



Phantastic Casino

Application Goals and Design

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Document authors: Johnnie Meijer
Christiaan Vinazza
Leon Willens
Jens Gantz

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1 Introduction

The basic concept of Phantastic Casino - and its first game **Spin your Soul** - is to provide a solid mix between a casino and Phantasma dApp marketing.

The aim is to create a Phantasma themed casino where players can win both Soul and NFTs from first and third party applications and games on Phantasma Chain.

The marketing and Phantasma dApp exposure aspect mainly consists of the following:

- NFTs can be showcased and won by players in the casino through several means
- Advertisements can be placed in the dynamic background of the main games
- Minigames: miniature and simplified versions of existing games on Phantasma Chain

In short, the goal of the application is to function as a marketing device for teams developing for Phantasma Chain as well as a fun game for casino players and users of Phantasma applications alike, bringing together and connecting the whole Phantasma Chain ecosystem.

2 Goals, Objectives, and Rationale for the Application

2.1 Business Case/Use Case

The goal is to create a casino & marketing application that is connected with Phantasma Chain and strengthen the network by:

1. Involving existing and upcoming applications by marketing them in the game, creating more awareness for the Phantasma and third party applications and games. This includes, but will not be limited to, the following aspects:
 - a. Advertisements in game on background billboard(s) and a moving zeppelin.
 - b. Showcasing NFTs from other applications and games that can be won by playing the game.
 - c. The game's setting will be designed to exist in and look out over Phantasma City, bringing extra awareness to Phantasma Chain and its first party applications.
2. Increase network activity with direct and indirect transactions done by players of the Phantastic Casino.
 - a. Direct: spending SOUL to play; winning SOUL and NFT prizes.
 - b. Indirect: Phantastic Casino team buying NFTs for prizes and players selling their NFTs prizes in the Phantasma Marketplace.

Besides being able to sustain continuous development, part of the game's SOUL profits will be used to buy NFTs on the marketplace for in-game prizes.

2.2 Advantages of Blockchain

We propose a system where most in-game aspects will utilize blockchain. For the Phantasma Casino, there are several advantages of blockchain over using a traditional system.

1. **Trust:** The player is always in control of their own wallet and assets. This is especially important in the context of gambling. Blockchain allows us to provide players with a fully trustworthy casino application.
All transactions will be recorded on the blockchain, giving players the ability to check on the fairness of Phantastic Casino and keep track of the flow of funds. The application will also use blockchain data to keep track of player statistics, e.g. SOUL spent and won.
2. **Ease of use:** Players can simply login with their cryptocurrency wallet, there is no need to deposit or withdraw funds of an account in-game. The game will always show the player's total funds when playing one of the casino games.

3. **Non Fungible Tokens:** Blockchain allows us to implement NFTs. NFTs are a great application of blockchain and allow players to win prizes that are either usable or collectible items - both in Phantastic Casino and in other applications within the Phantasma ecosystem. The player has the choice to use, keep or sell the items on the marketplace.

The interchangeable feature of NFTs adds further value to the use of blockchain.

2.3 Blockchain Scope

As this is a casino application where players bet with cryptocurrency (SOUL), all in-game transactions will be on the blockchain. A list of the features that will be on and off chain:

On chain

- Players have to connect their Phantasma wallet in order to play. The game will then show current balance in SOUL when playing the game.
- All bets are placed in SOUL, with every spin leading to several blockchain transactions. Any SOUL lost by the player will move to the Casino Wallet and - in case the player wins - SOUL will be transferred from the Casino Wallet to the player's wallet. It will immediately show up in the player's current balance.
- NFTs can be won in the minigame (M) or special minigame (S). This is a great use case of blockchain and will add value to the Casino gameplay experience. More information on this can be found in the NFT section of this document.
- Energy (KCAL) is needed to fuel each of these transactions.

Off chain

- The **achievements** will solely be account bound badges. They are not NFTs, as we don't think personal achievements should be transferred to other players.

2.4 Functional Requirements

User Requirements

Players will need to set up a Phantasma Wallet in order to play the Casino game. This is necessary because SOUL is the standard in-game currency used for placing bets. It is also needed to make use of the games' NFT features, as these prizes can either be sold in the marketplace or used in other applications, both of which are connected to the Phantasma Chain.

Having to set up a wallet means that players need to have a basic understanding of creating cryptocurrency wallets and know what it means regarding their own responsibility in taking care of the account and its private key.

For players unaware of this process in the cryptocurrency space, a manual will be written in order to make the process as smooth as possible for potential users.

***To be discussed:** We do not yet know what the minimum system requirements will be to play the game on either mobile or desktop. We estimate it won't be a 'heavy' game though, which means basic systems will be able to launch and play the game.

Business Requirements

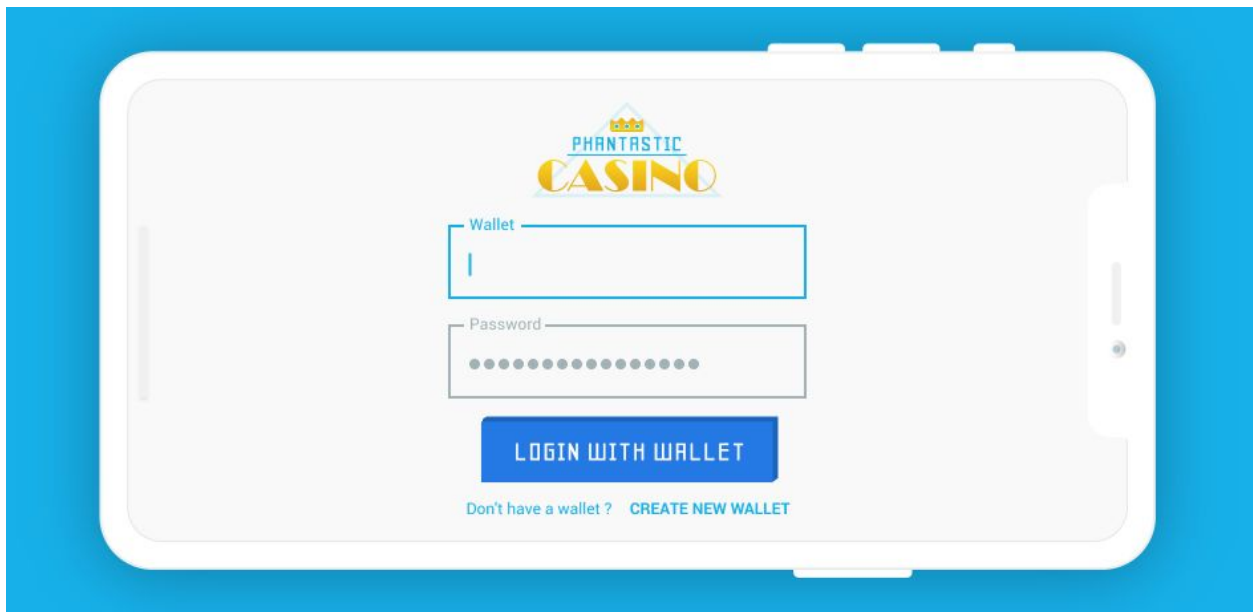
- We will need a server-side Javascript Node.js server, which we will use to hold the user wallets, the casino wallet and the connection to the blockchain. This way we can easily perform SOUL transactions for all activities.
- Client-side C# Unity game application which we can deploy for all possible platforms, including mobile (even iOS is possible here).

3 Game Design & Mechanics

The current game design is prone to change. The designs and artwork are a work in progress. The pictures are added to provide a sense of direction to what we have in mind; providing players with the Phantasma feeling in a casino setting.

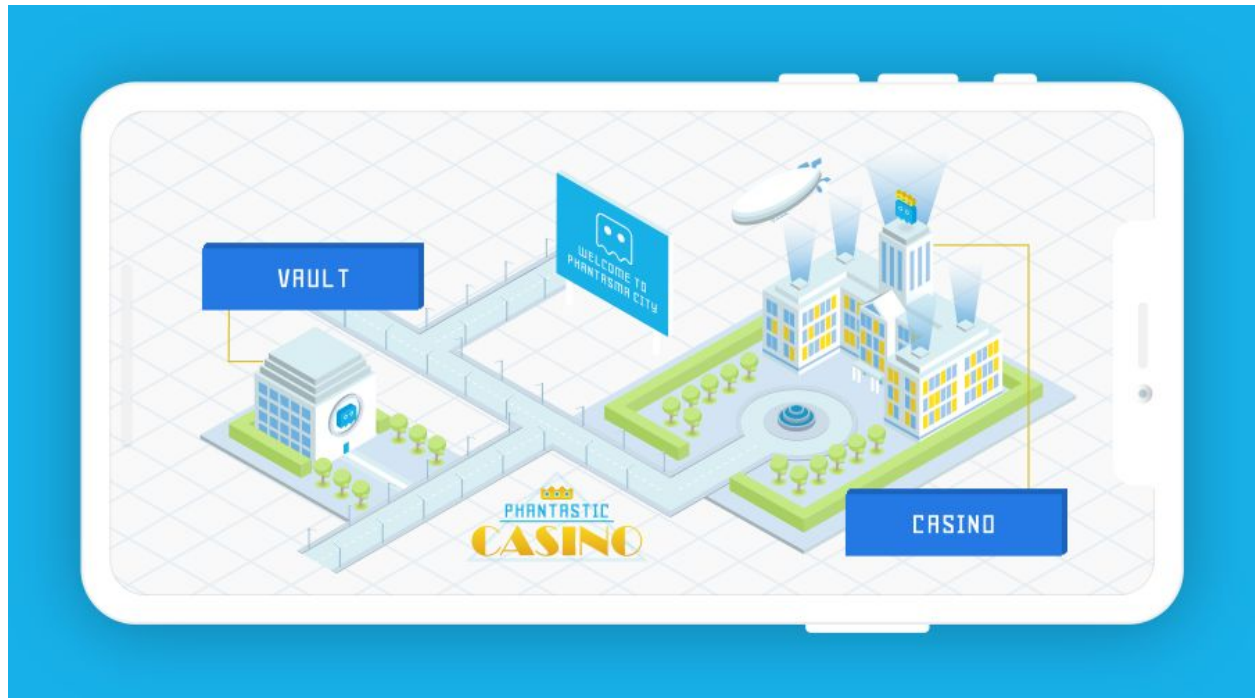
For more detail on the game design and user interface, make sure to see **attachment 2**, which is a click dummy video.

3.1 Login screen



After a full screen Phantastic Casino logo, the login screen will appear. This will allow the player to login with a *wallet* and a *password*.

3.2 Selection screen



Here, we have an overview of **Phantasma City**. Before elaborating on the Vault and Casino in the following subchapters, this text will explain the aspects of the 'selection screen' design and mechanics in a nutshell:

- a. **Start Game** by clicking on **Casino**; a button connected with our casino building. The player is now in the lobby - with the same isometric design - and is able to choose a room with one of the featured casino games. Our first game will be **Spin your Soul**, with **Poker - Texas Hold 'Em** coming out after the initial release.
The Spin your Soul room will look out over Phantasma City - a dynamic background - with a view on 2 **billboards** and a **zeppelin** flying around for **advertisements**.
- b. **Enter the Vault** by clicking on **Vault** in Phantasma City.
The vault is where the player can check out account profile, leaderboard and achievements. More information on the Vault will follow in a separate subchapter.

3.3 Spin your Soul



The first game of the Phantastic Casino is called Spin your Soul. It's based on money wheel games. The game will have its own design, partly derived from the design of Phantasma Town and the Phantasma homestyle. We want to convey the Phantasma feeling, so players *feel* they're playing a game on Phantasma Chain. This is part of our goal to strengthen the Phantasma ecosystem and bond players with the Phantasma brand.

Spin your Soul will consist of the following game mechanics and designs:

- a. **The Wheel:** The wheel's mechanics are based on *money wheels* found in other casinos. It will have some additional features and - of course - its own Phantastic Casino style design. Some of the specifics are as follows:
- b. **Setting and background:** Spin your Soul is located high up in one of the buildings on the edge of Phantasma City. The large window gives a great view of the city, but its main function is to make room for advertisement of other applications and games on the Phantasma Chain. Teams will be approached by us, but can also contact us for in-game advertisements in exchange for NFTs or SOUL. Examples that are implemented:
 - i. Rooftop for advertisement/exposure. For example showcase a Nachomen arena on top of building the player looks down on.
 - ii. Billboard: static asset on the side of a large building.

iii. Zeppelin: dynamic asset flying around the city.

- c. **Balance, bets and prizes:** The lower part of the screen is used to see wallet balance and to place bets. The player can bet a maximum of 50 SOUL per spin and can choose to add 1, 5 or 10 SOUL per click on a bet. The player can place bets on multiple numbers at the same time.

Prizes will mostly be multipliers of the bets placed on the corresponding numbers. Two different bets of x45 exist, distinguished by color. A table of the winning boxes:

Possible wins	Boxes
x1	24
x3	12
x5	8
x10	4
x20	2
x45	1
x45	1
Total Boxes	52

3.4 Poker - Texas Hold 'Em

3.5 The Vault

The Vault will be accessible from the selection screen. It will function as a place to look at the leaderboard and gained achievements. The vault has the following aspects to it:

- a. **Leaderboard:** this will have the top 10 players and player statistics. A place on the leaderboard will be based on the total amount of SOUL won during the ongoing month. At the end of every month, the leaderboard will be reset.
The leaderboards will show player names and avatars. Setting an avatar will be an added function of this game.
Next to the leaderboard, the player will find their own statistics. The statistics will show - amongst other stats - current rank, SOUL won and NFTs won.
- b. **Jackpot:** The top 10 in the leaderboard will win a certain percentage of the jackpot each month. Just like the leaderboard itself, the jackpot will reset on the 1st of each month. The jackpot is filled from the Casino Team Wallet; for every SOUL spent by players of the casino, 5% is added to the jackpot. This amount is independent of the player winning or losing a bet. **Sponsored jackpots will have the probability for NFT win for top 3 leaderboard.**
- c. **Achievements:** Trophies are showcased in the vault, which are designed to be badges you get after completing achievements. They will range from bronze to silver and come with prizes associated with the difficulty of gaining the achievement.
An example:

Master spinner

Bronze	/ 500 spins
Silver	/ 1000 spins
Gold	/ 1500 spins
Diamond	/ 2000 spins

Completing this collection of achievements will also reward you with bonus rewards.

- d. **Profile: (Need to expand on this:)**
 - Change character

4 Extended Development

5 Attachments

5.1 Click Dummy Video

Attachment 1 shows the user flow we have in mind in an animation. This is not a final version, but creates a feeling for the user experience we're proposing.

5.2 User Interface Architecture

See Attachment 2 for the wireframes. This shows a systematic overview of the UI/UX.

5.3 Team Data

Attachment 3 is an Excel sheet that contains team and project data, such as a link to our Github. It also shows the team member's names, locations and roles in the team.

5.4 Financial Flow

Attachment 4 shows the full financial flow for all incoming and outgoing funds.

5.5 Roadmap

Attachment 5 is a roadmap that shows we want to have the first game live and working in Q1 of 2020. We might be done sooner. We prefer taking the approach of underpromise and overdeliver instead of having to announce potential delays.