

Bouncy Coin

Re-engineered Games of Chance

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Abstract

In 2014 Americans spent 70 Billion Dollars playing Lottery Games in 44 of 50 states, playing games of chance that were rigged with very low winning probabilities. Currently, in California to play Super Lotto Plus a player chooses five numbers from 1 to 47 and one additional number from 1 to 27. The odds of correctly choosing all 6 numbers and winning the grand jackpot is 1 in 41,416,353, which is equivalent to guessing a single number out of 41,416,353 possibilities.

Most people who engage in these games do so out of desperation, societal conditioning and misinformation about odds. The Lotteries however, understand all too well the odds of winning and losing.

There is a very dark side to Lotteries. Lotteries represent regressive taxes on financially disabled and disadvantaged groups who are the most aggressive ticket buyers. A late-1980s Duke University study found that the poorest 1/3 of households bought more than 1/2 of all weekly lottery tickets sold¹.

Gambling addiction is a public health problem. It has been estimated that approximately 5% of all adults have symptoms of problem gambling². Neural states measured in problem gamblers have been compared to neural states invoked in cocaine dependence. Specifically, problem gamblers experience problems with impulsivity in making healthy gambling decisions. Lottery gambling has shown to have purchase patterns consistent with addiction³. In fact, research has shown that up to 15% of lottery players have symptoms of problem gambling⁴

What is needed for the good of people everywhere are social 'engagements' that provide all participants the ability to create and manage risk and on terms that they control if they choose to engage in gambling-like behavior.

Bouncy Coin will stop the hemorrhaging of cash to State-run Lotteries by offering socially networked engagements where participants can win small amounts of cryptocurrency and/or prizes and where they create and control the odds of their engagements.

¹ Moran 1997 *Public Integrity*, Fall 2006, vol. 8, no. 4, pp. 367-379

² Potenza, 2008

³ Guryan & Kearney, 2010

⁴ Grusser, Plontzke, Albrecht, & Morsen, 2007

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Business Motivation

Bad for Society

Numerous studies indicate that State Sponsored Lotteries impede the financial health of the poor which is bad for the overall health of society. The lottery's demographic is skewed toward minorities, the less educated and the poverty-stricken---those with the least ability to pay for lottery tickets. The lottery has achieved mixed success with its major goals and targets the disadvantaged. Yet this legalized form of gambling is not only regulated by the state, it is state-sponsored.⁵

Business Opportunity

We see US State Sponsored Lotteries as a business opportunity for the introduction of games of chance that empowers players by allowing them to set parameters of their engagements and on terms that they create and control.

Our Offering

Putting players in control.

We propose to create several socially networked client-side interactive engagements as replacements for casino-style money betting, that empowers users to make intelligent and conservative money decisions. Bouncy Coin will change the misaligned purchasing behavior of buying Lottery Tickets by introducing socially aware fun engagements that equates monetary success to winning small amounts of prizes over extended periods of time and where users create and manage their own risk.

⁵ The State-Sponsored Lottery: A Failure of Policy and Ethics, Elizabeth W. McAuliffe
<http://stoppredatorygambling.org/wp-content/uploads/2012/12/The-State-Sponsored-Lottery1.pdf>

Business Landscape

Competitive Analysis

There are three classes of competitors to Bouncy Coin.

1. US State Lotteries.

State Lotteries are monopolies that benefit from physical points of presence and convenient accessibility that is difficult to compete against even for online gambling companies. State Lotteries leverage street presence within markets and liquor stores using colorful flashy signs that make it difficult for normal consumers to ignore. It is no coincidence that Lottery Tickets are usually sold at the same locations as other addictive products, alcohol and tobacco. *Since States monetize so much from this business they have no incentive to offer clients the ability to create and set their own odds in these engagements.*

2. Tribal-owned Casinos

Tribal-owned Casinos fall into the same category as regular card house casinos but operate on Tribal land. Native American gaming comprises casinos, bingo halls, and other gambling operations on Indian reservations or other tribal land in the United States. Because these areas have tribal sovereignty, states have limited ability to forbid gambling there, as codified by the Indian Gaming Regulatory Act of 1988. As of 2011, there were 460 gambling operations run by 240 tribes, with a total annual revenue of \$27 billion.⁶ *To play these Tribal games you must physically be on Tribal land; Tribal casinos do not operate Internet-based betting.*

3. Foreign-owned Online gambling companies.

Bouncy Coin's online competition comes from over 1,000 gaming companies that enjoy a 24 x 7 online presence. Several blockchain style lottery games have appeared recently that implement the State-style Lotto game on a blockchain architecture. Specifically, blockchain is used to expose (in source code) Random Number Generation (RNG) algorithms. RNG's are used by online casinos in dice rolls, card shuffles, roulette spins and essentially any gambling process that requires a mathematically bounded but uncertain outcome that is not known beforehand. These online casinos offer all traditional casino games in the browser and/or on mobile devices.

⁶ Wikipedia, https://en.wikipedia.org/wiki/Native_American_gaming

An application to note is 'Etheroll' <https://www.etheroll.com/>, that has taken a physical 100-sided die and implemented a roll in software on the Ethereum blockchain. This has *some* similar aspects to our offering. Etheroll does not however have a 'queue size'. With Etheroll, the user is playing 1 on 1 against the casino and does not interact with other players. Our offering requires that people aggregate into similarly sized groups with the same desired maximum prize, what we call the 'queue'. *This aggregation into similar group sizes may also create other evolved behavioral strategies and promote real-time collaboration and discussion.*

In summary, blockchain prohibits casino cheating which is now forcing some casinos to offer 0% house-favored odds. What blockchain has effectively done is to force casinos to chip away at aspects of their controlled games giving up slight advantages in odds. The fundamentals of games however have not changed.

Bouncy Coin's goal is to re-engineer all casino games. Our MVP is a re-engineered server-side (blockchain) Lottery game interfaced with a client-side re-engineered Roulette Table. Our MVP is based on the work of Alex Villaseñor from www.casinodesign.mx

Business Channels

Bouncy Coin will operate within three distinct business channels as outlined here but will focus on building its business in channel #1 first right after the ICO.

1. **User controlled gambling applications.** This mode will be functional in any country that allows gambling. Bouncy Coin is a US Delaware LLC and does not possess a license to operate as a gambling business in any jurisdiction. Because of this Bouncy Coin will license (most likely at no cost) its first software app (based on our current MVP) to legitimate Casino operators for inclusion in their software offerings *and will not serve back content directly to public facing consumers.*

Bouncy Coin will create two components for Casinos:

- (a) A public/partner facing Ethereum API.
- (b) Casino hosted and launched off-blockchain browser-based and mobile-based apps.

2. **Contests.** Formally, a 'Zero Consideration' contest. Any Bouncy Coin application served by Bouncy Coin servers in the United States will **not** require an entry fee to engage with. This is critical because of the formal definition of gambling, to wit: ***The definition of "gambling," unless changed by statute, consists of any activity with three elements: consideration, chance, and prize. If any one or more of these elements is missing, the activity is not gambling***⁷. Bouncy Coin applications hosted directly by Bouncy Coin will be free and will thus have 'zero consideration'. Two other alternatives are to have an entry fee but no prize and one with no entry fee and no prize.

3. **Financial Services** via Financial Service Providers. This functionality will be implemented in the future.

We are currently focusing our efforts on the 1st channel opportunity for 2018-19.

⁷ Champion and Rose's *Gaming Law in a Nutshell*.

https://books.google.com/books/about/Gaming_Law_in_a_Nutshell.html?id=YFg5LgEACAAJ

Business Model for Channel #1

- Primary Model

We plan to give away our first app based on our current MVP to legitimate Casino and online Gaming companies. Bouncy Coin will hold a percent of BOUNCY tokens generated from the ICO. This represents a one-time event that will monetize Bouncy Coin for the near term.

Our subsequent apps may be licensed for cost to Casinos based on our anticipated performance.

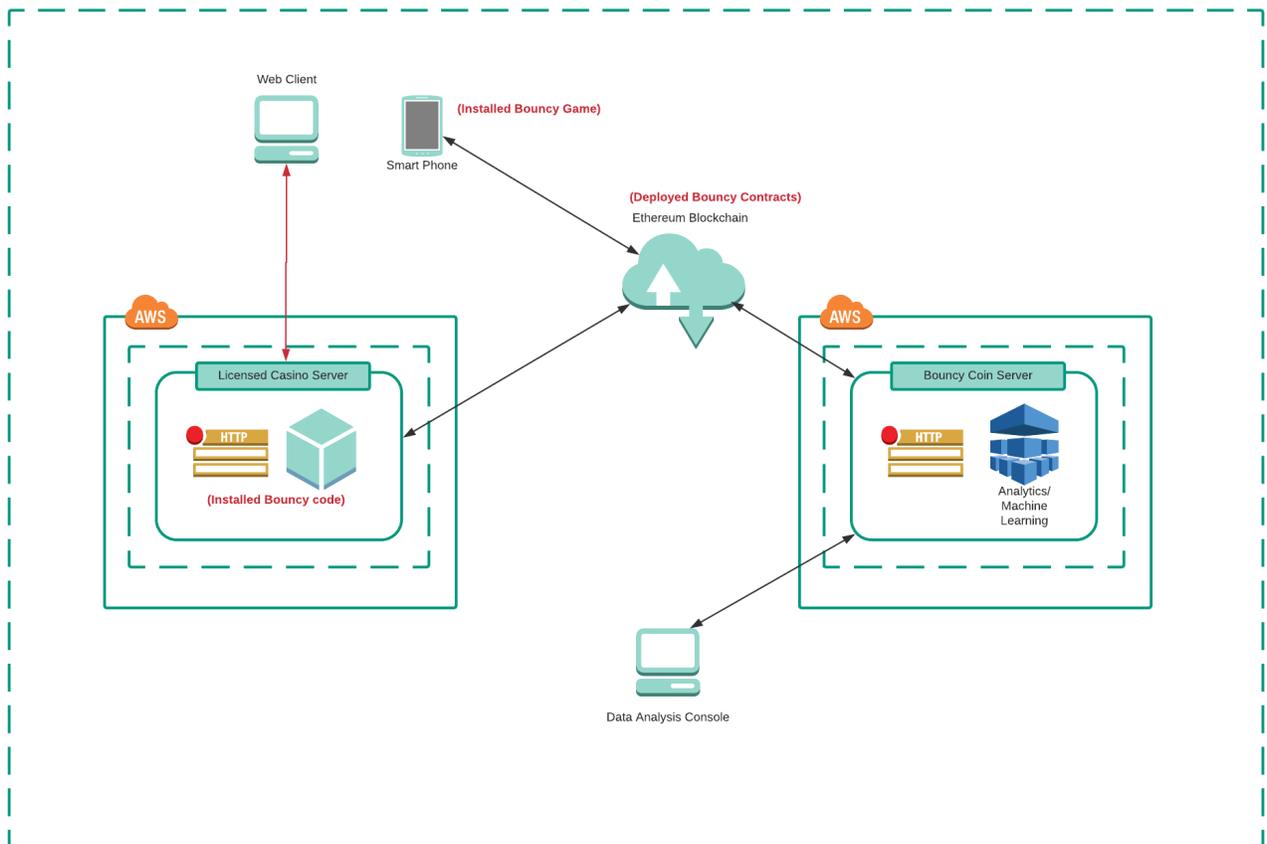


Figure 1 - Channel #1 Network Diagram

Most users will download a mobile game that will be installed on their phone or tablet. Users can also use a browser. Content is served back from the Casino Server which communicates with the Ethereum Blockchain. Bouncy Coin will run data analytics on the blockchain and present reports and data via a web browser to users and businesses.

- Secondary Models

Advertising Revenues

Bouncy Coin will integrate an Ad Exchange to promote products within the client-side application. For example, in our MVP we will advertise on the modified Roulette table.

Business Model for Channel #2

In this case Bouncy Coin serves back content to web-enabled browsers and manages the downloading of any mobile client content directly without a licensed casino business partner.

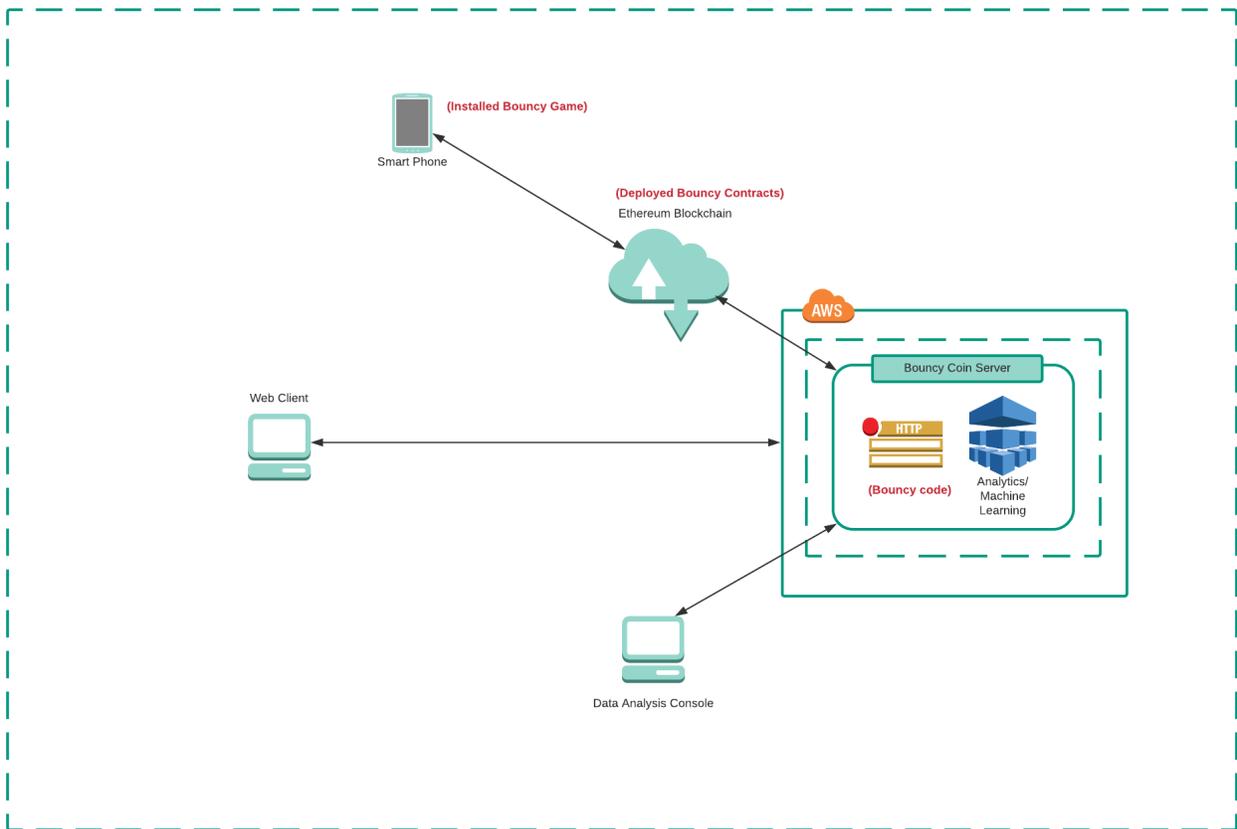


Figure 2 - Channel #2 Network Diagram

Legal Aspects of Bouncy Coin

Bouncy Coin is a registered LLC and is not a Casino or licensed to operate in any country as such. Bouncy Coin LLC is a software developer who grants software licenses to other parties some of which are legitimate gambling businesses.

Bouncy Coin has legal license to use and distribute software described in this document either via the Web for multiplayer use or downloaded and played back on mobile devices for personal use.

Bouncy Coin has patent pending applications with the US Patent and Trademark Office for aspects of the software described in this document.

Product Details - Features and Benefits

Technology Stack

Blockchain

Why Blockchain? We use blockchain for universal trust and transparency.

We will initially write Solidity contracts to execute our Random Number Generation and associated logic. This source code will be published on GitHub for public inspection and will allow any party to examine and conclude that our random number logic is 100% fair. Also, since our contracts are on the blockchain other developers will be able to call these same Contracts in their offerings with correct access control. We plan to write contracts for networks other than Ethereum.

Random Number Generation

Our RNG algorithms do not use external Oracles. We are currently testing Commit–reveal and RANDAO approaches to be published for review.

Off-chain components

The client-side game module is completely decoupled from the blockchain and communicates with the blockchain via a bridge API that we have defined. Our MVP is written in Unity 3D which talks to a Javascript API which then talks to our Solidity Contracts on the Ethereum blockchain.

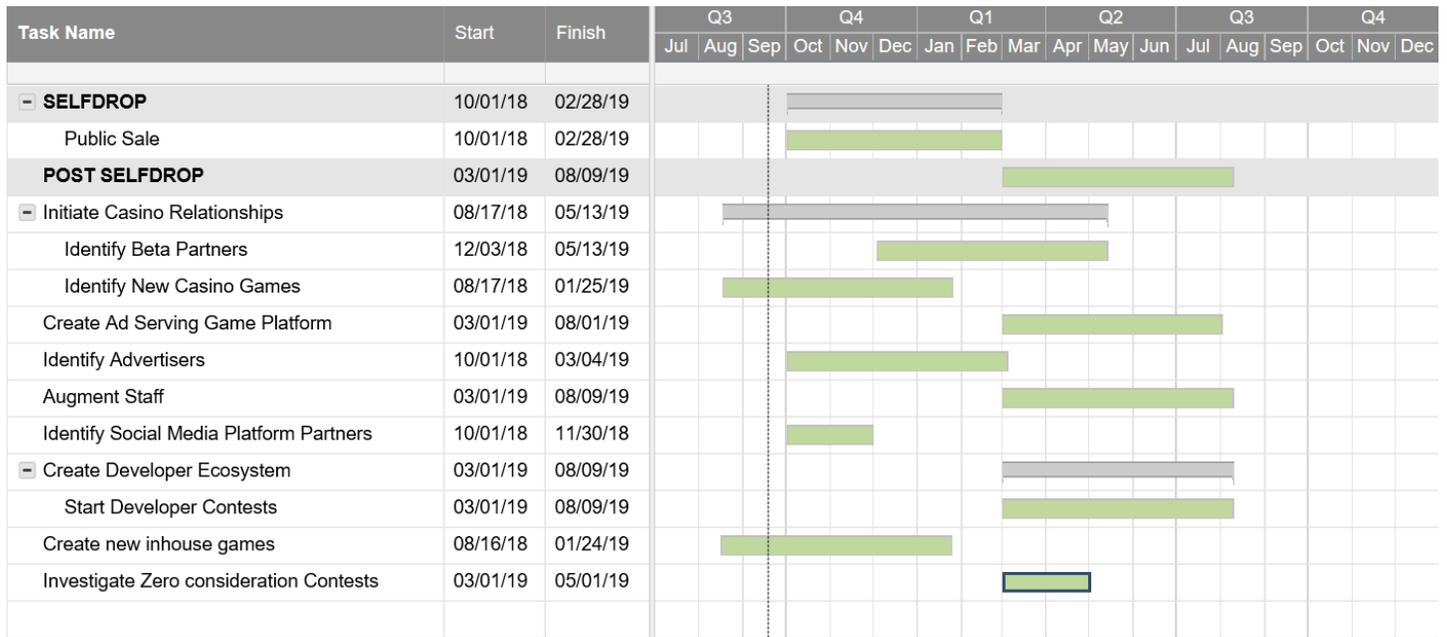
Open Source Considerations

Bouncy Coin filed for a US Utility Patent in 2017 for aspects of the MVP that is referenced here. Because of this Bouncy Coin will expose only the parts of our Solidity source code that do not implement our patent pending. We are doing this because if we are granted patents from the USPTO we can then defend them, but only if we have not open sourced our implementation of these patents. ***Bouncy Coin will open source all software that we create not directly related to patents that we hold or plan to apply for.***

Big Data Analysis/Machine Learning (AI)

Bouncy coin will data mine the Ethereum Blockchain Contracts it creates and transactions from users engaging in Bouncy Coin games. This will allow us to create predictive models to better serve our clients ability to maximize their earnings. We plan to hire AI experts to write programs to assist players in real-time to make better investment decisions.

Product Roadmap



Developer Ecosystem

Bouncy Coin will hold contests after the Self-Drop to allow developers to author and/or co-author the replacement of casino games and/or to create completely new games of chance that empowers users to create and control their entropy engagements. Winners will be awarded BOUNCY tokens and/or ETH. We have allocated this developer bounty in our Air-Drop contract.

Token Sale

Token Economics:

To quote William Mougayar, a token is “A unit of value that an organization creates to self-govern its business model, and empower its users to interact with its products, while facilitating the distribution and sharing of rewards and benefits to all of its stakeholders.”

The BOUNCY token will function as a **utility** entry fee into Bouncy Coin games. For the time being we will also allow users to play games with ETH.

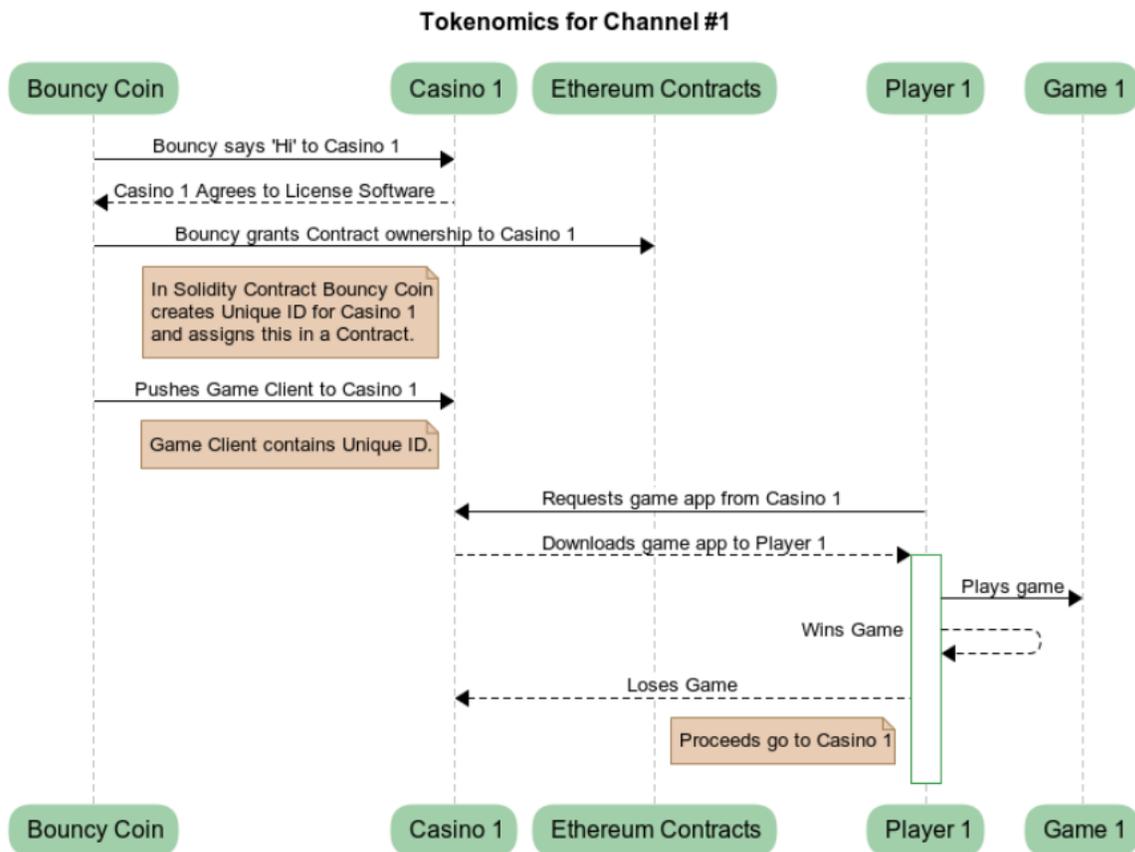


Figure 3 - Token Economics for Channel #1

Self-Drop Breakdown

THIS OFFERING IS CLOSED TO UNITED STATES CITIZENS

Minimum Transfer: 0.01 ETH

Soft Cap: 250 ETH <=> Hard Cap: 500 ETH

Token Name: BouncyCoin

Symbol: BOUNCY

Token Decimals: 18

Platform: ERC20

Current Price: 1 ETH = 15,000,000

Token Allocation:

70% Self drop

10% Team

10% Reserved Funds

7% Bounty and Airdrop

3% Advisors

Round 1

(October 17-23)

1 ETH and above = 50% Bonus

Below 1 ETH = 40% Bonus

Round 2

(October 24-27)

1 ETH and above = 30%

Below 1 ETH = 20%

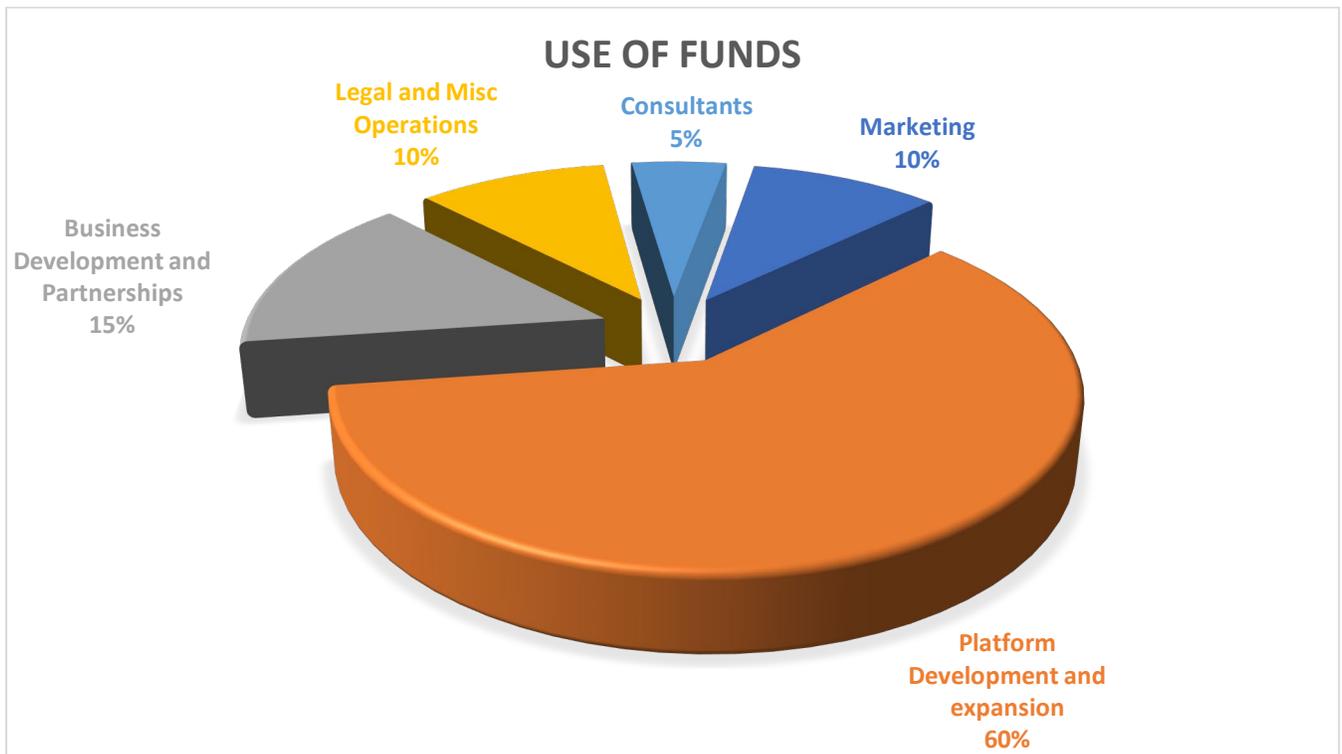
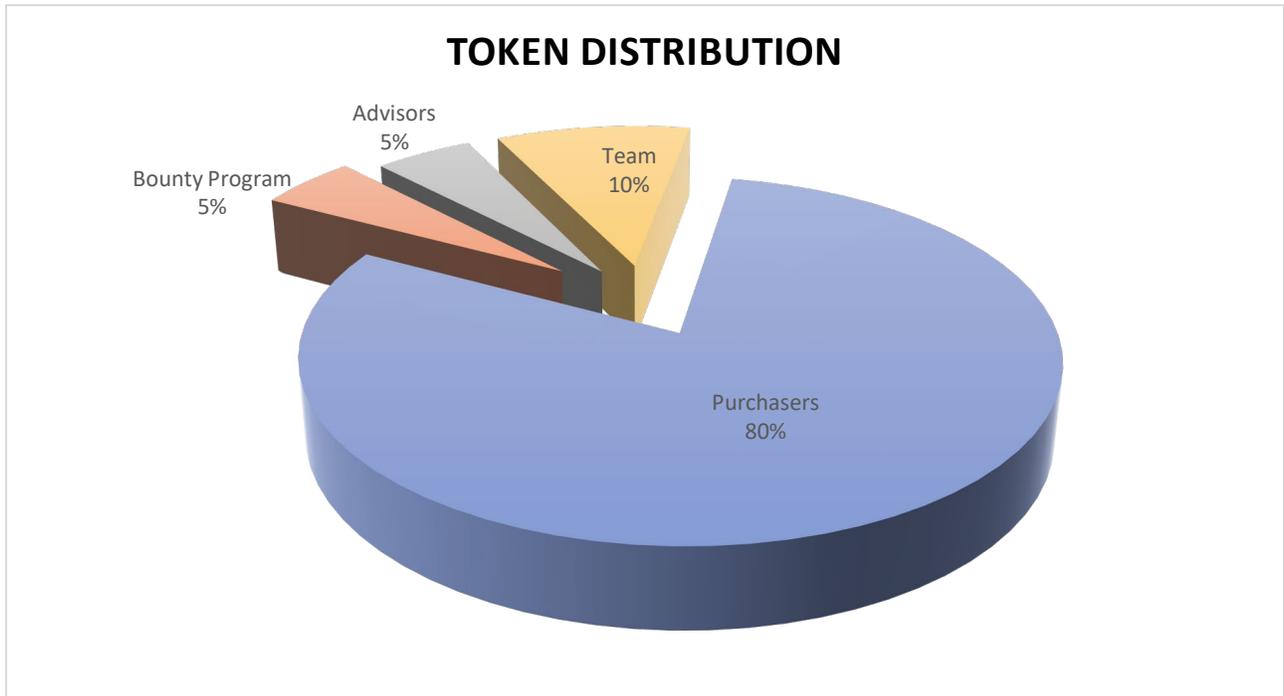
Round 3

(October 28-31)

1 ETH and above = 10%

Below 1 ETH = No bonus

Token Distribution and Use of Funds



Project Team



Bruce Macdonald
Cofounder



Lukasz Gasior
Cofounder/CTO



Todor Stoyanov
Game Architect



Appendix – Bouncy Coins MVP Re-engineered game.

This Appendix describes how parts of the MVP works.

Here is a diagram that outlines the steps taken to fire off an engagement that is dependent on a group of people (or programs) who/that have chosen the same maximum payout (the queue size).

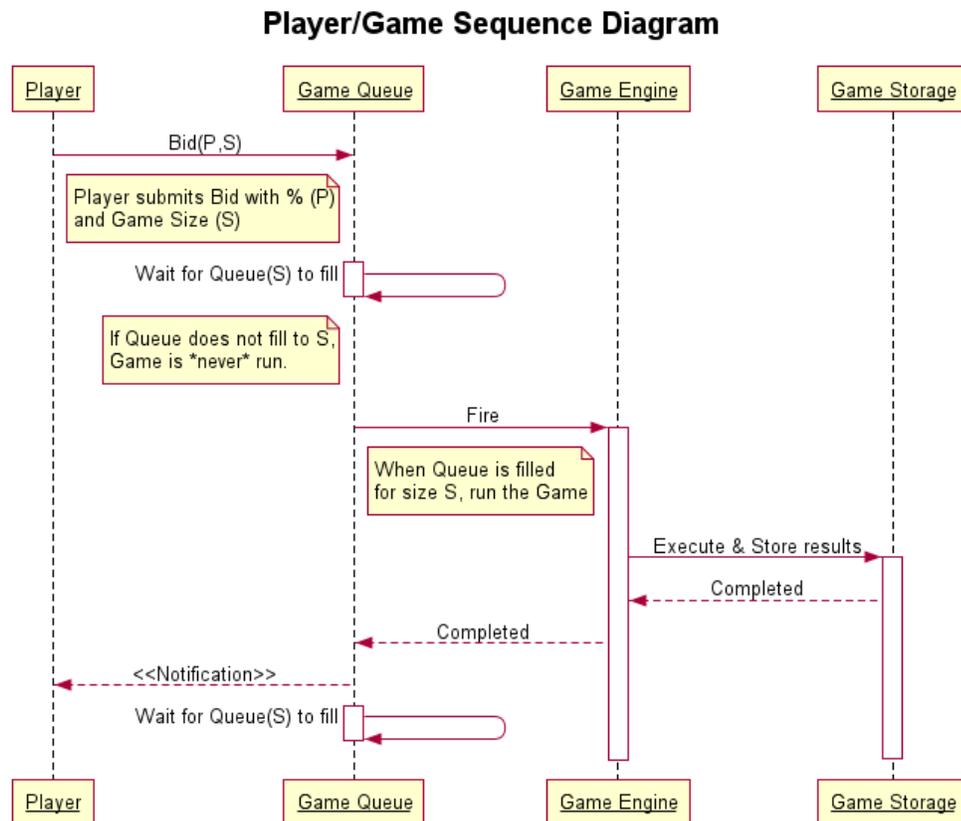


Figure 4 – Engagement Sequence Diagram

Bouncy Coin's MVP is based on the concept of a 'queue' size.

$2 \leq \text{Queue Size} \leq q$ where $q = 2, 3, 4, \dots, 10, \dots, J-1, J, J+1, \dots$

which then constrains a 'payout matrix' (shown below). *The payout matrix creation and user interaction with the matrix is described in our video found on our website.* For now, here are some payout matrices for queue sizes of 2,3,4,5, and 10. The 100% row is not 'played' but serves as a reference for other rows within that same matrix.

1.0	1.0	100.0%
0	2.0	50.0%

2

1.0	1.0	1.0	100.0%
0	1.5	1.5	66.66%
0	0	3.0	33.33%

3

1.0	1.0	1.0	1.0	100.0%
0	1.33	1.33	1.33	75.0%
0	0	2.0	2.0	50.0%
0	0	0	4.0	25.0%

4

1.0	1.0	1.0	1.0	1.0	100.0%
0	1.25	1.25	1.25	1.25	80.0%
0	0	1.66	1.66	1.66	60.0%
0	0	0	2.5	2.5	40.0%
0	0	0	0	5.0	20.0%

5

1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	100.0%
0	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	1.11	90.0%
0	0	1.25	1.25	1.25	1.25	1.25	1.25	1.25	1.25	80.0%
0	0	0	1.42	1.42	1.42	1.42	1.42	1.42	1.42	70.0%
0	0	0	0	1.66	1.66	1.66	1.66	1.66	1.66	60.0%
0	0	0	0	0	2.0	2.0	2.0	2.0	2.0	50.0%
0	0	0	0	0	0	2.5	2.5	2.5	2.5	40.0%
0	0	0	0	0	0	0	3.33	3.33	3.33	30.0%
0	0	0	0	0	0	0	0	5.0	5.0	20.0%
0	0	0	0	0	0	0	0	0	10.0	10.0%

10

Figure 5 - Risk Matrix

The green cells above represent positive payout amounts. The gray zero's (0) represent a loss. As you can see from above, a queue size of 2 is equivalent to sitting down at a table with another person, flipping a coin and calling 'heads' or 'tails'. Not exactly exciting. Notice however that users who choose 50% in a size 2 game may be injected into another game of queue size 4 and/or 10 if either of these queues are waiting to fill up and needs 1 more person or program to fill the queue and fire the game. There are other variations of this technique as well as applying matrix transformations on the above simple matrix.

