a button, the player will get stuck on the platform with the button, and their friend will have to find a button that frees them.

The correct order of buttons to push is 43125, going from left to right. Another mechanic introduced is the weakness to silver of the vampire. Here, the silver door can only be opened by the mage. This means that the mage needs to be the one to initiate the first button, or players will be stuck as the vampire dies to the door.

We will be modifying this level to include the use of the abilities and to make the level more contained.
This level goes back to the ice cube mechanic learned earlier on. To finish the level, players need to bring an ice cube to stand on the button, to raise the elevator. Intuitively, we expect the player to first try to push the ice block while casting ice as the mage, but the block will grow too big for the hole in the wall, resulting in the players falling in the water.

There are several ways to solve this level:
- Have the mage make a path, while the vampire pushes the ice cube behind him
- Have the vampire melt the ice cube until it becomes pickable and then have the mage make a path for both players
- Have one player launch the other, while they are holding the ice cube, then throwing it in midair to land on the other side.
Suggested Game Flow Diagram

Level Flow
Each level has the same set of interactions we expect the player to take. Both players start the level at the same time, and regard the environment around them.

Interaction with an object will take place. Either they will:
- Learn something new, and repeat
- Fail, and be sent back to the level start
- Success, and advance to the next level, where the cycle begins again

Game Flow
The full game flow is very simple. With minimal UI and thus, minimal out of game changes and lack of menus, the full game flow is built of stage and level loops.

The player enters the stage of the game they are on, and then continues to beat levels. When all those levels have been beaten for that stage, the player advances to the next stage and repeats the cycle again, until they decide to quit the game.
Suggested Project Timeline

**March 7 - Post-Playtesting Presentation:**
Level Design - Anisha/Pablo:
- Improvements to current levels
- 2 new levels to use current concepts
Audio - Jacob:
- Death sound
- Picking up sound
- Pushing sound
Animations - Tonya:
- Spellcasting
UI - Martin:
- Highlighting on characters complete
Models - Alessia:
- All necessary elements modelled - ground, doors, archways, etc.
Textures - Erica:
- All necessary models texturized

**March 14 - Ubisoft Presentation:**
Level Design - Alessia/Pablo:
- Transition levels to make one cohesive stage
- Combine all scenes into one
Audio - Jacob:
- Complete level sound
- Layered instrumentation of first stage music
Animations - Tonya:
- Push
UI - Martin/Anisha:
- Highlight on all objects completed
- Complete all text UI
Models - Tonya/Erica:
- All “flavour” objects modelled - skulls, cages, etc.
Textures - Erica:
- All flavour models texturized

**March 21 - Post-Playtesting Sessions:**
Level Design - Anisha/Alessia:
- Changes based on feedback
Audio - Jacob:
- Running water sound
- Hitting water sound
- Unique character sound
  Animations - **Tonya**:
  - Pickup

**UI - Martin/Pablo:**
- Improve the look of hovering buttons based on feedback

**Models/Textures - Erica/Tonya:**
- Improve based on feedback

**March 28 - Beta Demo:**
**Audio - Jacob:**
- Title screen audio, end screen audio
- Button click sound

**Animations - Tonya:**
- Death

**Level Design - Pablo/Alessia:**
- Title and end screens perfected
- Auto-Save functionality

**UI - Martin/Anisha:**
- Quit and Restart options
- Implement beginning cutscene

**April 5 - Stretch Goals:**
- Enemy boss level - **Anisha/Pablo**
- Interesting skybox - **Erica/Tonya**
- Players choose characters at beginning of game - **Martin**
- Dual-ending choice - **Alessia**

### Additional Ideas and Possibilities

**Boss Fights**

One idea we had come up with in the initial stages of planning was to have boss encounters that would need to be solved via puzzle completion, rather than violence. The idea here is that we implement a basic boss that has predictable, repeated motions and rather than defeat them, the characters must avoid them. This will involve predicting the boss’ movements and quickly solving mini puzzles in order to avoid being hit by those movements. These mini puzzles will incorporate the concepts they should have learned throughout the earlier levels; using ice to walk over water, avoiding spike traps, and throwing one another around, just to name a few.
Dual Ending Choices

Player faces a dilemma: exit with their trusty companion or betray them. There would be 2 ways of completing the level, one which requires the players to work together and another which allows the player to choose to exit without the other. When one player reaches a certain point in the puzzle, they get a prompt to make the choice.

Player Choice of Character

At the beginning of the game, we could allow the players to choose their characters, providing them with a brief description of each and thus giving them the chance to choose the character they feel more connected to.

Introductory Cutscene

A short series of illustrations and text to give the player a introduction and goal to playing the game.
References and Works Cited

“Environment Concept: Crystal Canyon.” Lyraina’s Artblog, 8 Jan. 2015, lyraina.wordpress.com/2015/01/12/environment-concepts-2/.


