Origin Sport Whitepaper

ORIGIN SPORT
PLAY YOUR OWN GAME

Next Generation of Blockchain based Sports Betting Social Platform

2018.03

Content

Disclaimer

NOTHING IN THIS WHITEPAPER CONSTITUTES LEGAL, FINANCIAL, BUSINESS OR TAX ADVICE AND YOU SHOULD CONSULT YOUR OWN LEGAL, FINANCIAL, TAX OR OTHER PROFESSIONAL ADVISER BEFORE ENGAGING IN ANY ACTIVITY IN CONNECTION HEREWITH. NEITHER ORIGIN SPORT FOUNDATION LTD. (THE FOUNDATION),ANY OF THE PROJECT TEAM MEMBERS WHO HAVE WORKED ON THE ORIGIN SPORT PLATFORM OR PROJECT IN ANY WAY WHATSOEVER (THE ORIGIN SPORT TEAM) NOR ANY THIRD PARTY SERVICE PROVIDER SHALL BE LIABLE FOR ANY KIND OF DIRECT OR INDIRECT DAMAGE OR LOSS WHATSOEVER WHICH YOU MAY SUFFER IN CONNECTION WITH ACCESSING THIS WHITEPAPER, MATERIALS PRODUCED BY THE FOUNDATION, OR ACCESSING THE WEBSITE AT https://www.originsport.io/ OR ANY OTHER MATERIALS PUBLISHED BY THE FOUNDATION.

All contributions will be applied towards the Foundation's objects, including to enhance our user experience, to accelerate the development process of ORS community, to update and open source the code of some functions in the smart contract, do intense research on sport event prediction market, to explore the direction of product development.

This Whitepaper is intended for general informational purposes only and does not constitute a prospectus, an offer document, or an offer of securities or a solicitation for investment. The information herein below may not be exhaustive and does not imply any elements of a contractual relationship. There is no assurance as to the accuracy or completeness of such information and no representation, warranty or undertaking is or purported to be provided as to the accuracy or completeness of such information. Where this Whitepaper includes information that has been obtained from third party sources, the Foundation and/or the ORIGIN SPORT team have not independently verified the accuracy or completion of such information. There is no assurance as to the accuracy or completeness of such information and no representation, warranty or undertaking is or purported to be provided as to the accuracy or completeness of such information.

This Whitepaper does not constitute any offer by the Foundation or the Origin Sport team to sell any ORS (as defined herein) nor shall it or any part of it nor the fact of its presentation form the basis of, or be relied upon in connection with, any contract or investment decision. Nothing contained in this Whitepaper is or may be relied upon as a promise, representation or undertaking as to the future performance of the platform. The agreement between the Foundation (or its affiliate) and you, in relation to any sale and purchase of ORS is to be governed by only the separate terms and conditions of such agreement.

The Foundation and the Origin Sport team do not and do not purport to make, and hereby disclaims, all representations, warranties or undertaking to any entity or person. Prospective purchasers of ORS should carefully consider and evaluate all risks and uncertainties (including financial and legal risks and uncertainties) associated with the ORS token sale, the Foundation and the Origin Sport team.

By accessing this Whitepaper or any part thereof, you represent and warrant to the Foundation and the Origin sport team as follows:

(a) You acknowledge, understand and agree that ORS may have no value, there is no guarantee or representation of value or liquidity for ORS, and ORS is not for speculative investment;

(b) In any decision to purchase any ORS, you have not relied on any statement set out in this Whitepaper;

(c) You will and shall at your own expense ensure compliance with all laws, regulatory requirements and restrictions applicable to you (as the case may be); and

(d) You acknowledge, understand and agree that you are not eligible to purchase any ORS if you are a citizen, resident or green card holder of the United States of America or a citizen or resident of the People's Republic of China.

The agreement for purchase and sale of ORS shall be governed by a separate Token Purchase Agreement with the terms and conditions of such agreement (the Token Purchase Agreement), which shall be made available at https://www.originsport.io/ prior to the sale of any ORS. In the event of any inconsistencies between the Token Purchase Agreement and this Whitepaper, the Token Purchase Agreement shall prevail.

All statements contained in this Whitepaper, statements made in press releases or in any place accessible by the public and oral statements that may be made by the Foundation and/or the Origin Sport team may constitute forward looking statements (including statements regarding intent, belief or current expectations with respect to market conditions, business strategy and plans, financial condition, specific provisions and risk management practices). You are cautioned not to place undue reliance on these forward looking statements given that these statements involve known and unknown risks, uncertainties and other factors that may cause the actual future results to be materially different from that described by such forward looking statements. These forward looking statements are applicable only as of the date of this Whitepaper and the Foundation and the Origin Sport team expressly disclaims any responsibility (whether express or implied) to release any revisions to these forward-looking statements to reflect events after such date.

This Whitepaper may be translated into a language other than English and in the event of conflict or ambiguity between the English language version and translated versions of this Whitepaper, the English language version shall prevail. You acknowledge that you have read and understood the English language version of this Whitepaper.

No part of this Whitepaper is to be copied, reproduced, distributed or disseminated in anyway without the prior written consent of the Foundation.

Introduction

In a very short amount of time, the popularity of cryptocurrency market has exploded. As a result, blockchain technology has been brought to the attention of the general public. Some of the most brilliant minds in the world are now hard at work building innovative blockchain solutions in order to realize the decentralized future first outlined in the original Satoshi white paper written a decade ago. He encrypted digital currency market has come a long way in the development of blockchain technology. Unfortunately, most of these exciting technological breakthroughs have yet to reach the hands of the average user. Besides cryptocurrency speculation, blockchain technology has yet to find its' way into our daily lives. The cause of this is the current limitations of blockchain networks. The computation power necessary to run a node and the increasing complexity of consensus algorithms makes it restrictively difficult to implement some of the larger scale blockchain projects. As a result, our goal is to ease the transition between now and widespread integration of blockchain technologies by focusing on a more approachable application of blockchain; event prediction markets; to be more specific, sports betting.

Part One ORS Design Philosophy and Market Opportunity

1.1 Background

The history of betting in sports events is almost as old as the history of sports. It is also an important part of why sports are so popular among the general public. Betting allows spectators to participate alongside their favorite teams and athletes. As the largest and arguably most important downstream industry in the global sports ecosystem, sports betting has naturally ballooned into a large market that includes a wide variety of sporting events. A conservative estimate of the global sports betting market in 2017 puts it well within the trillion dollar range.

While the concept of betting on the outcomes of sports events is nothing new, the widespread adoption of the Internet has brought unprecedented accessibility to the entire sports betting industry. Now people from all over the world, especially in developing countries, have the ability to participate in the world's most popular sporting events. Unfortunately, this accessibility hasn't come without a cost. The online sports betting industry remains fraught with controversy. The internet is littered with fraudulent betting sites and the entire industry suffers from poor public perception due to the actions of these few bad actors. Nevertheless, the sports betting industry continues to grow and remains one of the premiere ways for savvy sports enthusiasts to cash in on their extensive sports knowledge.

As an example, the World Cup is undoubtedly one of the most popular sporting events in the world. In developing countries, the number of bets placed on the World Cup has been on the rise. The total number of bets placed on the 2006 World Cup in Germany was around 20 billion euros; 8 years later, the amount placed on the 2014 World Cup in Brazil was estimated to be around 200 billion euros. Much of this explosive growth can be attributed to the participation of developing countries. In particular, the Chinese market has seen the most growth in participation. Throughout the 2010 World Cup in South Africa, China bet an average of 50 million yuan a day. By the end of the 2014 World Cup in Brazil, China had averaged 150 million yuan a day on bets. At the end of the 2014 World Cup, the total sales of tournament match betting tickets reached 15.58 billion yuan. This explosion in popularity has also been mirrored in developed countries. Jupiter Research estimated that 10% of the entire adult population in the UK participated in legal bets in the 2014 World Cup. It's estimated that the total number of participants in the global sports betting industry is around 560 million. In 2017 the worldwide football betting industry alone saw upwards of 700 billion pound - that figure is expected to reach 1.05 trillion pounds (about 1.5 trillion U.S. dollars) by 2018.

1.2 Opportunity and Challenges

1. **Trust in online sports betting platforms**

Traditional centralized betting platforms are dependent on reputation of the platform. Participants must trust that the platform operates in a fair manner and winnings will be honored. Herein lies the crux of the problem; there is no way for a platform to establish trust at conception. Trust in a platform is dependent on two key factors: the security of a user's funds on the platform and enough funds available for winnings distributions. Ideally these processes would be transparent and have some sort of accountability or accreditation. Unfortunately, this is usually not the case for most online betting platforms and the risk of fraud remains high. As it stands, unilateral regulations have yet to be imposed on online betting sites. Individual countries have taken measures to curb abuses, but in response, many of these websites opt to continue their operations illegally or move their operations to countries that are more lax with regulations.
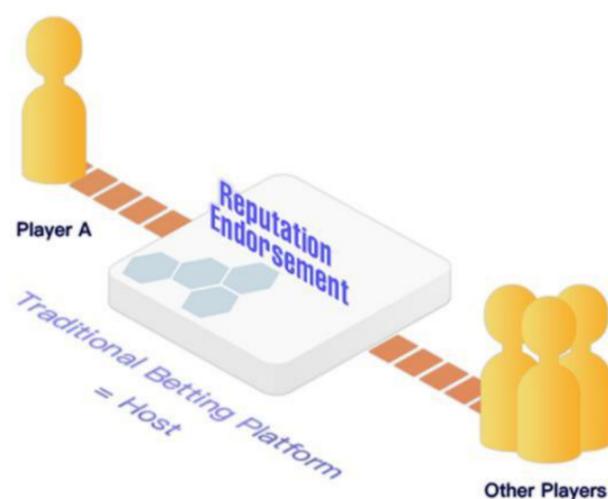
2. Transparency in online sports betting platforms

In centralized platforms, it is easy for a few bad actors to abuse the system. Odds rigging and other market manipulation techniques are notoriously difficult to identify. This is largely in part due to the black box approach that sports betting platforms take in dictating odds distributions. It is impossible for the average user to determine whether or not the algorithms used to determine odds distributions are actually fair or not. As the goals of the platform and the user are in direct opposition to each other, it is easy to arouse suspicion at the slightest hint of misconduct. Transparency in this process would go a long way in reversing the bad publicity surrounding online betting platforms.

3. Ineffective regulation leading to lower participation

Each country has its' own approach towards regulating online betting platforms. As an example; in the United States, fantasy sports is recognized as a skill based activity. Research by agencies in the United States determined that success in fantasy sports is largely determinate on the knowledge of the individual, with probability playing a very minor role. Their research also found that participation in fantasy sports correlated with a better viewing experience (for all matches, not just the specific match that the user has invested in) and an increased engagement with that sport's secondary markets (e.g. sports blogs, forums, etc.). The study concluded that with proper government regulation, fantasy sports would go a long way towards eliminating illegal gambling markets. Unfortunately, some parts of the country still classify sports betting as illegal. This naturally has led to lower vitality of the sporting ecosystem as a whole and an unsatisfied viewer base. As a

consequence, some of these unsatisfied viewers turn towards grey market betting platforms where underhanded tactics are employed due to lack of regulation.

4. **Difficulty of establishing trust in sports betting**

To establish trust with users, centralized betting platforms must first show a track record of transactions, hundreds of millions in transaction volume, and numerous partnerships to indicate legitimacy. Veteran enthusiasts may have the desire to become bookmakers, but have no feasible way of establishing a betting platform of their own. There exists a small subset of that group that do have the funds to establish small betting groups of their own, but the trust aspect is the limiting factor in making those dreams feasible. With no transaction history or any indication that winnings will be honored, it is impossible to establish credibility. This results in virtually zero user generated content when it comes to establishing betting parameters.

## 1.3 Future Development of the Origin Sport Chain

By developing a sports betting platform on the Ethereum blockchain, we forgo the need for trust. The decentralized nature of blockchain allows for full transparency of the process - no more black box algorithms that determine the odds. The purpose of the Origin coin platform is to introduce a decentralized method of conducting sports bets. Our smart contracts are pre-scheduled and ensure results and winnings distributions are tamper-proof. The goal of the system is to allow anyone to host their own bets while ensuring the integrity of the placed bets. As such, the increased transparency of the system will allow us to work with regulators in identifying potential money laundering fraud on our platform as well as monitoring user betting quotas through a combination of real-name systems. We believe this will go a long way towards bringing this industry into the light and encouraging governments to revisit legislation regarding sports betting.
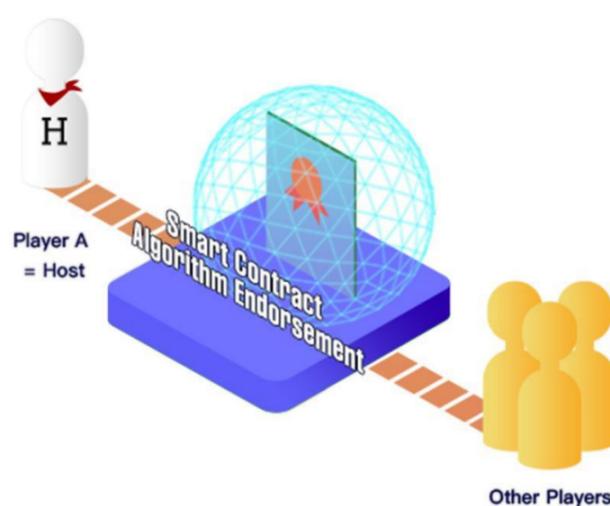
Part Two Origin Sport Chain and ORS

2.1 Summary

In addition to providing a basic sports betting platform, we will launch two complementary services along with the Origin source chain. Firstly, we will launch a credit-based lending service in order to supplant insufficient prize pools. By lending funds to accredited users with solid transactional history, we will be able to increase prize pool dynamism. The other service we plan on launching is a sporting event outcome confirmation service for use in smart contracts. Official sport event results must be referenced in order for smart contracts to execute, therefore there must be an accountable system to reliably retrieve competition results from official sources to maintain the integrity of the smart contract system. These three complementary services make up the core of the ORS sports betting platform and will ensure the full transparency and accountability of the entire system.

Sports betting service

Credit-based lending service

Outcome confirmation service
in smart contracts
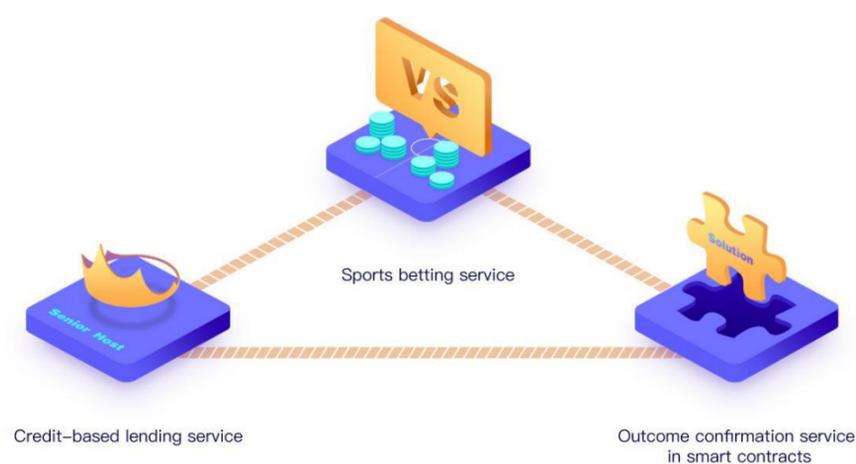
2.2 Next Generation of Blockchain based Sports Betting Platform

Traditional centralized betting platforms are unable to exercise full transparency as it runs directly counter to their business models. With the advent of decentralized blockchain technology, we now have the technical capability to create a true transparent betting platform. The necessity of a centralized authority that regulates transactions can now be carried out fairly and autonomously. Placing bets via smart contract is an ideal application of blockchain technology due to the current technical limitations of the blockchain network. Due to the nature of our smart contracts, we can ensure a predictable smart contract execution schedule. This is contrary to the nature of other smart contracts where execution time cannot depend on a set schedule. This runs the risk of congesting the entire network if too many contracts are executed simultaneously. As our contract execution times are in line with competition schedules, we can prevent TPS congestion by staggering execution times accordingly. Our sports platform commands five distinct characteristics.

1. **A decentralized global sports betting platform**

As our platform is in the blockchain domain, there are no arbitrary restrictions to participation. Our means of trade is in cryptocurrency, which means we don't encounter the traditional pitfalls of traditional currency exchanges.

2. A variety of betting experiences

We're able to provide a variety betting experiences as almost all of our content will be user generated. We will be able to support a wider variety of competitions spanning from traditional sports, to e-sports, to other forms of competition. As long as there is an official source of competitive results, our platform will be able to support it (see 2.3). We're also in the process of building a recommendation engine that looks at the betting history of a user and recommends them other bets that they may be interested in. This is to preempt the scenario in which a user may become lost due to the high volume of available bets. Our recommendation engine will also play a major role in organic discovery of different sports.

3. Transparency by design

All activity on our platform will be recorded on the Ethereum chain. As data on this chain is immutable and tamper-proof, we too can guarantee users and regulators that no fraudulent activity can occur. The source code for our smart contract protocol will also be open sourced on GitHub and subject to community supervision.

4. Approachable user experience

Cryptocurrency wallets currently suffer from poor user friendliness. If User A wishes to transfer 1 ETH to User B, User B must first share their 42 character wallet address with User A. User A then must correctly enter that 42 character address and initiate the transfer. Although easy on a conceptual level, in practice, this does act as a significant barrier to entry to crypto. Our platform will allow users to link their wallet addresses to their accounts allowing for a more familiar transfer process.

**5. Automatic smart contract creation and execution**

Our smart contracts are created with the ERC20 protocol on the Ethereum network and this ensures that the terms of the contract are immutable. This allows for anybody to host their own bets. Our smart contracts only execute based on officiated results so that there is no room for individual interpretation.

2.3 Technical Solutions for Resolving Sports Events via Smart Contracts

To ensure unbiased and fair results, smart contracts must reference officiated data in order to execute. We would have to identify the official organizations that sanctions sporting events and be able to pull data directly from their APIs. For those unfamiliar with Ethereum's operating principles, smart contracts on executed on the Ethereum network.

Require complete determinism at conception as it must ensure the independent verification of each node in the network in order to reach consensus. Unfortunately traditional API calls do not satisfy this need for determinism at conception. Potential server errors or data tampering would make the results unpredictable and therefore cannot be considered deterministic. Luckily, services such as Oraclize allow DApps to receive external data in a way that fulfills the need for determinism. Oraclize is employed by a wide range of blockchain projects and is able to support a variety of data sources such as URL access, data search engines, blockchain content data, IPFS file access, and more. Of course, for our specific application, we wouldn't require the full range of functionality as our results data would not change over time. The challenge then becomes finding reliable and reputable data sources. In addition to obtaining data from official tournament data providers, we will cross reference this data by crawling major sports websites to ensure that the game states and data is consistent. We'll then write this data to the blockchain. The code for all of these processes will be open sourced and we welcome all developers interested in sports to contribute. Of course, for our specific application, we wouldn't require the full range of functionality as our results data would not change over tie. The challenge becomes finding reliable and reputable data sources. In addition to obtaining data from official tournament data providers, we will cross referee his data by crawling majors' websites to ensure that the same states and data is consistent. We'll then write this data to the blockchain. The code for all of these processes will be open sourced and we welcome all developers interested in sports to contribute.

There are concerns that storing competition result data on the blockchain is a waste of resources. Our view is that sports is one of the most popular topics in the world and as such, we predict that more sports related DApps will be released in the future. If this is the case, it would prove beneficial for the future sports DApp ecosystem if official results data can be directly referenced from the chain itself. We will do our part in making sure minimal resources are spent by minimizing the data that is stored. We currently store three pieces of information: match ID, match results, and hash value of the match data. Match details are then stored via IPFS or Storj. This storage method saves resources and provides access to basic information while also providing indirect access to complete information all the while maintaining immutability. The schematic diagram is as follows:
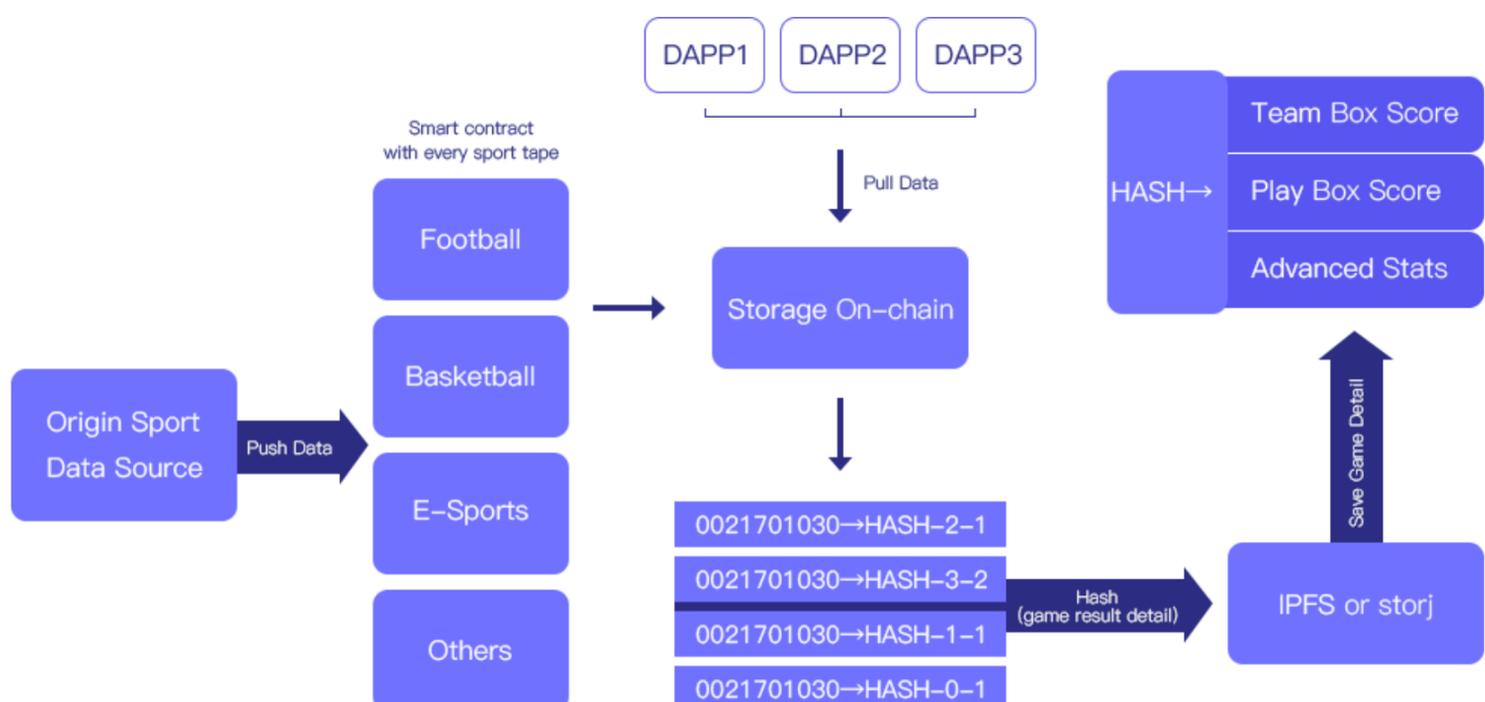
2.4 A Credit Model to Support A Token Lending System

After establishing the basic facilities of the ORS platform (betting DApp, smart contracts, competition result service), we will then begin building a credit based lending system. This is necessary in order to ensure that potential hosts have the ability to successfully host a wager. On our platform, in order to ensure a smart contract has the required funds to actually distribute winnings, we require a reserve pool to be locked into every smart contract. In the scenario in which a potential host does not have the available funds, they will be unable to host a wager. Therefore to ensure the continued virtuous feedback loop of the entire ORS platform, we must inject capital into reserve pools in order to keep the system fluid.

2.5 Technical Framework

We're currently developing an ERC20 compliant smart contract based on the Ethereum network and utilizing Oraclize as our data carrier. Despite being a centralized service, Oraclize is currently the best method for smart contracts to reference external data as it provides support for multiple data types and supports TLSNotary data verification. As a comprehensive decentralized sports betting platform, we must make sure that contracts are executed based on reliable data and data sources cannot be tampered with. As such, we identified that Oraclize is ideal for meeting those two requirements.

Each bet that is created by a user automatically generates a corresponding smart contract. The smart contract ensures that the host has the ability to distribute winnings as well as properly distributing the winnings. Hosts must first lock in a reserve pool to guarantee winnings distributions. The size of the pool dictates the total number of people that can participate in that particular wager. We will source competitive results data from official sources as well as cross reference them with secondary sources such as sports blogs. The smart contracts will then execute based on this data. As we are using Oraclize, our smart contracts will be able to securely access that data ensuring that the results are accurate and tamper-proof.

In order to ensure match status and data consistency, the settlement function will run 210 minutes after the game start time and access our open source event data interface on GitHub via Oraclize's URL data source and set the GET method and related parameters (Game ID). Oraclize will then automatically retrieve the contents of the URL based on the address and parameters provided by the smart contract, then send the data back to the smart contract and pass the callback function. This entire process is secure as Oraclize is able to

provide credible proof of TLSNotary throughout the entire process. After obtaining the results, the smart contract will then calculate the winning users' addresses and bonuses and distribute winnings. If a balance remains (certifying the dealer was profitable), we will then charge a service fee and distribute the remaining amount to the dealer.

The schematic diagram can be seen below:
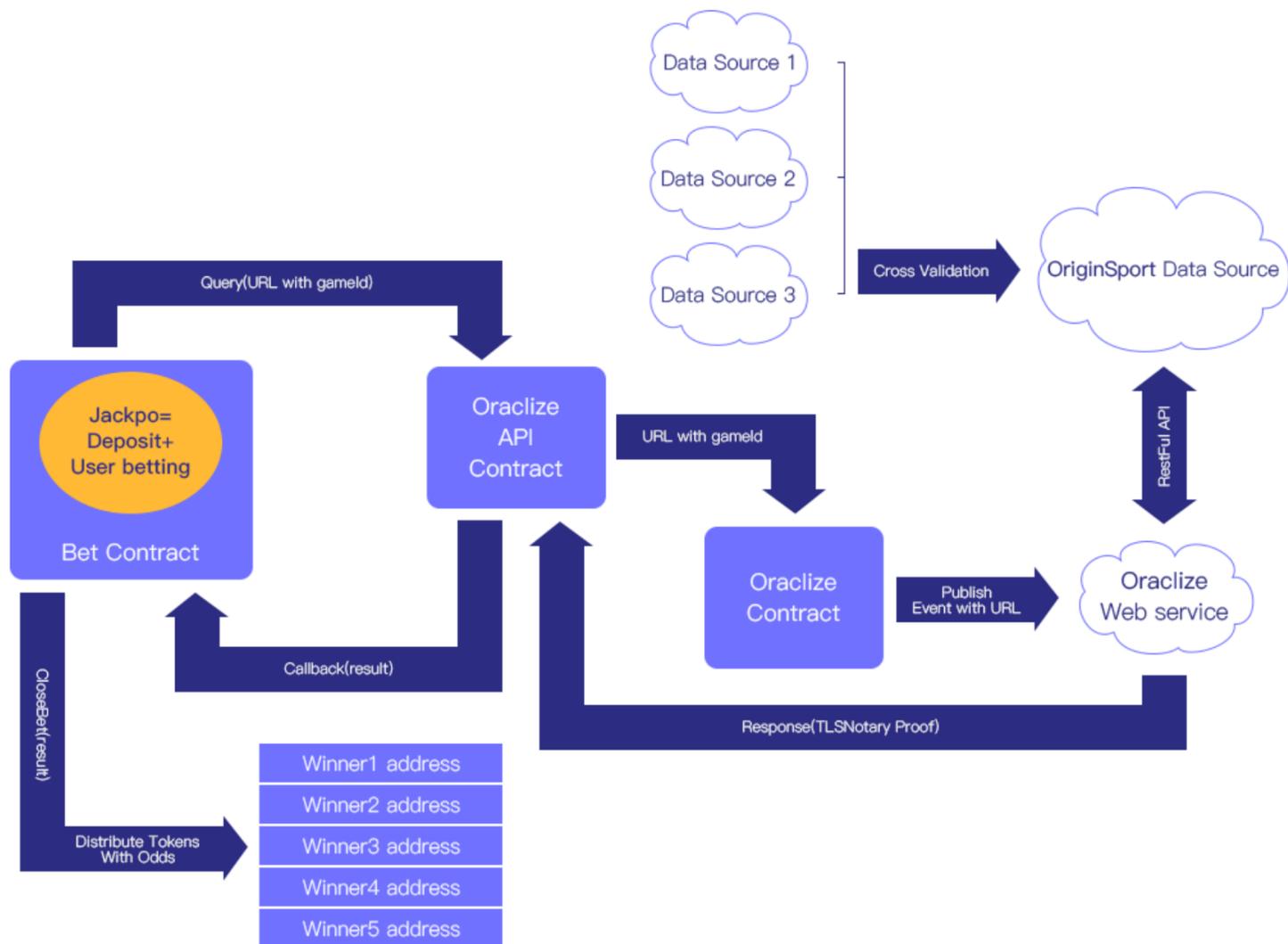
2.6 The Value of ORS

1. Potential value of ORS

ETH will initially be the only accepted betting currency when our platform first launches. Users will be able to use ETH to join and host wagers. As we increase the number of supported games, more people will join the ecosystem and the value of the platform as a whole will increase. As the value of our platform increases, we expect to see speculators in secondary markets buy our token as an investment.

2. Service fee discount with ORS tokens

Before users are distributed their winnings, the smart contract will charge a certain percentage of ETH as a service fee. Users will also be given the option of paying this service fee with ORS at a discount.

3. Hosts can attract more participants by fronting ORS as a participation prize

Our sorting system takes into account the size of the prize pool as well as the amount of ORS given as a participation incentive. In order to increase visibility of their wagers, hosts will either need to increase their prize pool or offer higher ORS participation rewards.

This creates a feedback loop as participants will earn ORS when participating and will be incentivized to become hosts as ORS can be used to pay the service fee.
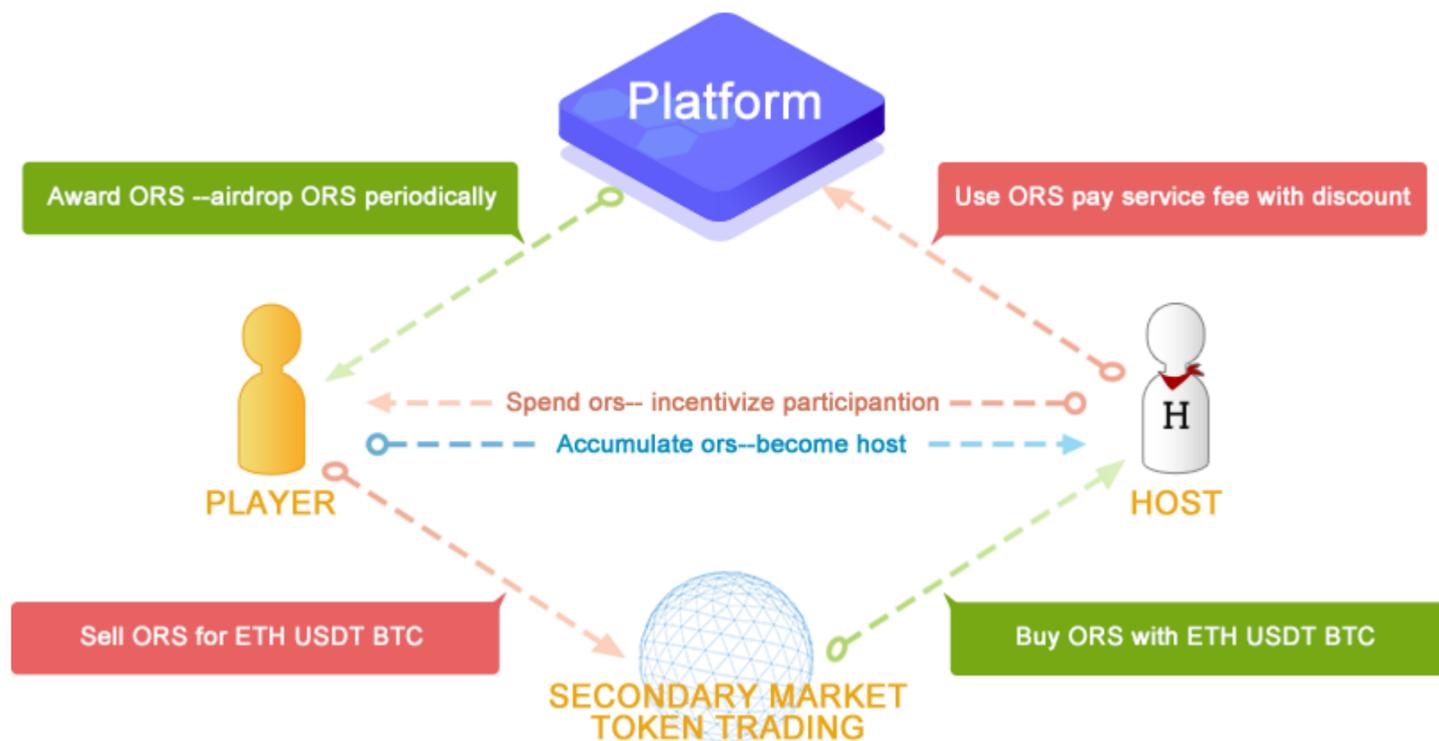
4. Proof of financial lending

For lending, two of the factors that are considered is how much ORS an individual currently holds, as well as how long that individual has held those coins. Although we accept ETH for repayment as a default, ORS can also be used to pay off interest at a discount.

5. Periodically reclaim and destroy ORS coin

After public sale, will use 30% of the revenue generated by the platform to reclaim and destroy ORS on a quarterly basis. The full process of this will be outlined on the website. This process will stop once 100 million ORS is reclaimed and destroyed. The purpose of this is to ensure long term value of ORS and prevent inflation.

2.7 PR Plan

As the latest "hot" technology, blockchain is widely known, but suffers from poor PR. As a platform that services fans of sports betting worldwide, the Origin sports team is committed to educating users worldwide about digital currencies and its application in betting. Our goal is to make cryptocurrency betting a popular form of entertainment that transcends borders and is accessible by everyone. Origin Sports' regional

expansion and launch strategy will center on popular worldwide sports events such as the FIFA World Cup, NBA playoffs and League of Legends World Series. By focusing our efforts on these major events, we hope to gain visibility and develop a thriving betting ecosystem. The Origin sports team will develop specific market development plans in order to meet the culture habits and market conditions for each country. Our marketing efforts will include, but are not limited to: online advertising, offline meetings, online live broadcasts, and social media promotion, and word-of-mouth.

Part Three Platform cooperation partners

The Origin sports team has a cooperative partnership with an international sports events betting company and a large mobile game company. The terms of our cooperation include, but are not limited to: integrating our technologies with their services, mutual promotion, assistance in dealing with regional restrictions, and logistical support.

Part Four Origin Sport Foundation

4.1 Establishment of Origin Sports Chain

Origin sports chain was created to meet the worldwide demand for a transparent and decentralized sports betting platform. We established our foundation company in Singapore early in 2018.

4.2 Functions of Origin Sport Chain foundation

The origin sport chain foundation will be responsible for：

1. Daily operation of the project

2. Furthering the research of blockchain technology and developing blockchain adoption strategies.

3. Human resource management.

4. Origin sports community maintenance and management.

5. Effectively managing resources to make sure they are used to further develop the ORS platform and the blockchain ecosystem as a whole.

6. Weekly reports on funds usage and project progress.

Part Five Project Schedule

2018 MAY
· ORS private sale
· List on world's top cyptocurrency exchanges
· Finish Origin sport digital currency platform development and launch mobile app and web app
· Launch NBA playoffs and UEFA Champions League betting

2018 JUNE
· Launch Origin Sport wallet for both iOS and Android
· Launch FIFA World Cup betting

2018 JULY
· Worldwide marketing promotion Strategic partnerships

2018 AUG
· Support for betting on Europe's big five football leagues
· Release Esports betting （Ti8 & S8）

2018 OCT
· Release Ethereum smart contract in sports event data

2018 DET
· Launch social networking services in ORS Dapp

2019 MAR
· Release digital currency lending system

2019 APR
· Release fantasy sports mode

2019 MAY
· Release more betting game modes

...... In the future,Release additional business services for other high grade chain smart contract in sports event data