



# MindSports

Intelligent and Trusted Board Game Network

## WHITEPAPER

Version 1.21

[www.mindsports.io](http://www.mindsports.io)

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### ABSTRACT

MindSports IO is an intelligent and trusted board game network powered by Ethereum technology, anti-cheating layers and the MIND Registry for games such as Chess, Draughts (Checkers), Xiangqi, Bridge and Go. The problem of today online board gaming is trust. Players may cheat with chess engine, users also have risk of losing money and they have to place trust that the service provider are doing the right thing. We aim to eliminate the need for trusting a single party running a centralized platform. MindSports IO provides an opportunity for user's participation. Mind games will be developed and deployed to the network. Community managed anti-cheating layers are in place to eliminate possibility of cheating with chess engine. Token holders have the option to be part of the community to settle game disputes and get rewarded accordingly. MindSports IO align incentives across all stake holders and tie MIND token to the core action of the network growth.

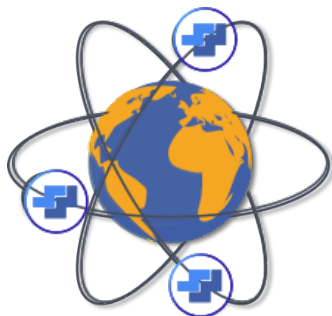
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# 1. Introduction

Traditional online mind sports platforms have a centralized host to manage communication and make sure the platform works correctly. This requires players to place trust in the host and ensure they have the adequate tools to run the platform. The goal of MindSports IO is to create a product that is "infinitely" scalable, decentralized and is secure for any transaction.



A decentralized mind sports network ensures everyone are part of the community regarding the network development and future roadmap. Transactions and messages are verified and take place on the Ethereum blockchain. No party or administrator is required to manage the online network or tournament. This prevents any malfunction and failure of the platform host.

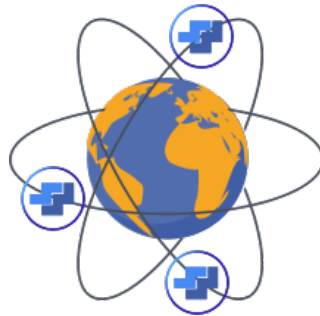
MindSports IO aligns incentives across all stakeholders and ties the MIND token to the core action of the network growth welding the interaction of the public with personally created mind sports tournament events through rewards of the cryptocurrency, MIND tokens.

The main motivation of the MindSports IO platform to encourage players to take part in the development roadmap of MindSport IO, to create or participate in high-quality games as well as involve the audience when viewing competitions. Mind sports are contests of mental skills in contrast to physical competition which is the hallmark of traditional athletic sports. The sports included under the umbrella of this concept includes games of skill, strategy, speculation, and deduction. Chess, Draughts (Checkers), Xiangqi, Bridge and Go are a few examples.

Chess and Xiangqi (Chinese Chess) players represent some of the largest communities in the world. Combined figure of 800 million players. Despite the evolution of physical to virtual games, chess and xiangqi congregations remain strong and continue to grow. The elements keeping these engaging and complex games alive include the competitiveness and potential sponsorships that stem from it.



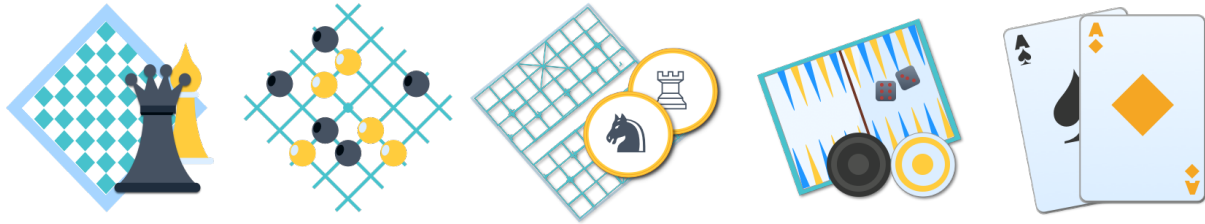
## Features of MindSports IO Network



1. **Anti-Cheating Layers** – The Anti-Cheating Framework consist of three layers. A Statistical Analysis Layer to infer move-matching probability between chess engine and human players. Intelligent Reputation Layer red flag potential cheaters and decide the types of matches, amount of token can be staked per game. Community Layer act as arbiter, where token holders can vote as arbiter and get rewarded when they identify cheaters.
2. **Community Managed** – Be part of the community to propose the board games for MindSports IO team build and deploy to the network.
3. **Create Tournament** - Create tournaments and determine the rules and token payouts for all party using smart contracts.
4. **Play Games** - Challenge, discuss and learn to play intellectual games.



## 2. Market and Industry



### What is Mind Sports?

Mind sports is a modern term that came into use in the 1970s. It took a number of years for the concept of “mind sports” to distill into a clear definition. The umbrella organization for all international sports federations, SportAccord, classifies sports into five categories:

1. physical sports
2. mind sports
3. motorized sports
4. synchronized or coordinated sports
5. animal-assisted sports

The 2011 Charities Act had adopted a definition of sports as “activities which promote health involving physical or mental health or exertion.”

### Why Should We Play Mind Sports?

MindSports IO strives to promote and educate on the benefits of playing mind sports. Mind sports is not only for people who are academically gifted or “smart.” Numerous studies have demonstrated the direct benefits of playing mind sports, such as improvements to cognitive function and the slowing down of aging. We believe mind sports should remain as accessible as possible so that people can develop analytical and critical thinking skills in their everyday life. It can also improve their spatial and cognitive abilities, pattern recognition, and discipline.

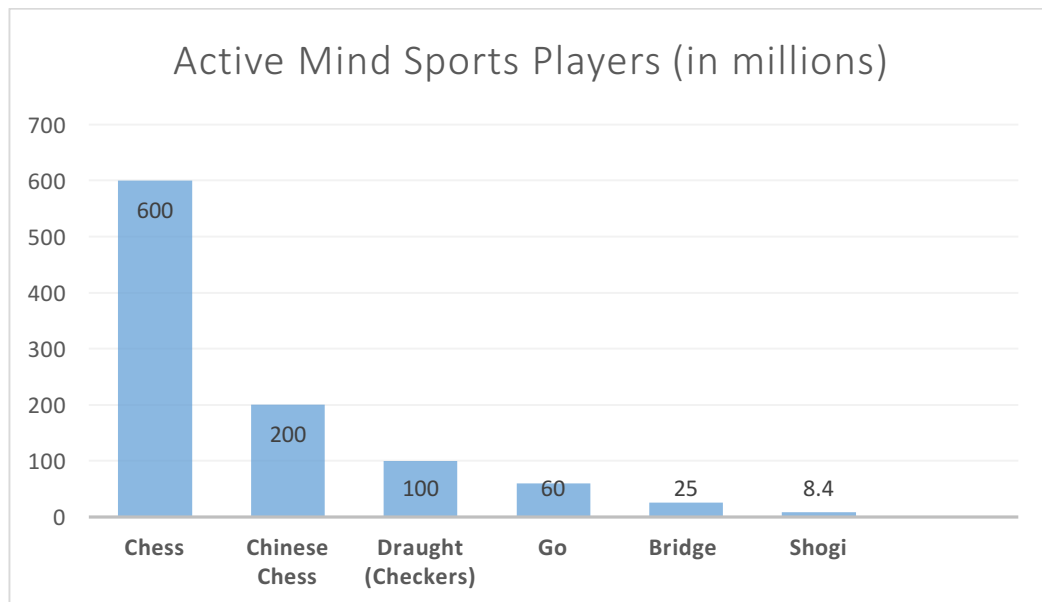
### The Mind Sports Landscape

The mind sports industry continues to grow despite the widespread use of internet games; sponsorships and competitive play have created lucrative opportunities. Mind sports players are finding ways to promote themselves and the game through the use of technology. ChessBrah via twitch.tv allows viewers to watch real-time streaming games, while prize funds for tournaments can be as much as \$2,000,000(USD). The live-stream of the World Chess Championship in 2016 received as much as ten million unique visitors. It is estimated that there are at least 100,000 online people playing at any time for chess alone with the audience reaching 2,000,000 viewers daily.



## Market Size

According to an official International Olympics Committee (IOC) submission, more than six hundred million people play chess, a game that is over 1,500 years old. Chinese chess is played by two hundred million players according to BBC News, while the game of GO, invented 3,000 years ago, has sixty million players globally.



source: FIDE, BBC, BritGo, Japanese Productivity Center of Social Economic Development, ACBL, World Bridge Federation

## Target Audience

Based on the findings from YouGov, mind sports players who are interested in chess are five times more likely to read The Guardian and The New Scientist and are two and a half times more likely to read The New York Times, The Wall Street Journal, The Economist or the New Yorker. Seventy-eight percent of regular chess players in the USA are university graduates with household incomes over \$120,000(USD).

Adding up the number from official associations and sources, we believe there are currently two hundred million people playing online in various mind sports platforms including chess, go, xiangqi and go. The largest chess portal, Chess.com, only consists of five million players or one percent of the total addressable audience. We are creating a platform for enthusiasts of all levels to play, compete, discuss and participate in various mind sports to increase the penetration rate of online, mind sports gaming.



# The Problem

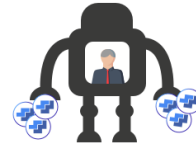
Trust is the most concerned reason why people are hesitant to play mind sports online for rewards. Players are suspicious of potential game manipulation such as stalling time, disconnecting, and cheating from opponents.



Single-Party Trust



Platform Reliability



Cheating

## Need for Trust in a Single-Party Host.

Traditionally, tournaments and games are hosted by a centralized platform. A platform administrator has the capability to make decisions that put the organization's interests before the interests of the mind sports community. After speaking with individuals in different forums and various live tournaments, we realized people are hesitant to play mindsport tournaments online for monetary rewards due to a lack of trust. When players are betting with tokens or money with others, they must transmit funds to unknown parties. This opens both parties up to the risk of losing all tokens or money due to fraud or hackers. Furthermore, platform administrators may unexpectedly ban players or decline payment transfers for unknown reasons.

## Platform Reliability

Most online gaming platforms operate using an intermediary to set up communication and ensure that everything works correctly. However, servers may unexpectedly shut down or get hacked.

## Cheating

Players are suspicious of potential game manipulation such as stalling time, disconnecting, and cheating from opponents.

# Current Mind Sport Platform Comparison

Comparison Table	MindSports IO	Chess.com	Lichess	PlayChess
Blockchain Support	✓	✗	✗	✗
Anti-Cheating Layer	✓	✗	✗	✗
Admin Controlled	✗	✓	✓	✓
Voting System	✓	✗	✗	✗
Tournament Hosting	✓	✓	✓	✓



## The Solution

Intelligent, community managed Anti-Cheating Layers are in place to eliminate possibility of cheating with chess engine. Ethereum technology removes the centralized game host and will revolutionize the way mind sports are played.

We are providing an opportunity for individuals take part in the network development and future roadmap. Mind sports players can create their own tournaments and games, and get rewarded with MIND tokens. Additionally, MindSports IO provides a place where people can place token bets against others with full confidence. Advance Anti Cheating Layers is in place to identify cheaters and block all chess engine cheating. Pay-outs are processed automatically by escrow contracts on the Ethereum blockchain. MIND serves as the currency for these games.

## 3. Product Features

The MindSports IO network is secure, serverless and trustless. Features include:

1. An Intelligent, Community Managed Anti Cheating Layers
2. Propose and vote for the next mind games on the network
3. Create board games and tournaments
4. Play trustless mind games
5. Win MIND tokens
6. Get rewarded for improving the Anti-Cheating Algorithm

## Intelligent Anti-Cheating Layers

Our Anti-Cheating Layers consist of three layers.

1. Intelligent Reputation Layer will red flag potential cheaters based on player's behavior and features like playing habits, game metrics, like time per move, rating and reputation change. Users can also stake their tokens to interact with our Reputation Engine by providing relevant metrics, indicator to help us improve our anti-cheating algorithm, to identify cheaters and get token reward accordingly.
2. Statistical Analysis Layer will infer and calculate move-matching probability between chess engine and human players to identify potential chess engine gameplay manipulation.
3. Community Layer will act as arbiter in case of dispute, where token holders can vote to resolve dispute and get rewarded with tokens and reputation rating when they identify cheaters.







## MindSports IO Community

Token holders can stake their token and interact with MIND Community to propose development roadmap and features of the MindSports IO network. They can propose for the mind games they would like MindSports IO team to build and deploy to the Network, where they can play trustless mind games with their MIND Token. We believe through the MIND Community, incentives are aligned across all stake holders and tie the token to the core action of MindSports IO network growth.

## Decentralize Mind Sports Game Creation

Within the MindSports IO platform, a smart contract is an integral part of the gaming process. The user can easily deploy a secure and highly modularized smart contract template.

### Creating A Decentralized Game (Tournaments)



Under the terms of MindSports IO, when players decide to start a game, both players will be required to send a certain amount of MIND tokens to a contract address designated by the open-source, algorithmic judge of the game. When the competition concludes, the judge will publish signed messages to the contract address, and the proceeds will be distributed to the winner. Through this escrow mechanism, the players involved can be confident that they will receive what they are entitled.

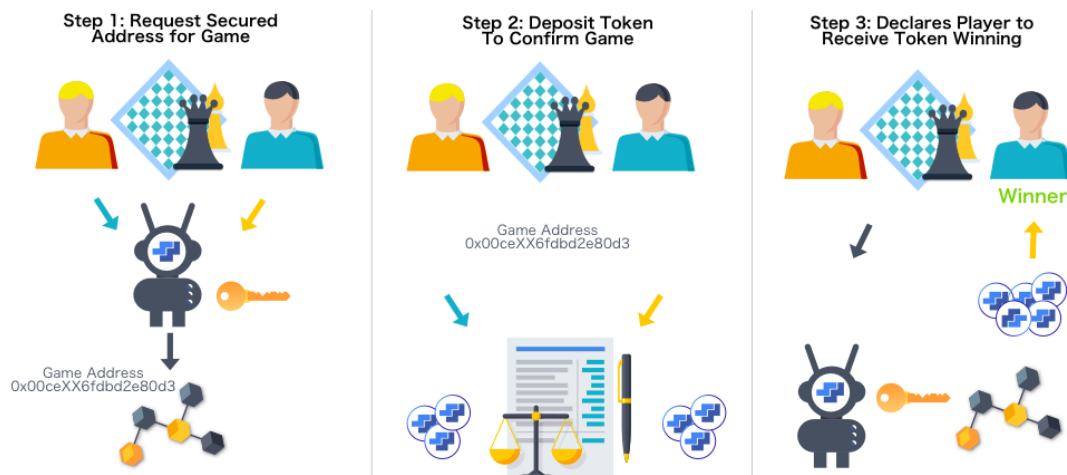
## Play Trustless Mind Games

Computation comes with a cost in the Ethereum Virtual Machine, it is expensive to verify each game move on-chain. Our goal is to create a trustless and efficient DApps. Therefore, an off-chain verification is the solution for this problem. Moves validation are happening off-chain to reduce gas cost. Each move made by players and the game outcome is signed by players and forwarded to their opponents through Whisper. Once the opponents agree, the verified moves and results will be confirmed. Alternatively, if



players do not come to an agreement. Both players can raise a dispute request through the smart contract for verification.

### Contract Template Algorithm Flow 1 (Private Challenge)



## 4. Token Mechanism

We believe a token must work as a necessary element of a self-sustaining system and a public utility. MIND token provides everyone an opportunity to participate in the MindSports IO community, create and participate rated mind sports tournaments, and be part of the in-game community. Token holders propose their favorite mind games to be deployed on the network and are able to use their token to create and play rated board games. We believe this mechanism align incentives across all token holders and tie the token to the core action of the network's growth.

### 1. Play Trustless Rated Mind Games

Players lock up tokens for rated mind games and tournaments on the network. Every game move and resulting game state are being signed by players and forwarded to their opponent through Whisper. In case of a dispute, players can raise a dispute request through Smart Contract for verification

### 2. Anti-Cheating Layers Fuel

Our Intelligent Anti Cheating Layer will red flag potential cheaters based on player's behavior and features like playing habits, game metrics, like time per move, rating and reputation change.

### 3. Anti-Cheating Layers Improvement Rewards

Users can stake their tokens to interact with our Reputation Engine by providing relevant metrics, indicator to help us improve our anti-cheating algorithm, identify cheaters and get token reward accordingly



## 4. Mind Game Dispute Management

Token holders are part of the community to settle game disputes through in-games voting and get rewarded with MIND token. Network reputation rating reflect player's honesty and ability as an arbiter to handle dispute and correlated to voting weight during dispute. Rating formula is transparent and visible to everyone on the blockchain.

## 5. Create Rated Mind Games and Tournament

Tournament and Game creator lockup their MIND tokens during events to create rated events or tournaments and reward winning participants accordingly. Network Elo rating reflect players strength in relevant mind games and grant them access to premium matches and rated tournaments.

## 6. MindSports IO Community

MIND Token holders stake their token and interact with the MIND Community to propose the development roadmap of the MindSports IO Network. Token holders can propose for the board games they would like MindSports IO team to build and deploy to the MindSports IO Network.

# 5. Technologies and Architecture

## 5.1 What is MindSports IO?

MindSports IO is a decentralized social gaming network powered by Ethereum, IPFS, Whisper and the MIND Community Users can play and create rated decentralized mind games tournament.

MindSports IO Network consists of 4 main components:

### 1. MIND Community

MIND Community can stake their token and propose the development roadmap of the Network. Mind Token holders can propose every 6 months for the board games they would like MindSports IO team to build and deploy to the MindSports IO Network.

### 2. Anti-Cheating Layers

The Anti-Cheating Layers consist of three layers. A Statistical Analysis Layer to infer move-matching probability between chess engine and human players. Intelligent Reputation Layer red flag potential cheaters and decide the types of matches, amount of token can be staked per game. Community Layer act as arbiter, where token holders can vote as arbiter and get rewarded when they identify cheaters.



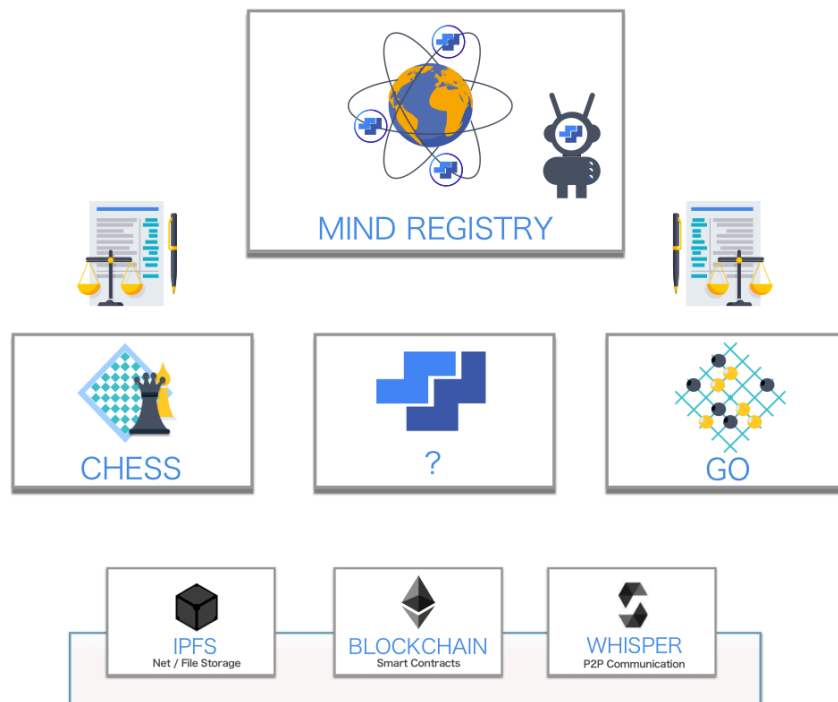
### 3. MIND Games DApps

MindSports IO Network is comprised of Mind DApps. Mind DApps are mind games being deployed on MindSports IO network, all MIND token holders can propose, vote and deploy Mind DApps to the network.

### 4. MindSports IO Development Team

According to MIND Registry Proposal and Voting result, MindSports IO Development Team will build and deploy Mind DApps to Ethereum testnet for beta release and mainnet for production release. Mind Dapps release cycle will be every 3-6 months, patches and enhancement release will be every 2 weeks.

The MindSports IO community can stake their token and interact with the MIND Community to propose development roadmap of the network. Token holders can propose for the Mind DApps they would like MindSports IO team to build and deploy next.



## 5.2 Anti-Cheating Layers

Our Anti-Cheating Layers consist of three layers.

### 1. Intelligent Reputation Layer

Reputation Layers acts as an ensemble-based cheating detection engine by combing a diverse set of statistical classifiers. Each classifier is an anti-cheating classification algorithm by analyzing sets of quantifiable features including



players behavior and gameplay characteristics, like playing habits, time per move, rating and reputation change to identify and red flag potential cheaters.

Every week an anti-cheating prediction contest will be held, game play dataset will be published on IPFS. Users can review existing the datasets as training and test sets, identify relevant gameplay metrics to build and improve their anti-cheating classifiers. Users can stake their tokens to interact with our Reputation Layers by providing relevant testing metrics and projections. Potentially added their classifiers into our anti-cheating ensemble detection engine to help us improve our anti-cheating algorithm and get token reward accordingly.

Combining individual classifiers and make anti-cheating predictions makes statistical sense, the giant ensemble averages out bias and error, at the same time increasing prediction accuracy.

Given the heavy computation nature, the gas cost and computation requirement of this module, this should be forecasted and run on third-party high performance, trusted server. Analysis Algorithm should be open-source and subject to peer review.

## 2. Statistical Analysis Layer

Our Statistical analysis module is based on Dr Kenneth Regan's Work on Intrinsic Performance Rating and Statistical Cheating Detection in Chess. Dr Regan statistical method try to aggregate game play moves as a set parameter to represent a player's skills and move quality. This set of parameters can generate confidence intervals for hypothesis test to calculate a z-score and move-matching probability between chess engine and human players to identify potential chess engine gameplay manipulation.

Given the heavy computation nature of the statistical computation, the gas cost and computation requirement of this module, this should be forecasted and run on third party high performance, trusted server. Analysis Algorithm should be open-source and subject to peer review.

## 3. Community Layer

Community can act as arbiter in case of network or in game dispute, where token holders can stake their token and vote accordingly to help resolve in-game dispute, cheating or appeal dispute. Voters will get rewarded with tokens and a reputation rating change when they identify cheaters. Reputation affect individual vote weight in case of dispute and affect govern the types of matches and amount of token player can stake per game.



## 5.3 What is Mind DApps?

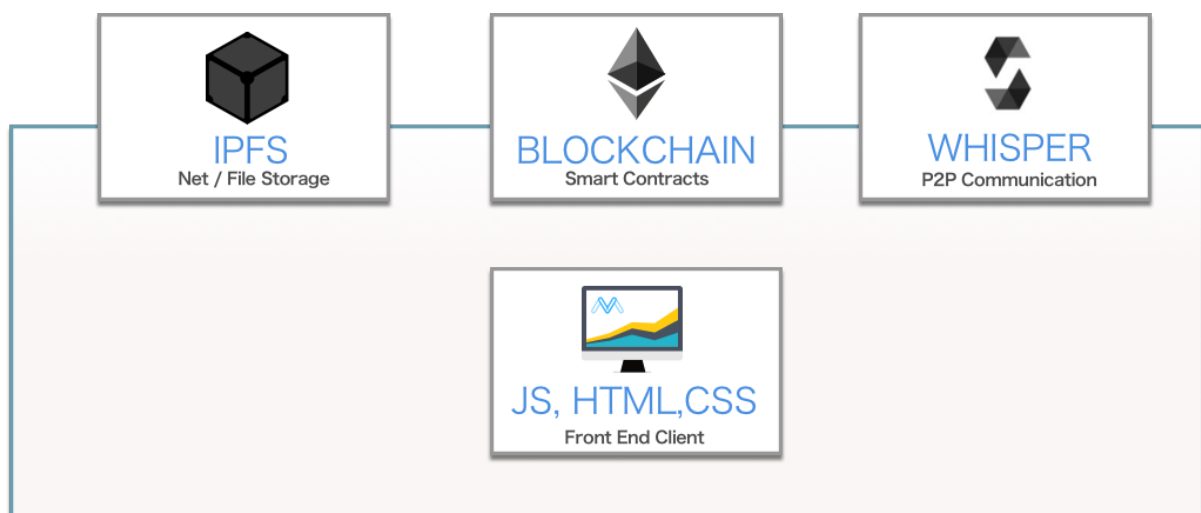
Mind DApps are mind games being deployed on MindSportIO network. All MIND holders can vote and deploy Mind Dapps to the network.

All Mind DApps are secure, serverless and trustless and possess the following core functionalities:

1. Function as a Mind Games like Chess, Go, Chinese Chess, Shogi
2. Ability to handle in games dispute
3. Play Mind Games with tokens
4. Create rated games and tournaments

Every Mind Games DApp consists of 4 main components

1. HTML5 Front End Client
2. IPFS as a Decentralized Storage Layer
3. Smart Contract as Decentralized Logic Layer
4. Whisper as the Messaging Layer



### Front End Client

Our front end clients are HTML5 based and served from IPFS. The front end consists of web3js, IPFS.js, game logic and the game UI. Web3.js will be a core component in the front end to handle Whisper P2P messaging and interaction with smart contract. IPFS.js will be responsible for retrieving historic game record, moves, data from IPFS.

### Decentralized Logic Layer, Smart Contract

MindSports IO DApps Logic Layer consist of the following Smart Contracts:



## 1. Escrow Contract

Escrow contract escrow the MIND tokens from participants of the game, while the host has no access to transfer the tokens. Tokens will be returned to players when the game aborts, encounters a draw game or agrees to a disputed outcome. Proceeds will be transferred to winners. The different payout, fees schedule can be structured and extended accordingly.

## 2. Main Contract

Main Contract works as a game management contract, it provide players game matching, status reporting, and community dashboard functionality.

## 3. Game Contract

Game Contract represent a single instance of a game, after players match successfully and deploy the join function to start game. Players interact with this contract when they join a game, claim the winning proceeds, announce the result, notify opponent timeout or raise a dispute.

## 4. Dispute Contract

Dispute Contract will manage two kinds of dispute raised by players.

### 1. Cheating and Draw Disputes

Through Whisper, the dispute contract will broadcast to the MindSports IO community regarding the dispute and game information. Token holders can vote in favor or against the dispute in a finite voting period.

### 2. Moves Manipulation

The player who raised the dispute will submit a record of moves to the Dispute Contract for verification. If the result is against the player who raised the dispute, a token penalty will be imposed. On the contrary, if the move manipulation claim is valid, the game will be terminated and penalty will be imposed on the manipulator.

## 5. Tournament Contract

Users can create mind sports tournament through our DApps. Tournament contract consists of (n) Game Contract instances and have the ability to interact with Escrow Contract to proceed funding and Storage Contract to store and retrieve game records and tournament data.



## Decentralized Messaging Layer, Whisper

Computation comes with a cost in the Ethereum Virtual Machine, it is expensive to verify each game move on-chain. To create trustless and efficient DApps we will utilize off-chain verification. Moves validations happen off-chain to reduce gas cost. Each game move and resulting game state are being signed by the player and forwarded to their opponent through Whisper. Once opponents agree, the signed moves and result state will be forwarded. Alternatively, both parties can raise a dispute request through smart contracts for verification.

## Decentralize Storage Layer, IPFS

IPFS is a reliable, secure distributed storage system capable of serving web content, its decentralized nature removes the single point of failure presented in centralized storage platforms. IPFS serves two purposes in our architecture:

1. A 'web server' to serve our HTML based DApps
2. A storage for game records, data, historic, reputation, elo rating.





## 6. MindSports IO Deliverables and Stretch Goals

Our deliverables will be based on the funding amount received from the MindSports IO Crowdsale. MindSports IO will be able to fund our team for one year and introduce two mind sports games: chess and a game determined by the community. Our milestone will also allow us to introduce our main features of creating an intelligent decentralized board games network.

Below are the expected deliverables based on the ETH raised.

Deliverables	ETH Raised
<ul style="list-style-type: none"><li>• Fund 3 engineers and 1 UX designer for 1 year</li><li>• MindSports.IO supports Chess</li><li>• Decentralized Tournament Creation</li></ul>	200 ETH
<ul style="list-style-type: none"><li>• Fund 5 engineers, 1 UX designer for 1 year</li><li>• Roll out new Board Game every 3-6 months</li><li>• Intelligence Anti Cheating Layers</li></ul>	500 ETH
<ul style="list-style-type: none"><li>• Fund 5 engineers, 1 UX designer, 1 Marketer for 2 years</li><li>• Roll out new Mind Game every 3-6 months</li><li>• International Mind Sports Event Sponsorship</li></ul>	1000 ETH
<ul style="list-style-type: none"><li>• Fund 8 engineers, 2 UX designers for 3 years</li><li>• Research and build Plasma Integration Prototype</li><li>• Regional Mind Sports Events Sponsorship</li></ul>	2,500 ETH
<ul style="list-style-type: none"><li>• Fund 10 engineers, 2 UX designers, 2 Marketers for 3 years</li><li>• Research and build Plasma Integration Prototype</li><li>• International Mind Sports Events Sponsorship</li></ul>	3000 ETH



## Token Proceed



The majority of our token proceeds will be allocated to the development of the MindSports IO platform. We would also like to highlight that a portion of the proceeds will go toward the promotion of MindSports IO tournaments. We believe this is necessary to jumpstart our platform and is also an opportunity get users to participate in the mind sports discussions and contribute to building up long-term value for the MIND Token.

## Token Distribution

The MindSports IO developers will create a total of fifty million MIND tokens. Seventy percent of the tokens will be distributed in this Crowdsale. The remaining tokens will be used to ensure long-term support for the MindSports IO ecosystem as indicated by the graph on the right. A part of this fund will be used for brand awareness in the mind sports scene, as the team plans to create tournaments and sponsor teams. Management team will undertake a 12-month lockup period. No sale transfer or pledge of token will be permitted.

It is MindSports IO's responsibility as a member of the wider community to help contribute to and grow it. We will continue to build meaningful relationships with blockchain members and other leading association in the mind sports community. Participants in the community are most important. We designed MindSports IO to ensure that decision-making is based on whether a majority of participants in the community agree on, After the crowdsale, we will sponsor mind sport tournaments in different countries to raise awareness and promote community involved within mind sports. One of our first events will be a live stream of chess grandmasters competing for MIND token rewards.



## 7. MindSports IO Roadmap

Date	Milestone	Highlights
1Q17	<p><b>Phase 1</b> <b>Concept and Prototype development</b></p> <p>Identified current problems in the mind sports landscape and addressed the issue by applying Ethereum technology to build MindSports IO prototype and whitepaper.</p>	<ul style="list-style-type: none"> <li>Identify Problems</li> <li>Prototype Design</li> <li>Whitepaper</li> <li>Team of 4</li> </ul>
4Q17	<p><b>Phase 2</b> <b>Brand awareness</b></p> <p>This prototype release allows users to play Chess on our demo during the pre-sale. Token Holders can vote in Dec 2017 and decide the next mind games to be deploy next.</p>	<ul style="list-style-type: none"> <li>Specification</li> <li>Presale</li> <li>Team of 5</li> </ul>
1Q18	<p><b>Phase 3</b> <b>Beta Testing Release</b></p> <p>Initial release of MindSports IO. This beta release allows community to beta test our platform's features and play Chess with MIND Token.</p>	<ul style="list-style-type: none"> <li>Community Testing</li> <li>Performance Testing</li> <li>Team of 6</li> </ul>
2Q18	<p><b>Phase 4</b> <b>Platform Official Release</b></p> <p>First production release of MindSports IO. Include Chess DApp release in Apr 2018 and second game release in Jun 2018.</p>	<ul style="list-style-type: none"> <li>Official Release</li> <li>Second Mind Games</li> <li>Team of 8</li> </ul>
4Q18	<p><b>Phase 5</b> <b>MindSports IO Features Expansion</b></p> <p>The next phase of MindSports IO is intended to provide a better gaming experience and API support for developers to design and deployment.</p>	<ul style="list-style-type: none"> <li>Improve User Experience</li> <li>DApps Enhancement</li> <li>Third Mind Games Release</li> <li>Team of 8</li> </ul>
4Q19	<p><b>Phase 6</b> <b>Plasma Integration</b></p> <p>With plasma integration, moves verification can be done on-chain and more complex games can be introduced and deployed to MindSports IO Network.</p>	<ul style="list-style-type: none"> <li>Plasma Integration</li> <li>Enhancement</li> <li>Fifth Mind Games</li> <li>Team of 10</li> </ul>



## 8. MIND Token



MIND is an ERC20 token designed to create and play decentralized rated board games.

### Token Usage

#### 1. Be Part of MindSports IO Community

Be part of the MIND Community to propose for the board games they would like MindSports IO team to build and deploy to the network

#### 2. Anti-Cheating Layers Fuel

Our Intelligent Anti Cheating Layer will red flag potential cheaters based on player's behavior and features like playing habits, game metrics, like time per move, rating and reputation change.

#### 3. Anti-Cheating Layers Improvement Reward

Users can stake their tokens to interact with our Reputation Engine by providing relevant metrics, indicator to help us improve our anti-cheating algorithm, identify cheaters and get token reward accordingly

#### 4. Create Decentralized Rated Tournaments

Users can create decentralized board games leagues and tournaments. In return for creating community engagements and deploying games, the organizer is rewarded MIND tokens for their contribution based on the number of participants and number of MIND tokens committed for their event.

#### 5. Play Trustless Mind Games and Win Tokens

Players will use MIND tokens as a currency for challenging other players and joining tournaments in various intellectual games. MindSports IO provides a place where people can safely place token bets against one another since the transactions and games are publicly verifiable and resistant to counterfeiting.



## MIND Token Overview

Role of Token	Decentralized Board Game Playing and Creating Rated Tournaments
Symbol	MIND
Token Type	ERC20 Token on the Ethereum Blockchain
Supply	50,000,000 MIND
For Sale	20,000,000 MIND
Funds Escrow	Funds secured in multi-signature escrow account
Bonus Schedule	20% of token purchase account
Emission Rate	No New Tokens will be created
Price	10,000 MIND = 1 ETH
Crowdsale Period	Feb 5, 2018 3PM (UTC) – Feb 14, 2018 3PM (UTC)
Minimum Goal	200 ETH
Maximum Goal	2,000 ETH

Each MIND token will be sold for 1/10,000 ETH, meaning 1 ETH will give you 10,000 MIND tokens. We will enforce a maximum fixed limit of 3000 ETH for the purchase of MIND tokens in the Crowdsale.

*Please note that we will NOT create additional MIND tokens after the MindSports IO Crowdsale*

## Unsold MIND Tokens

Unsold MIND token will be burned. In order to raise awareness of MindSports IO Network, we will allocate 100,000 Unsold MIND Token as airdrop and distribute 100 MIND each to the top 1,000 mind sports professional in Chess, Go, Chinese Chess, Shogi.

## Tokens Transfer

Your purchased MIND Tokens will be distributed to you immediately (subject to block confirmations and network status). Transfer will be enabled 3 days after sale. Purchased tokens will not be active during the token sale period (sale or transfer of tokens will not be possible until the Crowdsale is completed at the end of the Crowdsale closing date). Tokens can be freely transferred or exchanged upon Crowdsale completion date.

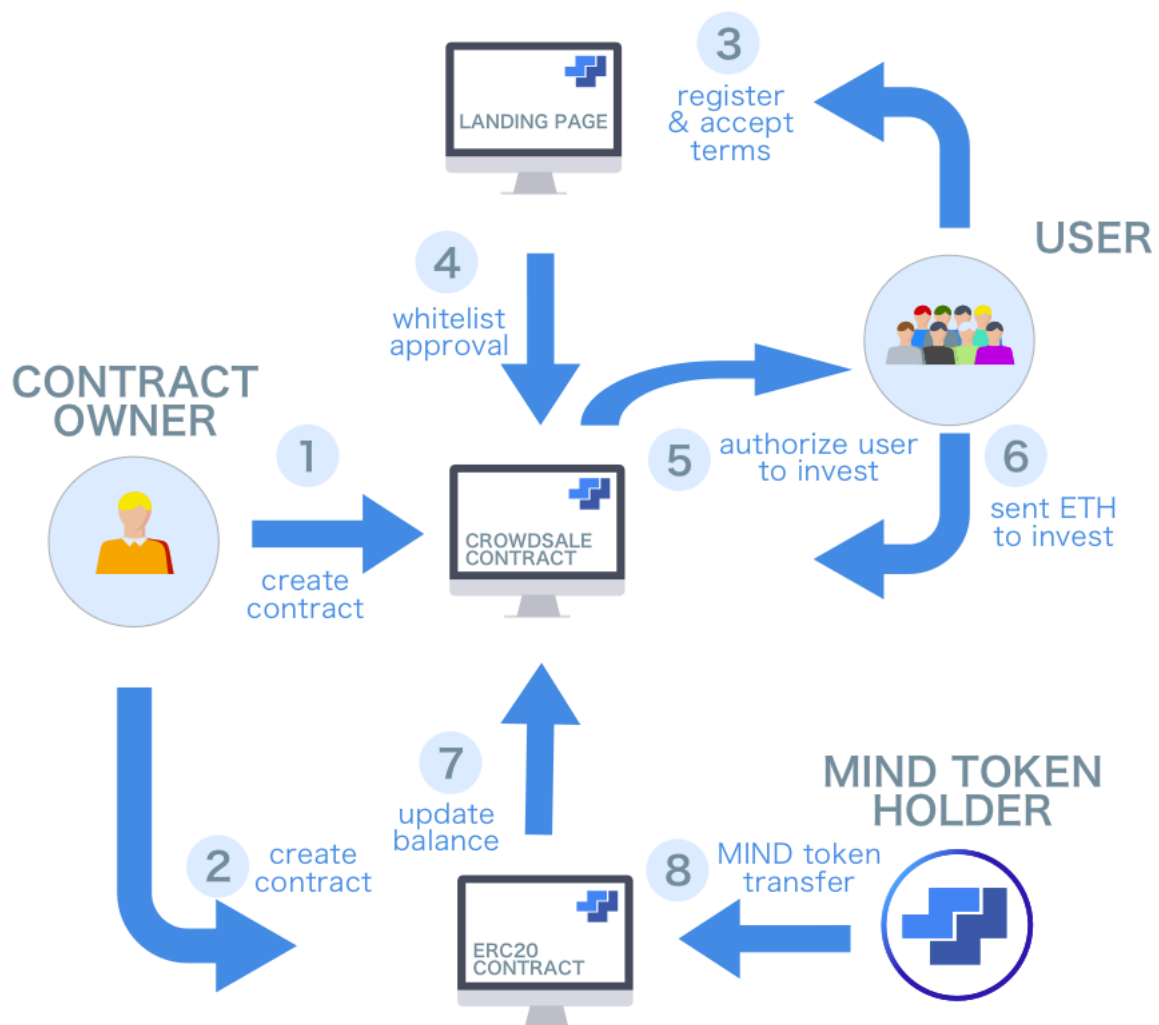


## Why a Crowdsale?

Our team already has a prototype of the platform. Bringing additional developers, marketing personnel, a legal team, designers and various talented people on board will require additional funds. Conducting a Crowdsale instead a traditional round of venture capital enables the mind sports community to participate in the MindSports IO success story, rather than limiting it to a select group of private investors. A Crowdsale is fast, transparent and efficient for this purpose.

## 8.2 Crowdsale Process

Here is how the Crowdsale for MIND tokens works.



## Create Crowdsale Contract

A crowdsale contract is created along with the ERC20 contract. The Crowdsale contract is used to collect and approve user addresses, collect ETH payments and compute MIND balances at the end of the Crowdsale. Funds will be returned to users if the minimum goal is not met, while the Crowdsale will stop if the maximum funding level is met.

## Crowdsale Registration

Users will have to provide a valid email address and the wallet ID from which the user will invest in the Crowdsale. Upon successful registration, the wallet ID is whitelisted for the Crowdsale, and the user is authorized to invest.

## Invest

Users invest by transferring ETH or BTC from their registered wallet ID to the Crowdsale contract wallet.

## Distribution of MIND Tokens

Upon completion of the crowdsale, the ERC20 is initialized with the MIND balances distributed through the crowd-sale. The MIND balances will then become available to the users who participated in the crowdsale.



## 9. Team



### Island Kon – Co-Founder & CTO

Island is a three time world XiangQi Champion (Non- Asian Division) and a federal XiangQi Master since he was 15. He is a Quant Portfolio Manager designing trading strategies in C++/Python on cryptocurrency and global markets.



### Christian Ng – Co-Founder & COO

Christian is an entrepreneur and investor from Canada with over six years' experience in cryptocurrency and global financial markets. He is experienced in organizing blockchain start-up projects and bringing them to scale and profitability.



### Law Wai Chun – Solidity Developer

Law is a ACM-ICPC World Finalist. He is a MPhil at HKU on High-Performance Computing, most recently at a Bioinformatics Startup that built GPU-based Bioinformatics analytics.



### We Are Hiring – Solidity Developers

We are looking for strong DApps developers fluent in truffle, web3js and solidity. Kindly forward your resume to [info@mindsports.io](mailto:info@mindsports.io)





## 10. Our Advisors



### **Geoffrey Borg - CEO of FIDE, Executive Director of IMSA**

Geoffrey is the CEO of the World Chess Federation and the Executive Director of the International Mind Sports Association. He holds the title of FIDE Master, has played chess for Malta in a number of international tournaments as well as Olympiads, including winning a silver medal on Board 1 in the 1984 Salonika Olympiad.



### **David Drake – Chairman of LDJ Capital**

David Drake is the Chairman of LDJ Capital, a family office with extended network of funds of funds and hedge funds with 1.5 trillion USD in assets. He is actively involved in the Crypto community as a speaker and has helped ICO firms he advised raise \$101M in funding.



### **Efstratios Grivas - Chess Grandmaster**

Efstratios was the Greek champion in 1983 and 1996. The 33rd Chess Olympiad Silver winner participated in eight Olympiads, three European Team Chess Championships, and twelve Balkaniads. He has written 42 books, essays and studies on chess and is a regular contributor to the most important chess publications.



### **Min Kim – Blockchain Community Advisor**

Min is the founder of Blocultural Studios. Min previously worked with Tim Draper and Cryptonomos on PR & marketing for blockchain related initiatives. Min has worked for various VC firms in the past and is a Dartmouth College graduate and a Palo Alto native.





### **Zeev Kirsh – Legal Counsel**

Zeev is an attorney and a strategist in blockchain and fintech. He consults on token generation and issuance and smart contract. He also possesses experience in securities laws and KYC/AML compliance regulation. Zeev obtained his JD at the Columbia Law School.



### **Matt Quinn – Ethereum Community Advisor**

Matt leads the San Francisco Ethereum Developers Meetup and previously worked as a Program Manager at Apple Inc.



### **Vincent Wong – International XiangQi Master**

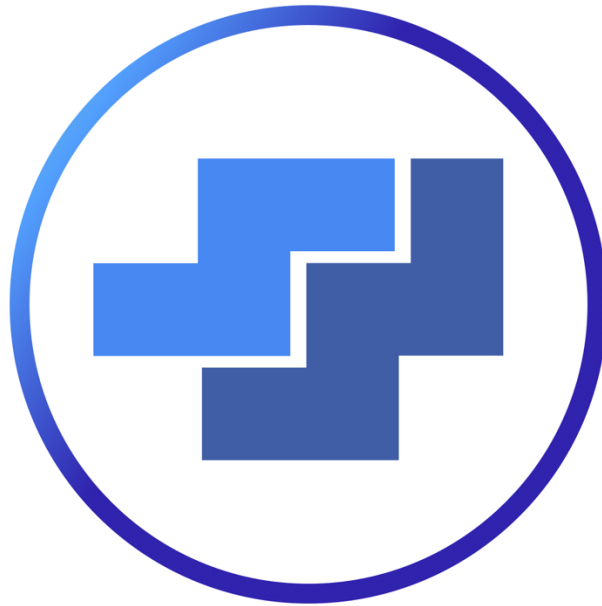
Vincent Wong is a two-time medalist in the World Mind Sports Games: silver in 2011 and bronze in 2014. His elegant and neat defensive skills earned him the third runner-up in 2013 World XiangQi Championships.



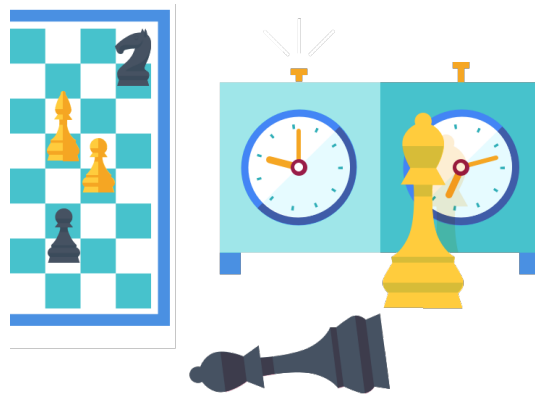
## 11. Summary

We have presented MindSports IO, the first decentralized social gaming network powered by Ethereum technology, IPFS, Whisper and the MIND Registry for intellectual sports such as Chess, Draughts (Checkers), Xiangqi, Bridge and Go. Players are able to play, create and propose board games within the network and in return is compensated with MIND Tokens. We have constructed a variety of smart contract templates that are suitable for mind sports and cryptocurrency settings, and address some of the design challenges to create an efficient and decentralized mind sports network. Our smart contract template is flexible, efficient, and generic enough for many daily mind sports and cryptocurrency settings.





# MindSports



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