



Blockchain + Quiz

# White Paper

*Octopaul Team*

# Background

## 1.1 Block chain

Users of digital money have grown explosively in 2017. Active digital wallet users have grown to more than 20 million from less than 5 million at the beginning of the year and users of Coinbase have exceeded 12 million alone. The substantial increase in the number of users shows that the block chain industry is attracting more and more attention, and its value of internet will also have a deep impact on the industry.

Although the current block chain industry is still in an early stage, the popularity of some pilot products such as encrypted cat shows the strong demand for landing application. If the products with actual use value appear, it will become a sign of "block chain product landing".

## 1.2 What is Octopaul

The name Octopaul is originated from the famous Octopus Paul that has successfully estimated all the competition results of German team in the 2010 South Africa World Cup and has enjoyed great reputation and popularity among football fans.

Octopaul is a football quiz platform based on block chain. It

is divided into three kinds of gameplay: LMSR, capital pool and personal banker.

After the launch of Octopaul, the initial user can get the Token award (Code: OPC) through the invitation, signing in, and finishing the task. Users can participate in quiz by rewarding and purchasing OPC.

## Gameplay Introduction

### 2.1 LMSR reality prediction (one- to- many)

LMSR realistic prediction consists of three parts: Creator, Oracle (result importer) and player. The creator pays a deposit to create a room for arbitrary quiz, and other users gamble with the creator by purchasing Handicap shares. After the game, both the creator and Oracle shall enter the result of the quiz. Oracle who has input the correct result will receive the reward, while the creator and the Oracle who has input wrong result will be punished. Rewards and punishments will be carried on by OPC as the medium. The creator can decide the L value to set the maximum loss value.

Whether the result is correct or not is subject to the principle of “the minority obeying the majority” . Due to the large

number of Oracle involved in results inputting, if the creator wants to collude with Oracle for cheating, he need to collude with 51% Oracle nodes at the same time with the high cost and risk. Thus, the possibility of cheating is greatly reduced.

The behavior of users in the public chain, such as the creation of rooms, requires Seer to be the “fuel cost” of the public chain nodes. The player can join in quiz through the token OPC issued by Octopaul.

### **2.1.1 LMSR reality prediction (one- to- many)—example**

This example is only used for gameplay instruction. Specific values mentioned are not of reference value.

Competition: Argentina vs Iceland

#### **Creator:**

1. Pay deposit (100 thousand Seer) to block chain network.
2. Open a quiz room
3. Set the quiz: Argentina is ahead by 1 goal in 80 minutes.
4. Set the L value (maximum loss value)—Handicap is automatically displayed by algorithm.
5. Set the punishment pool: the wrong result inputting cause punishment for 1000 coins.

6. Set the unit price of the handicap share: [Yes: 1000 / share]  
[No: 1000 / share].

## Player:

1. Enter the room
2. Player A spends 1000 OPC to buy one [No] while the handicap values 2.6.
3. Game starts  
(Argentina team is ahead by 1 goal in 75 minutes while a large number of players buy [Yes]. Then through the algorithm, handicap [Yes] is adjusted from 1.6 to 1.1, while [No] from 2.6 to 5.2).
4. Players have the right to sell shares at any time
5. Player A sells the share at this time: get 500 OPC (decide by algorithm)
6. Player A doesn't sell the share at this time:
  - 1) If Argentina was ahead of Iceland by 1 goal in 80 minutes—total loss.
  - 2) If Argentina or Iceland shot 1 goal in in 80 minute—gain 2600 OPC

When the final result is [Yes], if the creator is wrong, he shall return 2000 OPC to the players as punishment. If Oracle is wrong, he shall return 1000 OPC to the players.

## Oracle:

1. At the end of the game, Oracle shall enter the result of quiz.
2. Oracle can receive the reward from the algorithm

## 2.2 Personal banker (one- to- many)

The Personal banker is composed of three parts: creator, Oracle (result importer) and the player. The creator pays the deposit and open the quiz room. The quiz is for the victory, draw, defeat or concede points of the competition. The creator can adjust the water level by setting and adjusting the handicap. Other users bet on the bets with the creators. After the game, the operation is consistent with LMSR's realistic prediction.

### 2.2.1 Personal banker (one- to- many)—example

This example is only used for gameplay instruction. Specific values mentioned are not of reference value.

Competition: Argentina vs Iceland

#### Creator:

1. Pay deposit (100 thousand Seer) to block chain network
2. Open a quiz room
3. Set the quiz: Argentina vs Iceland—victory, draw or defeat

4. Set the punishment pool: the wrong result inputting cause punishment for 1000 coins.
5. Set the handicap value: [Victory 1.4], [Draw 1.8], [Defeat 1.8].

### **Player:**

1. Enter the room
2. Player A spends 1000 OPC to buy [Victory 1.4]
3. Game starts

(Argentina team is ahead by 1 goal in 80 minutes while a large number of players buy [Victory]. Then the creator can adjust the handicap himself. E.g. adjust [Victory] from 1.4 to 1.1, while [Draw] from 1.8 to 3.6 and [Defeat] from 3.2 to 9.6).

The final result and reward and punishment mechanism is consisted with LMSR's realistic prediction. The function of Oracle is consisted with LMSR's realistic prediction.

### **2.3 Capital pool (many-to-many)**

Capital pool is composed of three parts: creator, Oracle (result importer) and player. It is relatively simple, targeting at players with entertainment preference. The creator opens the quiz room and the quiz is for the victory, draw or defeat of the

competition. The player group in the room and Oracle who get the correct answer will share the funds of the capital pool in the entire room through algorithm.

### 2.3.1 Capital pool (many-to-many)—example

Competition: Argentina vs Iceland

#### Creator:

1. Open a quiz room
2. Set the punishment pool: the wrong result inputting cause punishment for 1000 coins.

#### Player:

1. Enter the room
2. Group A with a people: each person invest 100 coins sum to  $100a$  coins to by Victory
3. Group B with b people: each person invest 100 coins sum to  $100b$  coins to by Draw
4. Group C with c people: each person invest 100 coins sum to  $100c$  coins to by Defeat
5. The capital pool has a total of  $100a + 100b + 100c$  OPC
6. The game ends and Argentina wins. A total of x Oracles input the right answer
7. Group A and x Oracle share  $100a + 100b + 100c$  OPC

according to a certain proportion

## **Product system**

### **3.1 Creator**

The creator is composed of ordinary users. Each user can create rooms (LMSR reality prediction and personal banker require deposit) and quiz projects, and gain benefits by interacting with other users.

### **3.2 Player**

The Player is composed of ordinary users. Player can gain benefits by entering rooms to join in quizzes and interacting with creator or other players.

### **3.3 Oracle**

The Oracle can be played by ordinary user. The creator and players in the same room cannot be the Oracle of the room. The user's behavior as Oracle will be recorded on the block chain network.

### **3.4 Personal account**

The personal account system has storage function that can

be interpreted as a personal wallet, and the user can be embodied in a personal account by quizzing, airdropping, invitation awarding, etc. Users can check their quiz of the past.

### **3.5 Incentive system**

Octopus has an ecological reward fund, which will be the only reward through the Octopus original token (OPC). The platform allocates the rewards to users by algorithm through three dimensions of winning rate, quiz frequency and quiz amount.

The reward pool system performs a reward allocation calculation every 24 hours, and the award Token can be automatically distributed to the participants' personal accounts. (only one level) according to the calculation results.

Users will also be rewarded for inviting their friends. If user A invited user B, user A will receive token reward. The consumption generated by user B in the future will be partly distributed to user A.

#### **3.5.1 Reward Pool**

The Reward pool is used to reward users who contribute to Octopaul. The eco reward fund supplements the prize pool itself

every day on the basis of the reward elasticity coefficient.

### 3.5.2 Reward method

The reward will refer to the three dimensions of winning rate, quiz frequency and quiz amount. Reward ward pool will be equally divided into three parts on daily basis, and the three dimensions of rewards will be injected into independently. The rewards for each user will be calculated independently in different dimensions, and the reward will be awarded through the whole network ranking.

## Technology realization

The Seer public chain has been developed. The creating team of Seer public chain is the technical team. It is expected that the front-end will be completed and the products will be launched within a month and a half.

### 4.1 Seer public chain

Octopaul will develop products based on the seer public chain. The seer chain is a powerful block chain platform based on the Graphene Toolkits, which will provide high speed operating

elementary block chain systems, and a reliable and neutral decentralization prophecy framework is used to predict market. It is the world's first realistic market forecast platform for the development of sports industry based on block chain technology.

### 4.1.1 Protocol Nerve Center

Although Turing's comprehensive virtual machine gives a certain extensibility to the block chain, however, after the DAO event, the Ethereum still needs to rely on hard bifurcations to solve problems, allowing the Ethereum to be divided into ETH and ETC directly. Seer introduces the protocol nerve center, which is a decentralization logical neural network consisting of developer, council, witness, all the token holder and logic state. All the application logic and the block chain protocol itself are operated under the control of the Protocol nerve center. Then the upgrade of application and protocol are completed by the adaptivity of Protocol nerve center rather than hard bifurcations.

### 4.2 Platform model

Service APIs and Data APIs	Predictive Markets
Seer Core	
Protocol Nerve Center & Graphene Toolkits	

Seer is mainly composed of 3 levels:

The bottom layer is the Protocol Nerve Center and the Graphene Toolkits to provide the bottom block chain service. The Protocol Nerve Center includes the upgrade of block chain decentralization. Graphene Toolkits provides an average transaction confirmation speed of 1.5 sec and a maximum of 3300 transaction processing capabilities per second, providing a bottom block chain platform of high performance and low delay.

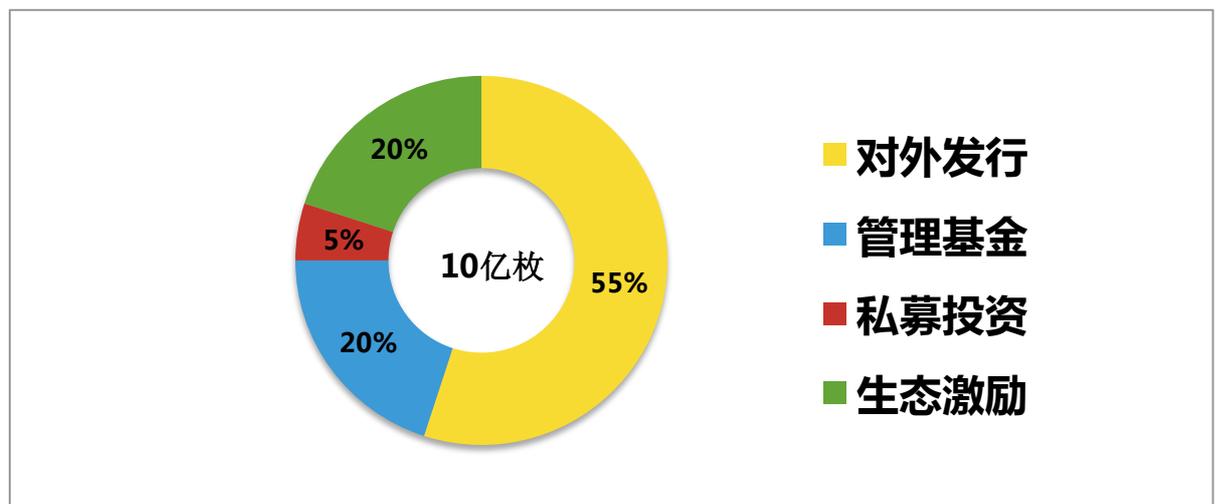
The middle layer is the Seer Core, namely the core layer, in which the communication with Graphene Toolkits and the basic logic of realistic market prediction will be realized while providing the service and operation mechanism for the optimization of predictive market.

The top layer is the service layer, which encapsulates the third-party developer interface and Data interface, as well as the external service APIs of the predictive market and the crowd raising market. In the service layer's external service APIs, web pages and APP based on IOS and Android will be developed.

# TOKEN plan

## 5.1 Token issuing

In order to effectively encourage community builders and participants, and to achieve the establishment of platform ecology and the realization of value, the total issuing amount of Octopaul' s token—OPC is 1 billion. Octopaul' s token (OPC) is the Seer public chain assets based on graphene technology. The management fund will be unlocked in four years for 25% per year.



## 5.2 The use of token

### 1. External issuing [55%]

It is used to provide quiz players enough tokens to play games.

### 2. Management fund [20%]

It is used to attract and keep more business partners and talents during the platform development.

### 3. Private investment [5%]

It is used for the research and development of the project and the market promotion in the early stage.

### 4. Ecological incentive [20%]

It is used for the early platform reward pool and the eco reward fund was supplemented in the form of additional issuance. In the second year, the amount will be the 10% of the total issued amount and will be reduced by 1% per year to 1% of the total amount.

## Investment



BWVC



Football fan service providers with rich experience in fan operation, covering millions of fans at home and abroad, have rich experience in football fan operation.



Fighting competition content service provider with millions of domestic and foreign combat users.

## Team

### Jacky Liu

The Product Director of Octopaul served in the development of Jiochat products led by Reliance Group with 15 years of product technology and team management experience. The product guided by him had the impressive record of 20 million users 10 months after the product launched.

### Will

Octopaul R & D director who is a senior engineer with 10 years of development experience. He was a senior engineer of a famous unicorn and participated in the construction of a famous public chain with rich experience in the development of block chain products.

### Edan Guo

The Operations Director of Octopaul served in YinYueTai, Sina, Sina Weibo, CCTV, CNTV. He has led the management of products, operations, and content of billions of users. He has

many years of experience in product operations for fans and the community.

### **Robin Li**

Octopaul Marketing Director, who is a senior marketer with 13 years of market and team management experience and was responsible for 8848 mobile phone and the brand case of "Tencent school season – "Senior Sister Hug Group". He successfully helped 8848 become the first brand in the global market segmentation.

### **Tobby**

Octopaul Commercial Director of America and senior sports economics expert. He was the Chief Operating Officer of Argensports Sports China. With years of blockchain technology research experience, he is familiar with the block chain market in America and successfully operated several large block chain projects in North America.

### **Ryan Wang**

Octopaul consultant with 10-year experience in the Internet industry and 5 years of financial industry experience. With abundant operating experience, he is familiar with the Internet operating model, and successfully led the team to design, operate several DAUs of million level and apps with monthly

income over 10 million. As private equity fund managers, he managed funds accumulated over RMB 2 billion in the recent three years.

### **Frank**

Octopaul Project Consultant. BWVC founding partner, Cheung Kong Graduate School of Business MBA, professional angel investors, investment projects include Keep, Xingzhan TV, www.woshipm.com, Future Law, Si Gai ESports, Gedoumi, Fansunion, etc.

### **Tal**

Octopaul Project Consultant who is a Geek and a senior block chain developer. He is currently responsible for the development of block chain research and development of MI.

More team members in the project development and operation are the Internet practitioners with extensive project experience and have cooperated with the founders for many years without detailed introduction here. The SEER team will also provide technology support for Octopaul in block chain development.