

HashDice

The first gambling Revelation written on the blockchain in
the world

What does our life really look like? When you think it is dark, there will always be something that will give you inspiration. When you are fighting for your dream, sometimes you may get lost by failure. It is your life, you can decide how you live.

I have fought for the war

I have run my way

I keep my promise and stick to my belief

Betrayal Lie

no way

To turn me to an animal like you

I would rather be a clown and fight for my belief

I will never be you

You made the game

I make the rule for myself “

Welcome to find your “Belief” in HashDice.

Preface

Is God playing dice? Einstein disagreed with the Copenhagen's interpretation, and said angrily: "Bohr, God does not play dice!" Bohr was unhappy: "Einstein, stop telling God what to do!" Who is right? Perhaps we still can't tell, but if "God is throwing a dice", then in the world thrown by the dice, we are tiny, but pretentious, and we stick to the belief that we can change the world by ourselves; we are originated from animals, but people sometimes feel high above and try to dominate everything. This is the fact that individuals who have no self-knowledge and try to prove themselves in the world in an "extremely stupid" way.

Some people say that life is nothing more than a gambling game. Yes, life is always betting on uncertainty. It's not necessarily gamblers who can throw a dice. We are all just cute and ordinary people, enjoying the infinite possibilities and excitement brought by "randomness". If you think you are master of randomness and can overcome weakness in human nature, HashDice will help you understand the desires in human nature is far more complicated than **explicit rules**.

HashDice is the world's first gambling revelation written on the blockchain. Here you will know that there is another source of wealth for getting rich; you will also know humans, maybe he is not so special, but not very different from animals. Here you will see freedom, but you may also be swallowed up by excessive indulgence. Gambling is a game of capital and humanity. Humanity is the most fascinating and unpredictable thing. Once you have the experience of gaining benefit, you will take this as referable rule, whether it is universally applicable or not, whether it is just a simple probability. Capital is a resource and a symbol of status. Don't think that humans have evolved to the apex of life on earth. In the view of higher-order life, humans are no different from ordinary animals. In the world of animals, there are only interests and no feelings. The more capital there is, the more it has the right to make rules of the game, and it

can take a bigger advantage in reproduction. It is precisely because of this that capital can control humanity to a large extent - after all, human beings cannot be separated from the instinct of reproduction. Gambling is the perfect bridge connecting humanity and capital. In the world of gambling - HashDice, there are no established rules to win. You can only believe in some kind of "Luck" to gain the unpredictable probability. You may be wondering how countless people will go to the casino without hesitation. It is gambling and its most fascinating nature - the possible surge in capital and the corresponding increase in social status. This is impossible. Don't challenge humanity, because real gamblers never know when to stop loss, which is the second source of wealth for the rich. Yes, the wealth of the rich is from the surplus value of the workers. But in modern society, rich people also gain money due to waste of wealth of "poor people" . Where did the waste of wealth of the "poor people" come from? It comes from greed and ignorance.

Life is a game, and HashDice is the stage where you stage a gambling drama. As long as you dare to show your greed and desire, you will understand this clearly. Because HashDice will continue to explore humanity in the most fair, transparent, and verifiable way through the blockchain, giving you a revelation of gambling, and will open a path from slavery to freedom.

1. About HashDice

The HashDice project is a socialized human exploration experiment based on

blockchain. Through the design and development of game with the theme of “ from the adventurer's great navigation to the construction of a civilized city state, we expose the phenomenon of human beings' selfishness, greed, ignorance, etc. in the social activities. It is our aim to entertain and educate. The fascinating gameplay and rich game materials allow players to play freely. At the beginning of the game, it will be presented in the simplest perspective, providing "Two Dice", "Etheroll", "Coin flip" and so on. With the deepening of the project, more game content is gradually release. At this stage, the interaction between people is increasing, accompanied by more complex interpersonal relationships and production activities, so we will maximize the re-enactment of the reality in the game, such as providing free transition, free trade, auction, leasing, equity dividends and other mechanisms, after the initial formation of the minimum free market, the player role is more and more, the character nature will be continuously enlarged, we will further enrich the game scene, expand the player's original accumulation and capital and status The road to promotion will be more conducive to our research and exploration of complex and diverse humanity. The long-term pattern of the game will be built on the gambling table - casino - civilized city state - the hash world is the main line.

2. Experiment Launch

At present, the “betting is mining” model is popular in the entire DApp ecosystem. As the players are familiar with the rules of mining, the disadvantages of this model are gradually revealed, but we still think it is a good way to help launch a game. Therefore, we also use "mining" to start the first shot of HashDice. From our research results on the current market projects, the popular “mining” model has been widely criticized as “three minutes of heat” , which is expressed as a “miner” with a keen sense of business and rich investment experience always be able to grab the opportunity, and then decisively exit when the first "mining decay", so that the combined cost of

acquiring tokens is the lowest. The best policy of this move is also the self-control of human nature - quit greed. However, if we often travel between the major projects of the DApp Ecosystem, we will be able to detect that the earliest "miners" are almost always in the same group, and new monopolies will be formed, which will naturally lead to the participation of the project. The last observable phenomenon is that most of the projects will get weak in a week or even less than a week. Taking into account the above consequences, we adopt reverse thinking and introduce a mining model that is opposite to the mining cost, that is, the mining cost decreases with time rather than increasing. Specific mining details are described later.

3. Introduction to technical elements

This section mainly outlines the mechanism for generating and transmitting random numbers on the blockchain and its specific implementation ideas in HashDice.

Blockchain technology has great advantages in ensuring transaction fairness due to its decentralization characteristics and the transparency and open source characteristics of transactions. Therefore, it is applicable to traditional applications that require random number generators, such as lottery and gambling, poker, mahjong, lottery, etc.

Traditional online gambling games, due to their centralization characteristics, the game platform occupies a complete position in the game, and can control the game results at will. Even if the random number generator (RNG) of some game platforms is certified by a third party, these certification cannot guarantee continuous auditing, and the player cannot judge whether the random number generated in the game is fair. However, allowing players to self-verify the fairness of random number generation is a key factor in the success of the HashDice. If the blockchain technology is applied on a large scale, it will completely change the ecosystem of online games, so that gamblers or addicted players can clearly understand the zero-sum nature of gambling games (Note: when there is House Edge, it is total loss), rather than the platform to cheat or confuse.

3.1 Real or fake random number

The world of blockchains has no real random numbers, but random numbers are the soul of blockchain games, at least at this stage. So, when the fake-random number lets the DApp flow down the first drop of blood, the DApp can't live. The hackers, like bloodthirsty sharks, quickly gathered after smelling astringency, besieging this prey with natural defects.

Real random numbers exist only in the physical world, such as the result of rolling a dice. The earliest random number generator was the dice. As early as 2600 BC, humans had used the four-faceted cymbal to play the game. So far, it is still the most reliable way to generate random numbers. However, the random numbers that are now widely used in the computer field are almost always generated by the fake-random number generation algorithm, and its generation is more or less related to the physical state or operation state of a single machine, that is, different machines or different nodes. The results of the calculations are different. This also shows that it is difficult to generate random numbers on the blockchain, because the blockchain is a distributed system, which requires the operation results of each node to be verifiable and consensus.

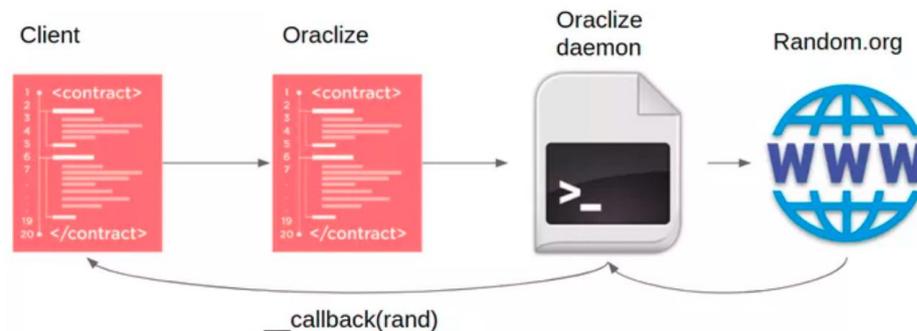
3.2 Rules of generating random number in blockchain

The design of the random number generation rule may require mental transformation and start from scratch, so that smart contracts on different nodes can use the same random number. Here we will briefly introduce the following three types:

I Generate random number from trusted third-party

This method essentially uses the Oracle technology. The main role of the oracle technology represented by Oraclize (white paper address http://www.oraclize.it/papers/random_datasource-rev1.pdf) is to attempt to transmit the off-chain data through a trusted delivery mechanism. This includes

introducing random numbers generated by the off-chain random number generator.



The predictor technology does provide a way to introduce random numbers into the blockchain, but it has the following problems in the generation and delivering trusted random numbers:

- 1.) Centralization: The random number introduced by the oracle is essentially a random number generated by a centralized mechanism and does not conform to the characteristics of the blockchain technology. In other words, oraclize actually has the ability to manipulate random numbers.
- 2.) Additional transaction costs: Any type of oracle technology needs to build and operate an oracle service platform, and running such a platform requires a fee. If you request a random number, you will need to pay a fee. In this case, the transaction cost is increased in addition to the blockchain network transaction fee.

II Let the contracts on all nodes collect the same seed, and then calculate the same random number sequence by fake random algorithm.

The random number is not introduced from outside the contract, but the information on the chain of the blockchain is used as a seed, and the fake random number is generated by the smart contract according to the seed. However, unlike the privacy of the seed in the traditional fake random number generation algorithm, the seed on the blockchain is almost "transparent", that is, it is the block information on the chain, and the smart contract on all nodes can be obtained. This creates a huge security risk:

- 1) Other application and block producers can also obtain block parameters (including but not limited to block hashes) in the same way, so that the results can

be known at the same time, and then the corresponding attack means can be taken.

2) If you simply use the block hash as the random number source, due to the characteristics of the blockchain technology, the current block has not been packaged, so you can only get the block hash before the current block. The hash value of these blocks is known to all nodes, and it is easy to attack this application.

3) If the benefit of attacking the application is large enough, the block producer will be motivated to manipulate the hash value of the block. Even in the blockchain of POW, even if the block packing income is sacrificed, but because of the public chain like Ethereum, it also has incentives for the uncle block, so the real loss of the block producer is not large.

III Implement a fake random number generator with a base contract to provide consistent random numbers for other contracts

This one fits blockchain spirit mostly, which is essentially a fake random number generator that cooperates with different participants to generate random numbers. A typical case is the RANDAO, which has been supported by the Ethereum Foundation. They propose a Commit-Reveal architecture to solve the problem of trusted random number delivery.

under Commit-Reveal architecture, a successful transaction is this one :

1) The platform generates a random number *Reveal*, and uses this random number to generate via Hash processing. Due to the irreversible nature of the SHA3 Hash algorithm, it is not possible to derivate *Reveal* from *Commit*, so *Commit* can be published.

2) The user gets a *Commit*.

3) The user initiates a transaction with the *Commit* obtained.

4) The platform reveals random numbers to the transaction. Also due to the irreversible nature of the SHA3 Hash algorithm, the platform cannot forge a random number. Only the real *Reveal* value can get the same *Commit* value. The transaction is successful.

RANDAO provides an efficient architecture for random number generation and delivery on blockchains. This architecture can be applied to many application scenarios. But for a gaming application that involves huge benefits, this approach

does not meet the requirements: since the dealer knows Reveal in advance, after the user bets, the dealer knows exactly when the user bets and Reveal are known. The result of the lottery, at this time the dealer can choose whether to reveal the random number. In other words, the banker has the right to selectively terminate, which is not in line with the principle of fairness.

Inspired by the Commit-Reveal architecture, it has also been proposed to provide a Commit/Reveal pair of dual commitment disclosure schemes. This scheme requires the client to also provide a Commit/Reveal pair. The final result is a mixture of random numbers provided by both parties. to make. In this way, the implementation requires that the client also has a random number generator. Since the client of most applications is provided by the application developer, this scheme does not bring any improvement in implementation.

3.3 Trusted Random Number Generation and Delivery in HashDice

3.3.1 Structure of Commit-Reveal + Tx(transaction) Hash

HashDice uses a method called Commit-Reveal + Tx (transaction) Hash. Before introducing its structural system, let's briefly review the commonly used random number generation and delivery mechanisms:

- 1) Commit-Reveal: It can guarantee that the platform can safely announce the Commit value to the user, and at the same time ensure that the platform cannot forge the Reveal.
- 2) Block Hash: Both the user and the platform cannot control the Block Hash value.
- 3) Tx Hash: The platform side cannot manipulate the Transaction Hash value.

The way to introduce random numbers from the oracle is not considered because of the problems discussed above. So, can we go further and let the Reveal holders have no advantage and thus lose their motivation to cheat? The Commit-Reveal + Transaction Hash approach proposed by HashDice may be a practical solution. The transaction process is shown in the following figure:

The on-chain and off-chain transactions of the whole process are divided into 7

steps:

[Step 1]: The platform generates a random number seed Reveal.

[Step 2]: Get Commit after Hash.

[Step 3]: The user obtains the Commit signed by the platform from the platform.

[Step 4]: The user initiates a bet transaction with Commit.

[Step 5]: The platform monitors the bet event.

[Step 6]: The platform notifies the client of the lottery result and the Reveal, Tx Hash value.

[Step 7]: Both the user and the platform can draw (Settle), and the random number seed used in the lottery mixes the Reveal value and the Tx Hash value.

The key points of the program are:

1) After monitoring the bet event, the platform immediately informs the client end of the lottery result. The user can verify the authenticity of the Commit/Reveal pair. The Tx Hash value is also known to the user, so the lottery result is verifiable.

2) After the client end made notification, both the user and the platform have the ability to set a lottery (Settle), the platform can not unilaterally terminate the draw.

3.3.2 Uncle block processing (Ethereum)

Uncle Block is a characteristic of Ethereum. On the decentralized blockchain platform, since all block producers are competing to produce block, it is inevitable that more than one block producer will obtain the right at the same time. Blocks packed by different block producers must be different, and the blockchain will only select one of the blocks as the block on the main chain, while other blocks that are not linked by the main chain will become a lone block.

The way Bitcoin treats a lone block is to discard it directly. This is because the time interval between bitcoin block generation is about 10 minutes, so the ratio of lone block generation is small and can be discarded directly. The time interval between the block generation of Ethereum is 12-15 seconds, the block production speed is greatly improved, and the ratio of the lone block is greatly increased. Therefore, Ethereum has chosen different processing methods, and there is no direct Discarding the lone blocks, but also those blocks that do not actually have any effect on the state of the main chain transaction are also packaged into the blockchain, these blocks are called "uncle blocks." Ethereum

also gave some incentives to the packer of uncle blocks. At present, the uncle block rate of Ethereum has exceeded 10%, which has become a problem that cannot be ignored.

Uncle blocks do not have any impact on transactions in most cases because they do not make any changes to the real trading state on the main chain. In the Commit-Reveal + Tx Hash architecture, the problem with the unblock is highlighted by the use of Tx Hash as an auxiliary random number seed: when monitoring the Commit event, it is impossible to determine whether it comes from an uncle block or a main chain block, while waiting for the unblock confirmation takes several block intervals, which is unacceptable for a real-time application.

3.4 Security Analysis

Blockchain application ecology advocates open source spirit, so DApps that are introduced to the market must be able to withstand the attacks of all parties and provide mathematically verifiable fairness. Next, we will briefly analyze various potential attack methods and coping methods:

1) Double Spend

For an initiated transaction, it takes a lot of cost to perform a double spend attack. Due to the problem of the ratio of the uncle block, the double spend attack is not economically feasible for this application, but the threat is highly concentrated. The chain does exist.

2) Selective publication

Random number generators can selectively publish data, but since the results are not generated by a single random number source, there is no point in the selective publication of random numbers.

3) Selective stop

whether the platform is able to predict the results ahead of the draw and have the advantage of selectively making a draw? Due to the timeliness of the lottery notice, the client end can immediately get the lottery result and verify it after the Commit transaction is confirmed.

4) Repeat in

The repeat in here is not the common function callback in ethereum, but it is use

the one Commit/reveal to repeat bet, and it takes points as follows to eliminate the problem

- a) We can not use the same signature address in different versions of contract.
- b) Once the Commit/reveal is used, it will be recorded in contract and can not be used again.

5) Block producer manipulating results

Is the block producer responsible for block packing capable of tampering or manipulating the results? First, since we introduced a Reveal random seed from the outside, the block producer could not control the result by manipulating the block parameters. Secondly, block producers are not free to choose the packaged transactions in the block. Any change in the transaction will result in a change in the block hash value, thus affecting the workload calculation of the block producer's package rights, so if the block producer changes the packaged transaction is equivalent to abandoning the packaging right of the block, unless the interest is large enough, it is not economically cost-effective for the block producer.

6) Block producer colluded with platform

For a blockchain platform with a high degree of computational power, this is indeed a problem, and for a blockchain platform with a high degree of decentralization of the power distribution, it is economically impossible to do so. feasibility.

7) Reject service (DDoS)

Many DApp projects can't avoid the DDoS risk of Ethereum itself. By sending a lot of high price transactions, hackers can block Ethereum in a short time, which makes normal transactions unable to be packaged. In this game logic, the reliability of the transaction is a key factor, and the DDoS attack is fatal. HashDice will provide a mechanism for users to withdraw their funds if they do not complete the transaction within a limited time if they are blocked in Ethereum.

8) Other security matters

For a blockchain application that is open source and transparent, the security issues go far beyond the content of these summaries. Known security issues

include overflow, callback reentrancy, incorrect use of this.balance, short address attacks, stateful checks of underlying calls, and other types of attacks. These attacks and countermeasures are exposed through a large amount of open source code. Summarized. Therefore, we believe that choosing a blockchain platform with a larger audience is also very important for developing a usable distributed application. This is an important reason why we currently choose to develop on Tron and Ethereum.

4. Construction of application ecosystem

The HashDice team hopes to absorb more eco-constructors and partners to participate in this socialized human exploration experiment to build a fair and transparent and inspiring game ecology. Therefore, the team itself has launched a deep incubation service and UGC system to promote the development of the project while continuing to transfuse the project content.

4.1. Deep cultivation

Around the game ecology, there are many professional teams that can provide very effective content and products to help players choose and play, provide multi-dimensional assessment, etc., build ecological deep interaction, make the ecology more dynamic, and make this experiment more Effective and meaningful. Therefore, we will work with a professional game service team to collaborate or deeply incubate creative and quality game teams.

4.2. UGC System

A large number of UGC (User Generated Content) is a positive feedback to the experiment. In the process of the HashDice project, producers of high-quality UGC content will receive corresponding incentives, and the UGC content itself will greatly enhance community activity, promote community development, and provide value to those who need more information.

In the HashDice ecosystem, users can help update and maintain game-related information (such as providing easier-to-understand gameplay and profiles, game project updates, etc.), as well as publish their own game experiences and impressions, or in-depth analysis of output. Or science. All high-quality content will enter the reading horizon of all players through the system's recommendation mechanism, and other players can also generate secondary UGC to complete the interaction through mechanisms such as praise, comment, and bounty.

The reward mechanisms mentioned in this section are implemented through the Token issued by the project. The specific Token issuance plan is described later.

5. Token Issuance and Ecosystem

We believe that the blockchain project that does not introduce the Token model will lose inspiration. In order for HashDice to last for a long time, we will release HDT for circulation within the HashDice ecosystem and design an excellent economic model for this purpose. In addition, according to the initial settings of the game, we will also pre-sell some HDTs to support the bounty pool in the game and for operation and promotion.

5.1 Token Distribution

Total issuance of HDT is 10 billion with no more issuance in the future, here is the distribution diagram.

Token Distribution		
Item	Percentage	HDT Distribution
Private sale	5	500,000,000
Team	10	1,000,000,000
Marketing & Operation	10	1,000,000,000
Explorer Mining A	8	800,000,000
Explorer Mining B	8	800,000,000
Mysterious Mining Pool	4	400,000,000

Adjustable Mining	20	2,000,000,000
Initial Prize Pool	10	1,000,000,000
Great Navigation Fund	25	2,500,000,000
Total	100	10,000,000,000

Private Sale Plan : Plan to raise fund of **6,250,000** TRX in private sale, the part was not well funded in private sale will add into “Mysterious Mining Pool”.

5.1.1 Interpretation :

The principle of placing a bet on winning chips: the bet chip and the type of bonus are as consistent as possible.

Mining explanation: "Betting is mining." For example, when the odds of the winning is 95%, the corresponding odds are 1.032. For each bet 1 TRX or 1 VENA, several HDTs will be obtained. The use of HDT as a chip bet is not part of the mining range, but players who bet with HDT will regularly get candy or get increased percentage of deposit bonus.

Initial Prize Pool: Since the game has set the HDT as a chip bet and the bet winning principle, we need to set up the HDT's initial prize pool.

Explorer Mining: Explorer Mining means initial mining which is used for cold start.

Adjustable Mining: Adjustable Mining is the phase of adjustment mining. HashDice adopts non-continuous mining mode. In order to protect the interests of investors and the vision of platform to pursue a stable, long-term, real game flow, the team will open the mining mode under the new game according to the new game itself and the secondary market price. This part is locked when starting a new game mining.

Great Navigation Fund: HashDice's design philosophy follows the "ripple phenomenon". First, the interaction between the individual and the house is the central point of the smallest unit. The energy storage around the center point gradually spreads. We believe that the greater the energy of the center point, the wider the scope of the impact, and the expectation. Affects the inaccessible border. In this process, we will be highly compliant with the emotional needs of human beings, from human-machine battle to PVP, and even to more complex models. Of course, we also apply the "Dunbar's number" theory to the design process. To give players the most realistic and practical game experience. Therefore, the Great Navigation Fund is the infrastructure fund for each circle of energy, and it is also a gas station for proliferation.

5.2 Explorer Mining

- 1) The explorer mines a total of 2 billion HDT, which is divided into three stages (5.2.3) for mining, and the two mines of A and B are set as a control form for competitive mining.
- 2) Each of the two mines A and B has a total of 800 million HDT. That is, a total of 1.6 billion HDTs are to be mined by betting mining.
- 3) There is a total additional storage of the bottom of the two mines A and B of 400 million HDT, but the distribution ratio is unknown. If the A mine is firstly mined, the additional HDT at the bottom of the A mine will be distributed to the miners of mining A according to the weight of the mining volume, and the additional stored HDT at the bottom of the B mine will be directly destroyed. Conversely, if the B mine is first mined, the additional HDT at the bottom of the B mine will be distributed to the miner of B mine according to the amount of mining, and the additional stored HDT at the bottom of the mine A will be destroyed directly.
- 4) If the A mine is first mined, except from the extra HDT stored at the bottom of the B mine, the remaining unexploited HDT will be distributed to the mining

B miners according to the weight of the mining. Conversely, if the B mine is first mined, and the A mine removes the extra HDT stored at the bottom of the A mine, the remaining unfinished HDT will be distributed to the miners of A mine according to the amount of mining. (This part has a lock-up period of 3 months and releases 1/3 per month)

5) Usually we call the mining mode to adjust the winning rate to 95%, and the corresponding odds are 1.036 (the odds are based on the actual line product).

That is, for each bet 1 TRX or 1 VENA, several HDTs will be obtained.

Winning odds	Return ratio	Bet expectation	Unit Loss
0.95	1.036	0.9842	0.0158

即:每投注 1 单位 TRX 或者 VENA, 预期亏损 0.0158 单位(挖矿成本)。

That is: Every 1 unit of TRX or VENA, the expected loss is 0158. (Mining cost)

5.2.1 Staged mining mode

The staged mining mode has 3 stages:

【First stage】 : Initial mining of (HDT) (mining percentage is 10%)

【Second stage】 : Running for mining (HDT mining percentage is 65%)

【Third stage】 : Last spurt of mining (HDT mining percentage is 25%)

After the completion of the first stage, the miners' workload will be verified. The more work in the first phase, the higher the work level, and miners will get more mining bonuses the second phase, ie the mining cost is lower. The proof of work is divided into 10 grades. The grades and bonuses is as the following table. If the miners did not participate in the first stage of mining, the amount of work awarded is 0. Therefore, the first stage of mining is very important!

Grade of proof of work	Percentage (miners)	Bonus in second stage
level1	5%	2%
level2	10%	4%
level3	15%	6%
level4	20%	8%
level5	20%	10%
level6	15%	12%

level7	10%	14%
level8	2%	16%
Level9	2%	20%
Level10	1%	25%

Mining mode in the second stage :

$$HDT = TRX * \frac{1}{1 + e^{1 - \frac{2 * mined}{total}}} * (1 + Reward\ ratio)$$

Reward ratio is the percentage based on the first stage.

5.2.2 Mining mode

Explorer mining mode :

$$HDT = trx * f(x)$$

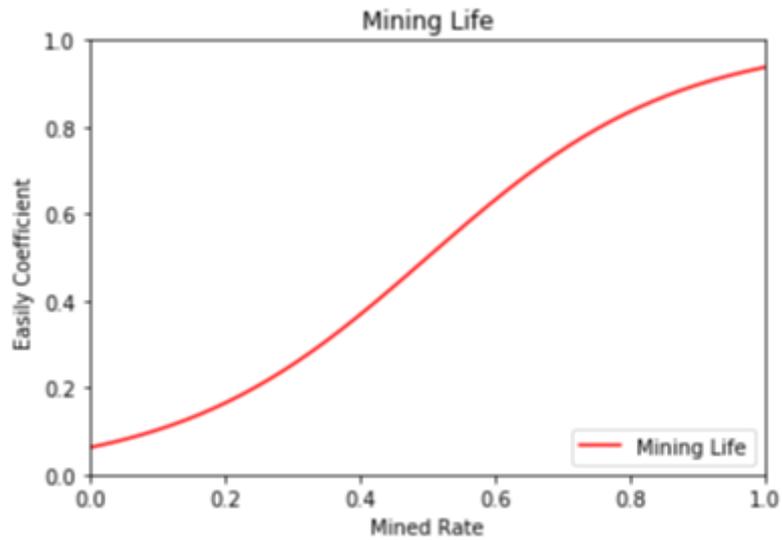
- $f(x)$ means the ease of mining, $f(x)$ is monotone increasing function, mining gets easier as time goes. $f(x)$ is the function $F(x)$ modeled as sigmoid.

$$F(x) = \frac{1}{1 + e^{-x}}$$

General mining mode in the whole cycle :

$$HDT = trx * \frac{\beta}{1 + \alpha^{\frac{2 * mined}{total}}}$$

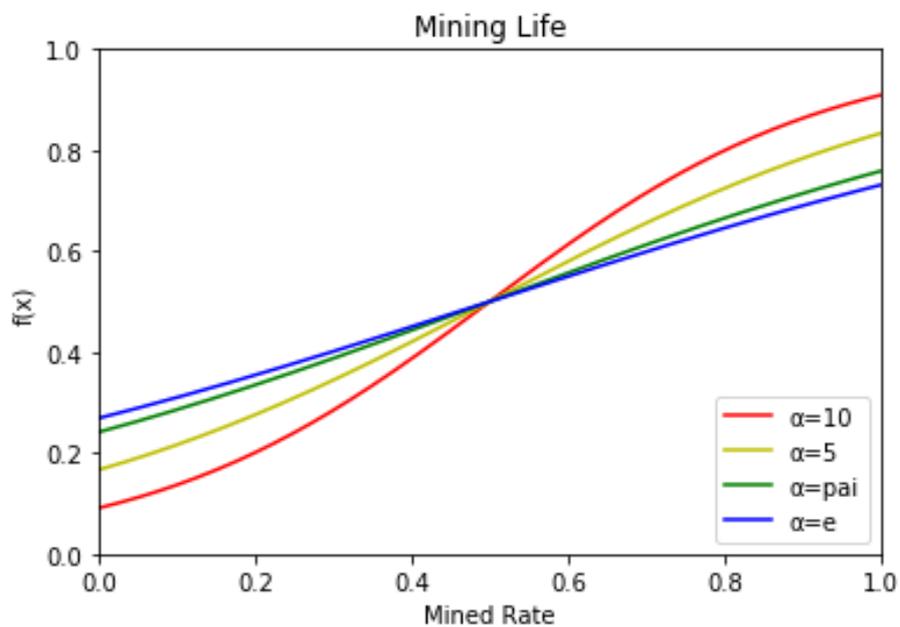
α and β is adjustable parameter, ease of mining is as follows :



5.2.3 Analysis of mining parameters

1) Parameter α

When the parameter β is determined, parameter α determines the increasing speed of ease of mining, α goes larger, mining gets easier, while the difference between the ease of initial mining and ultimate mining is larger, vice versa.



2) Parameter β

When parameter α is determined, parameter β decides to invest a percentage that TRX produces HDT. Parameter β is larger, the easier the mining will be, vice versa.

Finally, we take the parameters $\alpha = e$, $\beta = 1$, and we determine the mode of explorer mining

$$\text{HDT} = \text{trx} * \frac{1}{1 + e^{\frac{2 * \text{mined}}{\text{total}}}}$$

HDT means the amount of HDT

TRX means the amount of TRX

Mined: the amount that has already been mined

Total: the total amount of mine

5.3 Background story of explorer miners

Since life is a gamble, no one knows what will happen next. In the era of great navigation, the same goes for the explorers. We are waiting for wealth or death. We are not predicting, but we are willing to let go and prove that we have actually lived this life.

The explorers sailed out to sea and realized the two mines A and B, turning into a miner. Mine A and B are full of mystery, which makes it more attractive. The miners learned from the paper rolls in the stranded drift bottle that there were 400 million treasurable HDT at the bottom of the two mines A and B, and several VENA and TRX, but the detailed distribution of the mine is not stated in the paper roll. The miners are undoubtedly making a big bet on the choice of mining. Yes, when the miners made up their minds to participate in this gamble, they fell into meditation. They dreamed of the day of wealth and freedom, beaches, beautiful women, seagulls, and captains. Well, a beautiful and endless scroll instantly spreads in my mind, but greed and selfishness are spurting out at this moment. Everyone wants to consider the treasure as their own and to dig a tunnel to wealth freely. With a bang, the miners awoke from their dreams and looked at each other.

They found that they had already coveted three feet. Afterwards, the snoring was the splattering of their own saliva on the boots. After waking up, a mighty revolutionary mining revolution began, and a golden treasure can be imagined. Under the greed of human nature, there will be thousands of holes. Under the scattering of sunlight, we seem to still get immersed in the situation of the Tyndall effect.

However, the explorers who are good at sailing are not good at mining. Due to the lack of mining experience and the lack of equipment in advance, only the local materials can be taken. Therefore, the mining output of the miners is low, and they complain that mining is difficult. Despite this, the miners are not discouraged. They sum up their experience in mining practice and record their daily routines on the blockchain. This is proof of the workload and is also a symbol of merit.

Day by day, the miners looked at their daily records and had a lot of sentiments. I felt that it was time to return to the flight. During the rest period, the miners forged excellent mining equipment, and shared their own rich experience in the workshop to satisfy their vanity, so the people who standby also resolutely joined the gold rush army. When they came to the mine again, the old miners chose the road they had traveled before and continued to mine at the depth. The miners had already been familiar with the road, but due to the different talents, the mining output was due to the accumulated proof of work to have different output coefficients, and the fledgling miners were prepared to listen to the story before they set off. They chose their predecessors to walk through the gold rush road (mining tunnel). Since the beginning of the leak, the pursuit of mining, because of the lack of mining experience, so their mining output is lower than the output of the miners who have proof of work, but the new miners have the same output coefficient, benefiting from sophisticated equipment, the newly mined miners first mined the coins with higher output.

During the long years of mining, the mining tools of the miners have become blunt, so they returned to recuperate and repair the equipment and rebuild the weapon. It is conceivable that this time the surviving miners have earned a lot, and it is rumored that the bottom of the mine still contains rich treasure. The blink of an eye, the rumors spread all over the streets, people can't resist the temptation

of money, and they have begun to collectively train all kinds of mining and skills in the back hills of the town. How long does it take for everyone to be stunted, and winning the treasure is a must. Due to the systematic training of the whole people, everyone's mining experience is very rich and the skill level is almost the same. So in the final stage of crazy running, everyone's mining output is strikingly similar. Not only that, just as Newton said "He can calculate the universe, but can't calculate human greed." The miners lost their mind by the treasures at the bottom of the mine, and they have forgotten the so-called exhaustion when they are at their fingertips. "Getting" and "lost" is in an instant, because everyone knows that the two mines A and B are adjacent and the bottom supports each other. No matter which mine is first mined to the bottom of the depth, the neighboring mine collapses due to uneven force, and only the treasures in front of you can be seen. Perhaps we can only hold our breath, raise our hands, and peep through the narrow line of sight between the fingers to spread over the sky after the earthquake.

5.4 HDT Reward

20% of HashDice profit will go into prize pool, and 60% of prize pool will be given to players in the form of deposit bonus. Players could deposit and lockup HDT to get bonus for every 24 hours.

The Token in the deposit bonus could be mining, private sale, bonus for users, partner and team.

6. Contact us

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7. Disclaimer

- 1) We build a game platform to promote a socialized human exploration experiment, but do not persuade game users to participate in any game. It is strictly forbidden for players under the age of 18 to participate in this experiment without obtaining relevant permission.
- 2) We comply with the laws and regulations of relevant countries and regions and do not provide any game services to countries and regions that prohibit blockchain projects.
- 3) We do not make any form of commitment. We could not promise appreciation of tokens.
- 4) Participation in the game may be faced with a loss, if you can't afford it, please don't participate in the game.
- 5) The right to interpret this document is owned by the HashDice project team.