



iMPERIUM

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No Fee Sports Betting Platform built on the Ethereum Blockchain.

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iMPERIUM White Paper



1.0: Intro/Abstract

People have been informally betting on sports just about as long as there have been sporting events. Organized sports betting took off in the United States at the horse racing tracks that sprang up in the 1800s. Betting really caught on in the 1900s when the pastime became more accessible to the middle and lower classes. Unfortunately, over time bettors have been plagued by faulty rules, an over-abundance of fees, and a lack of security when placing their bets which has forced them to go underground. 400 billion dollars. The amount of money illegally bet each year on sports. Why is it bet illegally? Why isn't there a secure way to bet on your favourite sports team, player, or event that doesn't take 30% of your winnings? Greed. In the overpriced, fee-ridden ecosystem of online sports betting platforms, we saw a change that needed to be made. When sports bettors are hit with a giant fee taken out of their winnings, they have no choice but to go to underground markets. In

these underground markets there is backstabbing, violence, book-keeping malpractice, and theft. iMPERIUM is here to change that.

Blockchain technology hasn't only changed the way we view the future of decentralization, the power of the blockchain has created a new way to build a 100% secure monetary platform. Transactions can now be carried through without requiring trust in a centralized third party. Each day another industry seems to benefit from the gradual adoption of the Blockchain. Yet, in the sports betting industry, archaic practices still exist. Nevertheless, people rely on third parties to host their bets, send their money into insecure platforms, and trust that the third party will actually carry through with their payouts. All the while, bettors get nickel-and-dimed through the process as the host charges fees on each bet as well as when depositing or withdrawing funds. We're here to change that. iMPERIUM will never charge fees; your profit is *one-hundred percent yours*. This is the way it should be.

2.0: Sports Betting Market Analysis

Sports betting is planted deep within the seeds of American society. The financial planning website, Mint, estimates that more than \$8 *billion* is wagered every year on the Super Bowl alone with an estimated *two-hundred million* people making wagers on the outcome of the game worldwide. According to the Nevada Gaming Commission, \$3.2 *billion* was wagered in sports bets in the state's casinos in 2011. Fantasy sports are emerging as another avenue of sports betting. *Thirty-three million* Americans participate in fantasy football each year, according to the Fantasy Sports Trade Association. Further, *one in ten* Americans play March Madness brackets according the data-processing website, wagersolutions.com. The FSTA found that \$1.18 *billion* changes hands between players through pools each year. Betting is a part of who we are.

This legal betting, though, serves as an artificial facade for the illegal, underground betting rings found around the world. According to the AGA (American Gaming Association) \$95 billion dollars this year alone will be spent betting on the NFL, 98% percent of that spent illegally. That is \$93 billion dollars funneling into the underground sports betting markets. Further, according to CNBC, between \$60–70 *billion* is illegally wagered on college football each year while \$30–40 *billion* is illegally wagered on Major League Baseball each year. Instead of

funneling into the underground markets, we will redirect that revenue to the IMPERIUM platform.

3.0 Our Purpose

Plain and simple: We are here to solve the main problems harming sports betting today, in hopes that we can put an end to the driving forces that are sending bettors to the corrupt, dangerous world of underground betting. We strive to use some of today's most influential and new technologies to our advantage in solving these problems and hope that, in cohesion, our solutions will provide the groundwork for a disruption in the sports betting industry.

4.0: Problems in Sports Betting Today

LACK OF SECURITY

Billions of dollars a year are spent in the sports betting world. When people bet on sports in the underground market, they have to trust crooked bookies and illegal, centralized websites that could easily take off with their money. These websites frequently get shut down by government regulators, leaving bettors without payouts and without any chance of recovery on their losses. What's more, the biggest problem in every online betting platform is cheating, either financially (credit card frauds) or in-game cheating. This toxic mix adds another layer of risk to an already risky 'investment'. Now that's gambling and it needs to change.

FEES

Fees upon fees upon fees. Sports betting websites take money from everything, it's their bread and butter. You get a fee when depositing your own money, a fee when you win money, and a fee when you want to withdraw money. They skim off the top for providing no special service simply because they can. We will change this.

BETTING LIMITS

Due to payout-matching liability, sports betting websites place limits on how much each bettor can bet. This chart, taken from Bovada's website (the most popular sports betting website in the world), shows how

atrocious these betting limits are. It exemplifies the reason *\$400 billion* a year is bet illegally through underground channels.

You can see in the above chart, the most popular widely used sports betting website in the world does not allow bettors to wager more than \$2,000 on a money line bet for Major League Baseball. No more than \$1,000 on a UFC fight. Does it surprise anyone why the “big money” goes to underground markets? That is the only place they are welcome. iMPERIUM is going to change that.

5.0: iMPERIUM—Our Solutions

SECURITY

iMPERIUM aims to entirely eliminate security risk by decentralizing transactions on the backbone of the Ethereum blockchain. We increase security in multiple ways:

- 1) All bets are made using our MPRM tokens which are conveniently stored in escrow smart contracts, eliminating counter-party risk and allowing fast, automated payments to winning bettors.
- 2) Depositing and withdrawing funds are also completely automated using the blockchain. With no human intervention required, there can be no human error.
- 3) Automating event verification using site scraping tools, IBM’s Watson, and sports betting APIs.

The iMPERIUM system is decentralized and self-regulating. These qualities allow iMPERIUM to deliver secure, private, and safe sports betting. Players avoid fees, corruption, legal repercussions, and violence prevalent in today’s industry. Using iMPERIUM is accessible, fair, and safe.

NO FEES

Because of the unique nature of this emerging technology, we will be able to eliminate all fees bettors normally pay on other betting platforms. Instead of taxing our customers each time they place a bet, we will instead remove this externality from the system, encouraging them to place larger bets and therefore, increase the winnings for every

bettor. This will create a surge in demand and an uptick in value of our MPRM coins. This natural price appreciation, inherent in the coin supply, will serve as our fee revenue as we have *forty percent* of coins in escrow for company funding (see section 11.0). One can start to see the power in the implementation of blockchain technologies by looking through this lens.

NO BETTING LIMITS

One of iMPERIUM's most valuable characteristics is our unlimited betting protocol. Thanks to our monumental Automated Queue Model (described below), there are no restrictions to how much you can bet. Nowadays, only in the underground sport-betting world could someone wager *\$50 million* on a sporting event. On our platform and with the use of our tokens, this kind of bet is possible. No restrictions. No limits. With this ceiling-less structure, the *\$400 billion* of illegal betting that takes place each year will now funnel into iMPERIUM and away from the dangerous underground betting world. With our unlimited betting protocol, we feel that eliminating illegal betting isn't a possibility, but an ultimate end result.

6.0 Automated Queue Model

Book makers in traditional betting markets have the problem of payout-matching liability. In short, if side A on a straight money line has put in *\$10,000* but side B has only put in *\$7,000*, there is a payout liability. If side A wins, there is a *\$3,000* deficit which must come out of the book-keepers wallet. We have solved this problem with our Automated Queue Model.

Its simple, really. Every bettor is placed in a "queue", with the first bettors on either side in the front of the queue. Whoever does not have a matched bet will be lined up orderly in the queue so that, as more bettors are assigned to the other side, their bet gets matched. This queue will proceed 10 blocks prior to the start of the event. If either side does not have their bets matched, they will be notified and receive their full MPRM bet back, free of charge. Some betting sites will change the odds on either side of the bet to encourage more bettors to get in on the action. This is unfair for the first bettors, as they could have received better odds if they just waited. We will not continue this unbalanced practice.

7.0 The Power of Watson:

PRELUDE

When developing our platform, we had a few questions:

- *How is iMPERIUM to confirm a sporting event, player, or team is actually competing against one another?*
- *How does iMPERIUM add events for users to bet on automatically?*
- *How can iMPERIUM be 99.99% sure a team has won/lost?*

This is where IBM's Watson comes in:

WATSON

Watson is an analytical computing system that specializes in interpreting natural human language. Watson represents a tremendous breakthrough in computers' understanding of natural language, or "real language", not designed or decoded for computers.

IBM's Watson is at the forefront in a new era of computing called: cognitive computing. A radically new kind computing, very different from the programmable systems that preceded it. Conventional computing solutions, based on mathematical principles that emanate from the 1940s, are programmed based on rules and logic intended to derive mathematically precise answers, often following a rigid decision tree approach. However, with today's wealth of big data and the need for more complex, evidence based decisions, such a rigid approach often fails to

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keep up with available information. Alternatively, Watson and its cognitive capabilities mirror some of the key cognitive elements of human expertise.

Humans go through 4 keys steps when seeking to understand a problem and make a decision:

1) We observe visible phenomena and bodies of evidence.

- 2) We draw on what we know to interpret what we're seeing to generate hypothesis about what it means.
- 3) We evaluate which hypotheses are right or wrong.
- 4) We decide; choosing the option that seems best and acting accordingly.

Just as humans become experts by going through the process of observation, evaluation, and decision making, cognitive systems like Watson use similar processes to reason about the information it reads. Watson does this at massive speed and scale utilizing its 10 racks of IBM POWER 750 servers running Linux, 15 terabytes of RAM, and 2,880 processor cores.

Unlike conventional approaches to computing, which can only handle neatly-organized, structured data, Watson can handle unstructured data (which is 80% of data today). Watson can interpret information that is primarily produced by humans for other humans to consume. This includes everything from literature, articles, research reports, even blogs, posts, and tweets. Watson relies on natural language which is governed by rules of grammar, context, and culture to arrive at its conclusions.

Because of this adaptable capability, Watson will be able scrape through social media, sports websites, sports television networks, non-stop, until it arrives at the real world outcome. Any bet, score or fight will be immediately imported into iMPERIUM as soon as it is confirmed by Watson.

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VERIFICATION

To tackle the issue of verifying wins and losses, as well as making sure certain teams are in fact playing one another, iMPERIUM will perform multiple verification processes before the creation of an event as well as before better payout:

- Watson will utilize site scraping function and tv analyzation to form basis of understanding of outcome or event.

- Watson will cross-reference news articles until reaching a 95% consensus of an outcome or event.
- iMPERIUM's custom back end protocol will utilize sports betting API's to reach a 95% consensus of any sporting event.
- Watson will cross-reference social media until reaching a 98% consensus of any outcome or event.
- Coupling all of these processes together can give iMPERIUM a 99.99% verifiable confirmation of any given event. Adding Watson to the team helps to further the accuracy and legitimacy of the iMPERIUM platform.

8.0 The Platform

PLACING BETS

Placing bets on the iMPERIUM platform will be as easy as seeing an event you like, determining which matchup type you would like to participate in, and betting as much MPRM as you want.

SUPPORTED MATCHUP TYPES

- *Head to Head*—Challenge a buddy, a coworker, a family member, or another random user on the imperium platform to a head to head matchup.
- *Pool*—Join a team of multiple bettors to compete against the other side.
- *As development of the iMPERIUM platform continues, more matchup types will be added*
- ***SUPPORTED BETS***
 - *Parlays*—A parlay is simply a combination bet. Instead of making five separate bets on five different tickets, the bettor places a single parlay bet, hoping he or she can predict the outcome of all five games. If any one of the games is a loser, the entire parlay is a loser. The payout is much better for parlays, because the odds of successfully picking multiple winners are much lower.

- *Money Line*—Money line bets do not have a spread or a handicap, and require the chosen team to win the game outright. The favoured team pays lower odds than does the underdog, thus, it acts mainly as an enticement to take the underdog for a better payout.
- *Spread Betting*—Spread bets are wagers that are made against the spread. The spread, or line, is a number assigned which handicaps one team and favours another when two teams play each other and one is perceived as being more likely to win. The favourite “takes” points from the final score and the underdog “gives” points. This is the most common type of bet in sports betting.
- *Total (Over/Under)*—Total bets are wagers made based on the total score between both teams. Example, if an MLB game has a total of 10.5, an over bettor will want the combined total to be greater, and the opposite for a bettor taking the under. If the combined total is the same as the proposed total, the bet is a push.
- *Proposition bets*—“Prop” bets are wagers made on a very specific outcome of a match not related to the final score, usually of a statistical nature. Examples include predicting the number of goals a star player scores in an Association Football match or betting whether a player will run for a certain number of yards in an American football game.
- NOTE: iMPERIUM will **NOT** support over-leveraged or margin betting on its platform. A single user can only bet what they have. This ensures complete monetary safety and control.

9.0: INITIAL TOKEN DISTRIBUTION

TEAM POOL: 10%

Ten percent of tokens will be held by the developers and founders of iMPERIUM. These coins will be held in escrow and released to founders after the Beta release of the iMPERIUM platform.

INCENTIVE POOL: 10%

Ten percent of the total MPRM coin funds will go towards our first year user-acquisition initiative. This initiative will draw bettors to our platform, allowing the platform to gain traction in the space.

Specifically, this *ten percent* coin allocation will be used to match the winnings of each bet placed in the first year of the MPRM platform launch (or until the pool runs out, whichever comes first). We estimate this user-acquisition initiative will help to boost the popularity and frequency of betting on the iMPERIUM platform and drive an influx of new bettors to the platform. These coins will be held in escrow, only being released into the iMPERIUM community when a bettor has won a wager (read more; Section 12.0).

TOKEN SALE: 40%

Forty percent of coins will be directly sold to investors during the fundraiser between 18:00 UTC August 20, 2017 to 18:00 UTC August 27, 2017. Once the hidden hard cap of *forty percent* coins is reached, no more coins will be for sale, and no more will ever be created (see section 14.0).

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ESCROW COMPANY COSTS: 40%

Forty percent of coins will be held in escrow by the company to pay for company costs and expansion. This escrow is the reason we are able to provide users the benefit of **zero** fees (see Section 11.0).

10.0 Intended Use of Revenue

OPERATIONS: 30%

Thirty percent of revenue raised from the fundraiser will go towards operating the iMPERIUM platform. To ensure amenable business practice is occurring, our team of accountants will be expanded to provide authorization of resources and to improve transparency, improving company longevity. A business consultant will foster the adoption of new ideas and practices from industry experts. Further, game strategists, business strategists, Blockchain technicians, and communications experts will keep iMPERIUM on track toward its worldwide goal.

DEVELOPMENT: 20%

Twenty percent of funds raised will go towards the overall development of the iMPERIUM platform. Our goal is to create a user friendly, aesthetically pleasing platform which is functional on any software or hardware device in the world.

MARKETING: 20%

Twenty percent of funds raised will go towards the continuation of our advertising efforts to encourage worldwide adoption and usage of iMPERIUM. We want to expand our global outreach to promote the advantages of decentralized sports betting, ensuring iMPERIUM becomes the largest sports betting platform in the world.

R&D: 20%

Twenty percent of the funds raised will go towards research and development. We will not stop at the simple stuff. We will stay on the cutting edge of change in the betting industry. Our future goals include:

- Creating fully operable fantasy leagues within the iMPERIUM platform.
- Designing a system for large coin holders to create their own betting pools and point spreads
- Implementing social media-connected betting (using Watson)
- Developing the option for political, financial, and derivative bets
- Optimize a system for incorporating user designed betting games

LEGAL: 10%

Ten percent of funds raised will go towards legal efforts to assist with navigating regulations when needed. Due to the desired outreach of our platform (worldwide), we will need a legal team to handle the imminent efforts of sports betting companies trying to obstruct our goals. Our legal teams main focus will be advocacy and lobbying to promote total access worldwide.

11.0 Escrow Economics

When creating iMPERIUM we wanted to ensure that bettors were never charged fees. However, this goal brought a very important challenge to the table. How are we to promise zero fees, yet continue operating the platform on a global scale?

OUR SOLUTION

As MPRM gets adopted, the MPRM tokens will rise in value. As this natural price appreciation occurs, our *forty percent* escrow of coins will be sold for purposes of running the company. This is how we will pay for operations and other company fees. This process will be completely verifiable and transparent. Those on the MPRM platform will have voting power on when to release more coins into the market as well as how many coins should be released at a given time. This countermands “pump and dumps” which have no place in the Ethereum community and the cryptocurrency system as a whole. By using our *forty percent* escrow to bring new coins into the market when we (and the coin holders) see fit, we can drastically reduce the volatility of MPRM coins over time.

NOTE: No more than *two percent* of coins can be sold per year from the *forty percent* escrow unless deemed necessary by MPRM users.

12.0 Matching Incentive

Because it is important that MPRM is widely adopted so that demand increases, 10% of all tokens during the coin sale will be transferred to escrow where it will wait for bettors to place their bets. When they do bet, this *ten percent* will match the winnings of every bet placed until the *ten percent* is gone OR the first year of betting on the imperium platform is over (whichever comes first). This will incentivize the market to place bets early on, as well as get new users onto our platform and increase adoption of our technology.

Example: If a bettor places a 2,000 MPRM money line bet on Real Madrid (at a standard 2:1 odds), and they win, the bettor will receive 4,000 MPRM coins as well as 2,000 BONUS MPRM coins.

13.0 ICO Details

MPRM COIN SALE

ICO start: 18:00 UTC—August 20, 2017 *ICO end:* 18:00 UTC—August 27, 2017 *Multiple funding rounds:* NO.

Hidden hard cap: YES.

Limited Supply: YES.

Price: 1 ETH = 2,000 MPRM *Price:* 1 BTC = 25,000 MPRM

NOTE: Prices subject to change near the beginning of the coin sale due to price fluctuations of Bitcoin and Ethereum. (See more below)

ACCEPTED CRYPTOCURRENCIES

Ethereum and Bitcoin will be accepted during this fundraiser. Ethereum will be the easiest way to contribute to this fundraiser. However, we want to support other blockchains and, because we believe in simplicity, we will accept Bitcoin directly at the designated address during the creation event. However, this blockchain by its nature cannot provide us with an Ethereum crediting address for the MPRM token. The MPRM tokens that are created by these contributions will be aggregated into one Ethereum account controlled by iMPERIUM. These MPRM tokens will be transferred only to a party that can prove they are the sender by **signing a message** with the **private key** of the **originating Bitcoin address**, and sending to **info@imperium.network**. No exceptions whatsoever will be made to this rule. If you are uncomfortable with the process of signing a bitcoin message, our advice is to simply use Ethereum to contribute to our coin sale.

REMAINING COINS

If our hidden hard cap is not reached during the coin sale (highly unlikely) the remaining MPRM coins will be distributed amongst the coin holders based proportionately off the percentage of coins owned at the conclusion of the coin sale. The iMPERIUM fundraiser is a limited coin issuance event. It begins at the Ethereum block mined soonest after 18:00 UTC on August 20, 2017. As soon as the hidden hard cap is reached OR August 27, 2017 18:00 UTC passes, the receiving contract will be finished and will reject Ether from that time on by calling a “throw” function. There will never be more MPRM minted.

PRICES

Bitcoin and Ethereum contribution prices will be fixed for the duration of the fundraiser. Finalized prices will be published at or slightly before 18:00 UTC August 20, 2017. This is due to the fluctuations in price between BTC and ETH.

WALLET ADDRESSES

Ethereum and Bitcoin wallet addresses will be posted on the website prior to the ICO at 18:00 UTC on August 20, 2017.

NOTE: When donating ETH make sure the spelling of our donation address is correct or else Ethereum donation will be invalid and you will not receive any MPRM coins.

DISTRIBUTION

As soon as the coin sale is completed (once the hidden cap is reached OR at approximately 18:00 UTC August 27, 2017) the coins for ETH contributors will be immediately released. The coins of BTC contributors will be verified by an email of BTC donation signature and released immediately after verification.

14.0 How The Value of iMPERIUM Will Rise

GROWING USER BASE

As more users flood to the iMPERIUM platform for sports betting, the coins will become more valuable by the Law of Supply and Demand. No new coins will be minted, ever. As demand goes up, and coin supply stays the same, the only factor left to increase is the value of MPRM coins.

SECONDARY EXCHANGES

One of iMPERIUM's first goals after completion of the fundraiser will be getting MPRM onto the secondary exchange platforms. Once they are on the platforms, its price will begin to rise as people trade and, consequentially, bring increased visibility to the iMPERIUM platform.

EXPECTATION

Due to the usage and further popularity of the coin, the most inexpensive we ever predict the coin to be, is during the initial crowd-sale. At 2,000 per ether and at an average Ether price (at time of drafting) of \$200 per Ether, each MPRM coin is worth approximately \$0.10 cents. As these coins hit the secondary exchanges and demand for them goes up—as it will—the coins will also rise in value.

15.0 MISCELLANEOUS

SOURCE CODE

Fully open source code will be released for full transparency once Beta is released. Further, throughout the development of the iMPERIUM platform, we will be instituting a generous white hat bug bounty program, ensuring our code is thorough and free of bugs. This will help to deter Black Hats from tampering with our system, as the rewards for finding bugs will be extremely generous.

COMPATIBILITY

The iMPERIUM platform will run on the following operating systems:

- *Windows*
- *Macintosh* • *IOS*
- *Android*
- *Chrome OS*

BLOCKCHAIN

Other betting platforms in the cryptocurrency space require users to have the entire blockchain downloaded onto their device when using their platform. This takes up (currently) more than 60 gigabytes of storage space which is atrocious. Not to mention, the blockchain is getting larger every day. MPRM platform keeps the blockchain downloaded and constantly updated so its users do not have to download the entirety of the blockchain every time they would like to place a bet.

16.0 SUMMARY

In conclusion, iMPERIUM is here to rid the world of illegal sports betting by solving the betting industry's three biggest problems:

- *Lack of Security* • *High Fees*
- *Betting Limits*

To solve these problems we have harnessed some of today's most powerful technological capabilities. Firstly, the Ethereum network will allow us to guarantee security and decentralization to our bettors.

Secondly, our economic model (achieved by issuing utility tokens) will allow us to eliminate fees by using natural price appreciation to pay for operations. Finally, our monumental Automated Queue Model, will allow for limitless betting.

Together, we can utilize the power of the blockchain to create the largest betting platform in the world.

