



SmartPlay.Tech

Whitepaper
V2.0

Blockchain Realization in Game Industry

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1. Online gaming - An Introduction

Online gaming, or gambling, is the wagering of something valuable, usually asset or money, on the outcome of an event or game, using the Internet. It usually includes various activities such as casino gaming, sports betting, bingo and other lotteries. Of these, casino games and sports betting account for the largest market share^[1]. In 2015, the online gaming market had a volume of 37.91 billion U.S. dollars^[2]. And according to market analysts, this figure is forecasted to increase to 59.79 billion U.S. dollars in 2020^[2].

Despite the booming market, the online gaming industry is plagued by three significant issues.

Lack of Trust - Trust is an important factor, especially in online games, where a certain central gaming authority is accountable for keeping the players' bets as well as winnings safe. Building trust is difficult, especially for smaller, newer casinos or gaming centers. People usually aren't confident enough to place bets on a platform which doesn't have the necessary resources required for the safekeeping of players' assets. There is also the additional factor of fraud; the gaming authority might tend to cheat players into depositing assets of significant value, and then disappear without paying back the players with their rightful winnings. Alternatively, players might tend to fool the gaming authorities into winning a significant value in assets through illegal or dishonest means.

Lack of Anonymity - In the online gaming landscape, multiple players are competing against each other and a significant value in assets is almost always at stake. As such, some players might want to keep their identities hidden for personal security. This is not always the case with conventional online games.

High Commission fees - Keeping transactional commission fees low has always been a challenge in the online gaming industry. Low fees encourage maximum participation from players, as well as enabling them to place micro bets, such that the participation fees are fairly insignificant compared to the total value of the bets placed. But, usually the operational costs for running a casino, even an online one, is significant, and it becomes mandatory to keep commission fees in order to keep the platform running over the long term.

2. Our Solution

SmartPlay.tech has developed a unique, decentralized gaming platform, based on Ethereum Smart Contracts, aiming to take advantage of the Blockchain technology in online games to counter these aforementioned issues.

First, the platform eliminates the trust factor and brings complete transparency into the system with the help of Blockchain. The honesty of the game is confirmed by an open algorithm locked via a smart contract. It is impossible for anyone to alter the game conditions or predict the result of the game in the Blockchain. Moreover, there is no deposit required. Funds are controlled by the player and their winnings are directly transferred to their wallets. All the in-game transactions, including the processing of

bets and payout of winnings, are visible to the players and investors, enabling transparency within the platform.

Second, the use of cryptocurrency in gaming addresses the question of anonymity for the players. People can participate in online games without any requirement of registration, documentation or verification. Further, the players' wallet addresses, which are primarily used for in-game transactions, cannot be associated with any personally identifiable information. Hence, players can participate in the online games anonymously without worrying about their safety. It is to be noted, however, that we do not encourage the use of anonymity as an advantage for illegal participation of players from locations where gambling is banned. Access to our platform and its games are blocked from such locations.

Third, we are continuously working on the implementation of new and under development Blockchain forks that tend to minimize and even eliminate transaction fees. We have already been able to reduce the operating costs, particularly related to commissions during in-game transactions. As a result, one of the games implemented on our platform, was able to reach a certain level of operating profitability.

We have developed and launched the prototype of the European Roulette game, called SmartRoulette, based on an Ethereum Smart Contract. We have tried to make the gaming experience productive, fully functional and complete, by offering the following features:



- Various types of bets, such as Corner, Split, Sixline, etc.;
- The possibility of placing up to 64 bets on different fields per turn;
- Provably fair random number generation, as well as fully automated payouts, being governed by the smart contract;
- Open source smart contract code available on GitHub, its transparency may be verified by any Blockchain developer;
- All results of the smart contract are permanently stored in the Ethereum Blockchain.

The game uses the Ethereum DApp browser to interact among the client browser, the Ethereum Blockchain and our smart contract via the SmartRoulette.io interface. For Google Chrome users, one has to install the MetaMask extension to enable these features. The game is available on both the Ethereum Main network (MainNet) as well as on the Test network (TestNet). After signing up, a user may select the TestNet mode, and get several free ETH test coins to try the game.

We have also announced the launch of SmartBox^[3] – a Blockchain based gambling machine working on Ethereum smart-contracts. It is a first-of-its-kind solution in the gambling industry, in which smart contract algorithms are used to implement traditional slot machine games.

The SmartBox software is based on the SmartRoulette gaming mechanics, and includes all the advantages of our platform. Transparency and honesty are guaranteed by a

smart contract, which cannot be altered, even by the SmartBox owner, since the Blockchain ensures the permanence of data and game code.

3. Smart Contract Token - RLT

RLT (RouletteToken) is an ERC20 token, created for the primary purpose of its use in various blockchain-based gaming solutions developed by [SmartPlay.tech](#). RLT tokens can easily be transferred among participants via Ethereum network addresses. They can also be transferred from and to supported cryptocurrency exchange accounts.

3.1 Token details

Name: **Roulette token (RLT)**

Initial amount: **10,000,000 (10 million)**

Initial price: **1.00 RLT = USD 0.07 (0.0015 ETH)**

Token standard: **ERC20**



3.2 Initial distribution of tokens

- **2,500,000 RLT (25%)** - Funded for token distribution during ICO (Crowdsale);
- **2,500,000 RLT (25%)** - Rewards for developers and initial investors of the project;
- **5,000,000 RLT (50%)** - Reserved for system maintenance – costs associated with servers, domains, refilling bankroll of existing and new game versions, bounty payouts and other overhead costs.

3.3 How to get tokens

There are several ways to get tokens. As of now, users can acquire RLT tokens by:

- ~~Purchasing tokens during ICO;~~
- Placing bets in SmartRoulette (p. 8);
- Assisting in the testing, development and promotion of the project;
- Attracting players via the affiliate program;
- Purchasing tokens on cryptocurrency exchanges.

4. Issue of RLT tokens

RLT token liquidity is primarily backed up by our products, which are games running on Ethereum smart contracts. Therefore, to maintain the economic sense and attractiveness of the tokens, we bind the volume of tokens issued, to the quantity and the volume of games played.

4.1 Emission formula

RLT tokens are generated after a bet is placed using ETH, in any version of Roulette. Generation of tokens is governed by the following formula:

Emission = Bet * coef / RLT rate, where:

Emission (in RLT) - Number of new tokens generated and received by players after placing a bet.

Bet (in ETH) - A player's bet size.

coef - The coefficient of return received by a player after placing a bet. This number is defined by the administrator as follows:

Test period 03.14.2017 - 03.21.2017	3%
Test period 03.22.2017 - 03.29.2017	2.5%
Test period 03.30.2017 - 04.06.2017	2%
Test period 04.07.2017 - 04.14.2017	1.5%
After 04.15.2017	0.5%

RLT rate - The current rate of RLT token to ETH on cryptocurrency exchanges.

4.2 Economic Justification

Roulette token holders have no reason to worry about the value of RLT being impacted by emission of new tokens, as:

- A significant volume of token emission is only possible in case of high player activity, increase in demand and increase in popularity of RLT. The more the players' activity, the higher the popularity of RLT token and its value, leading to decrease in the issue volume equivalent to bets, as the emission volume is inversely proportional to a token rate;
- At the same time players receive instant guaranteed bonuses in RLT tokens backed up by ETH cryptocurrency at the current rate and automatically become members of the loyalty reward system. All this eventually leads to increase in players' interest as well as the popularity of the project.

Here we present several examples to help understand how the algorithm works*:

Date: 03.17.2017

coef: 3%

Rate: 1 RLT = 0.0015 ETH

A player places a bet 0.5 ETH. According to the formula, the smart contract issues $0.5 * 0.03 / 0.0015 = 10$ RLT and send them to player's balance.

* Definite numbers are shown to simplify calculations as per the algorithm, and may differ in reality.

Date: 05.04.2017

coef: 2%

Rate: 1 RLT = 0.004 ETH

A player places a bet 0.5 ETH. According to the formula, the smart contract issues $0.5 * 0.02 / 0.004 = 2.5$ RLT and send them to player's balance.

Date: 17.04.2017

coef: 0.5%

Rate: 1 RLT = 0.011 ETH

A player places a bet 0.5 ETH. According to the formula, the smart contract issues $0.5 * 0.005 / 0.011 = 0.227$ RLT and send them to players' balance.

5. Loyalty Rewards System

All loyal users have the privilege of receiving loyalty rewards for their contribution to the project. Loyalty reward points are built up from gaming activity, thus appraising users for their quality work and encouraging them to create additional value.

Initial amount of tokens necessary for participation in the loyalty reward system is 1,000 RLT, which can be acquired by using SmartPlay.tech products, participating in its promotion or playing in its games. In the course of the project development, this number will vary.

This new loyalty program is currently under development. Further details will be available on the Smartplay.tech website.

5.1 RLT Token as a multi-functional utility token

RLT is mainly used as an in-game token for playing various games on the SmartPlay.Tech platform. For example, it is now utilized for playing "European roulette" on Smartroulette.io. It could also be utilized for accessing several existing apps and services on the platform, as well as the ones developed in future. Hence, RLT serves as a utility token. Users can also exchange RLT in supported exchanges, such as Livecoin, YoBit, etc., so the tokens aren't just locked in within the platform.

In the current loyalty rewards system, reward payouts are directly dependent on the user activities, rather than being a regular dividend payout. Hence, this system is now a reward-based loyalty program, which is not subject to any regulation by the authorities.

6. Bonuses and Bounty

6.1 Bonuses for Players

When a bet is placed using ETH, new RLT tokens are generated according to the Emission formula (p. 6), and as a bonus for the player, the new tokens thus generated are sent to the same Ethereum address, which was used to place the bet.

Tokens are paid regardless of the game result. After receiving tokens, the player can use them for different purposes:

- Utilize the tokens to access games and services across the Smartplay.tech platform;
- Send them to any other Ethereum network user;
- Trade them on any of the supported cryptocurrency exchanges.

6.2 Bug Bounty and Contribution Rewards

Developers can also contribute to our project by testing our games/software, and reporting new bugs found in the system. Users who are able to find major bugs are rewarded in RLT. Additionally, any person contributing to the project in any way, if recognized by the team, shall also be eligible for bounty rewards. Bug bounty and other bounty rewards are distributed from the funds reserved for system maintenance. Please send your requests via email to info@smartplay.tech.

7. Affiliate Program

As per our affiliate program, any player who refers another player via their affiliate link gets rewarded whenever the referred player places a bet using RLT.

7.1 Terms

Every participant of the project can take part in the affiliate program by procuring an affiliate link and sharing the same to other people via:

- Personal websites;
- Public forums;
- Instant messages / Chats;
- Social Networks;
- Media Reviews;
- Direct referrals.

What is strongly prohibited:

- To send spam;
- To post information relating to the project on non-thematic sections of forums, blogs, etc.;
- To publish misleading information about the project.

7.2 Rewards

Players who join the platform via affiliate links become permanently associated to the respective players who referred them, after placing the first bet. The affiliate is rewarded in RLT by the smart contract for each bet the referred player places using RLT. Currently, affiliate rewards are valid for lifetime as long as the referred player continues placing bets using RLT, although this could change in future. This reward is currently equal to 0.5% of each bet (not depending on the game result), and may be modified later for better effectiveness.

Here we present several examples to help understand how the affiliate program works:

You post your affiliate link on your Facebook page and 7 users follow it. Only one of them installs the MetaMask extension and places the first bet amount of 100 RLT. At that moment, the particular user is permanently associated with you and you get your first reward calculated according to the following:

$$\text{Reward} = (\text{coef } \%) \text{ of Bet} = 0.5\% \text{ of } 100 \text{ RLT} = 100 \text{ RLT} * 0.005 = \mathbf{0.5 \text{ RLT}}$$

During the following months the referred user places bets with total amount of 18000 RLT in 100 games providing you with a total reward of $18000 \text{ RLT} * 0.005 = 90 \text{ RLT}$.

8. Development roadmap

Our development plans for the near future, funded by our primary investments as well as the teams' personal expenses, are as follows[†]:

Q3 2018

- Implementing a solution to further optimize transaction fees.
- Adaptation of smart contract in our game under the Casper update for the Ethereum Blockchain.
- Creating and implementing a new design for existing games.
- Researching to find possible solutions to decentralize the winning payouts. Currently these payouts are handled by our team; the idea is to finance the winners' payments from a special fund powered by private investors, who would receive benefits from the profits of the game.

Q4 2018

- Adding support for specialized browsers with built-in access into the Ethereum network.
- Completion of the development and testing of the new game - Bingo - followed by game launch.
- Creating an interface with easy access to an open Roulette transactions database.

[†] This roadmap may be modified later for better effectiveness, as per the market conditions.

- Researching the possibilities of EOS smart contracts with the goal to create a gaming solution based on it.

Q1 2019

- Researching on the possibility of creating a multiplayer mode for the existing games, so several players could play at a single roulette table.
- Integrate player chat.
- Exploring possible concepts for creating a multiplayer Poker game.

9. Development team

Our team of developers is experienced in the field of Blockchain technology for more than 4 years. The concept of smart contracts represents the minimization of human involvement, and that is the very ideology, which inspired us when we started the project – trust the code and numbers, rather than the creators' authority or advertisement.

There were several reasons for us to consider keeping the identities of the project founders, developers and testers a secret; a significant one among them being the fact that the legal status of cryptocurrencies is still questionable in the developers' home country, and casinos are not allowed to operate outside permitted zones.

But, due to high demand from the community, the team is now considering the possibility of revealing their identities to the public in near future.

10. ICO (Crowdsale) - Ended

10.1 Summary

We have successfully completed the ICO for RLT token. The three-day crowdsale started on 7th of April, 2017 at 12:00 GMT, with the initial price of RLT being 0.0015 ETH, and ended on 10th of April, 2017. In total, the Smartplay.tech platform was able to raise 2873.592 ETH, which was roughly equivalent to \$126,150 as of 04/10/2017. The total number of tokens sold at the time of ICO was 1,874,170.

10.2 Goals

We put realistic goals ahead of us to ensure that the collected funds are used for definite purposes aimed at delivering results. The following were some of the immediate goals we had in mind at the time of ICO:

- To launch the affiliate program in order to boost the popularity of the platform and the game among new players;
- To provide RLT token holders with sustainable loyalty rewards;
- Introduce RLT token within popular cryptocurrency exchange markets;

- To develop and launch a voting system for RLT token holders allowing its participants to make decisions concerning the game development and its promotion;
- To present SmartRoulette game with animated 3D design, along with visual and sound effects;
- To develop and launch a set of additional Roulette versions with various types of bets and options (for e.g., American Roulette, Russian Roulette, etc.).

Since the ICO held last year, we have completed most of the ICO goals, a few others are in progress, while some new ones have also been added. We plan to develop the following games in the future:

- Bingo;
- Poker;
- Blackjack;
- Slots.

For more information on our updated near-term goals, refer to p. 9.

10.3 Distribution of ICO funds

- 60% of the collected funds was used for carrying out an advertising campaign to promote our game;
- 20% of the funds are being used for development of SmartRoulette game, as well as launching additional versions of the game;
- 20% of the funds are reserved as rewards for developers and initial investors of the project.

10.4 Mechanism of ICO implementation

RLT tokens were initially priced at 0.0015 ETH during the ICO. The smart contract only allowed a total purchase of RLT tokens worth between 0.15 ETH and 500 ETH. In case of a valid purchase, the equivalent amount of RLT tokens was immediately sent to the Ethereum address used for the purchase. Moreover, no deposits were accepted from countries like the U.S. and Canada, where there are strict security regulations in place. Collection of deposits was discontinued after three days from the start of the ICO.

References

- [1] - <https://www.statista.com/statistics/248655/segmentation-of-online-gambling-market/>
 [2] - <https://www.statista.com/statistics/270728/market-volume-of-online-gaming-worldwide/>
 [3] - <https://www.youtube.com/watch?v=xQ1zspISrmE>