

The Decentralized Sportsbook of the Future
Powered by Blockchain Technology

CRYP2NOVA

White Paper v 1.0

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1.0 Abstract

Wagerr is a decentralized sportsbook that brings trustless sportsbetting to the entire world. Due to its strict use of Application Specific Smart Contracts (ASSC) and 2nd layer network controlled by Oracle Masternodes, Wagerr solves the security, scaling and incentive issues that have plagued smart contracts since their inception. Additionally, Wagerr combines leaps in technical design with an economic linkage that creates a deflationary, and self regulating economy. Through decentralized governance and contract fees, structural mechanisms balance Wagerr's token value by dynamically adjusting supply based on the current exchange rate and betting volume within the Wagerr network.

Wagerr does this all while avoiding single points of failure and implementing a network and system that is fully decentralized.

2.0 Manifesto

Bit by bit: a manifesto for modern freedom through decentralization

Wagerr celebrates the freedoms and new possibilities opened by the internet and especially those opened by bitcoin and the underlying blockchain technology.

The internet delivered a decentralized network, that was everywhere yet nowhere. The internet was and is a radical and disruptive experiment that propagated new ways of living, new forms of relationships, and new discoveries of the nature of social practices we have taken for granted. We have made new discoveries about inherent unconditional rights and freedoms previously unimaginable. The context has shifted. New pleasures are possible. And the freedom to pursue happiness takes on new meanings, new implications, for individual and collective behavior, indeed even for *network behavior*.

The creation of secure, self-regulating networks that behave in mechanically predictable ways, offload the perceived need to control human behavior. Fairness is built in.

However, these new freedoms face daily peril as the Internet gets re-centralized in the form of applications, websites, corporate conglomerates, and creeping regulatory action. The proper burden of freedom is constant vigilance.

It is not that Google, Apple, and Microsoft are inherently bad. Concern arises when people's identities become products for a corporate resale. These same people are led to mistake the web for the internet, as if the current state of the web corresponds with the aspirations of the decentralized internet. Concern grows deeper when profiteers mistake utility for

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power, and people regard their own consumer behavior as mere consumerism when, simultaneously, their identities are being harvested and auctioned to the highest bidder.

A corporate model that commercializes and exploits the things that are most personal and most private about individual lives and identities only to repackage those identities for targeted advertising, or worse, extortion or blackmailing — all while perpetuating predatory targeting and exploitation of non transparent policies. This has become the modern antithesis of freedom.

Wagerr believes that sports betting persists throughout societies despite efforts to curtail it because it is *fundamentally fun* and it is intrinsic to human nature to exercise free choice.

Wagerr believes that self-regulating, open source systems can produce better, more reliable and fair outcomes because they are not subject to human vagaries. People can design and control machines, systems and networks more precisely and more reasonably than they could ever control other people — even themselves.

To the extent that government limits people's capacity to exercise free choice and blocks the pursuit of happiness by means of regulation of a simple entertainment industry, it curtails our capacity to be truly human, truly free.

Wagerr believes the internet is the greatest invention of modern time. Access to this freedom must always be free of fear and legal repercussions. Instead of having to invest trust into unknown individuals or entities who may or may not be there tomorrow, players can rely on a trustless and decentralized system.

Services should be decentralized.
Systems should protect users.
Access should be free and open.

No more platforms. No more websites. No more apps.
No more paternalism. No more systemic corruption.
No more arbitrary restrictions and self-serving barriers.

Bit by bit, we shall decentralize.

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3.0 Problem Overview

What is the problem with sports betting?

- Excessive risks for sports bettors
    - Exploitation of identity/information
    - Regulatory repercussions
    - Total irrecoverable loss of funds
    - Vulnerability to manipulation

- Unpredictable risks for corporate and private bookkeepers

    - Regulatory repercussions
    - Government confiscation of funds
    - Frozen assets
    - Security vulnerabilities

Sports betting has a bad rap. Simple analysis traces the industry's clouded reputation to the regulatory practices that drive sports betting underground, and the inevitable problems that result from systems of trust enforced only by greed and fear of violence. The reputation of bookkeeping (and gambling in general) and problematic efforts at regulation are mutually reinforcing. When government impose regulations they inadvertently drive betting underground. When underground markets become violent or result in tragic economic losses, the justification for regulatory control of a purportedly dangerous industry becomes self-fulfilling.

Some governments, knowing that betting activity will continue — even if it is declared a crime — allow licensed betting. Governments charge fees for licensure and regulation and tax the industry and any winnings. A so-called "sin tax" justifies excessive government confiscation and control premised on the notion that extragovernmental sports betting is inherently dangerous and constitutes a moral vice.

The first irony is that this political competition for control over gambling income — the question of "who will be the house" — inevitably corrupts the politicians and government officials who benefit from the "vice" that they purport to regulate. The industry becomes "pay to play" for entities to participate and compete, leading to oligarchy.

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A second irony is that regulation is inevitably ineffective, resulting in legal loopholes that are used to bring products and services to market anyway, often at a high cost to efficiency. This waste of resources would better serve economies, and ultimately, communities, in other areas of production.

The third irony is that the regulation itself produces a combination of corrupt and dangerous markets: the legally regulated one and the underground one regulated by vigilante practices.

The result is moral hypocrisy on the part of regulators, an arbitrary and unpredictable mishmash of inefficient local regulatory practices and the flourishing of underground markets which are, indeed, more risky both because sports bettors and bookkeepers risk criminal prosecution and because they have no recourse to the law when one party fails to deliver what they owe.

Government regulation is a protection racket

In short, government regulation of sports betting is a racket. Government regulators make money by providing "protection" to citizens, sports bettors, and legitimate bookkeepers. But the protection offered is only necessary because the underground markets are defined *by the government itself* as illegal, the participants defined as criminals, and their everyday practices require participants to rely upon a delicate balance of "trust," on one hand, and the threat, and potential reality, of severe violence on the other. Even when government regulation of sports betting is a well intended effort at protection; it is a racket, nonetheless. Worse yet, governments are not only confiscating winnings to pay for “protecting” citizens from dangers and corruption — the government officials, themselves, are corrupted by their incentives to collect taxes and maintain power, thus facilitating the dangers that perpetuate the narrative and their role as protection.

Centralization as the core problem

- Trust requirements
- Centralization of power, control
- Non-distributed systems

Wagerr agrees: the current state of sports betting is terribly risky, expensive, corrupt, and dangerous. But it doesn't have to be this way. Wagerr has identified the elements crucial to a safer, more secure way to practice sports betting. Wagerr, furthermore, has designed a system that brings this better way to the whole world without borders. This is a big deal. Illegal sports betting in the US and China combined totals a trillion Dollars in illegal bets. Despite efforts at heavy regulation, people are betting anyhow. And they are doing so in an insecure and unsafe manner. Wagerr provides a global solution to a vast array of localized problems in sports betting markets.

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4.0 Criteria for a solution

Distributed, decentralized, trustless, stable, private

Any solution to the problems of the *status quo* for the sports betting industry must serve the interests of sports bettors and also satisfy the needs of the contributors who maintain the security and functionality of the network. To this end, we believe that any solution must:

- Be fairly and widely distributed to speed up adoption and reduce market risk.
- Be fully decentralized to remove single points of failure and individual control.
- Function in a trustless manner, so one party's dishonesty does not jeopardize the fairness of the entire system's performance.
- Include mechanisms that stabilize the value of the network's underlying token of exchange, whether adoption dramatically rises or falls.
- Guarantee user privacy.

Wagerr satisfies all the above requirements:

- Its ICO and the related marketing efforts draw interested investors and bettors.
- A fully open source codebase attracts diverse technical interest and allows for anyone to have say in its development and future.
- Rigidly programmed contract rules and subroutines enforce trustless operation of the network.
- The destruction of 48% of total contract fees ties betting activity to Wagerr's market value and reduces volatility.
- And finally, no personal information is required or stored to usage Wagerr. The network is available from any internet connection and is not subject to regulatory oversight. Wagerr's open network does not reinforce centralized identities, freeing participants from any stigma associated with sports betting.

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5.0 Features and functions of Wagerr

Transaction functions
Wagerr is a two tiered network comprised of standard wallets and Oracle Masternodes.

Standard Proof of Stake wallets

- The first layer is the standard transactional layer in which basic wallets earn rewards for block formation.
- Provide network security and confirm blocks of transactions that constitute the blockchain, the ledger of immutable transactions.
- Maintain a full copy of the blockchain.

Oracle Masternode intranet

- Oracle Masternodes, a second layer of the Wagerr network, function as consensus agents, forging betting contracts, retrieving sporting events outcomes data, and consensually validating results that trigger contractual payouts.
- Oracle Masternodes also mediate decentralized governance of the Wagerr network, as discussed in greater detail in section 7.10

Betting functions
The Wagerr system facilitates three modalities of sports betting:

1. *Peer to peer betting*
   Peer to peer betting (or "head to head" betting) requires two partners to take opposite sides of a betting contract. The players agree on the betting line and the total amount at stake. One player initiates the bet by posting it to the blockchain from their wallet. When the partner sends coins for the complementary side of the bet, the blockchain tags them as transactions with dispositions contingent upon the outcome of the specified event. Once the event is completed, the Oracle Masternode network records the performance result on the blockchain, triggering a payout to the winner. If the event never happens, the coins, minus fees, are returned to the original transactors.

   This feature is great for casual players, friends who live apart, colleagues, etc. They can make a plan, forge a contract on the blockchain, and leave the rest to the Wagerr network.

2. *Multi user betting*
   Multi User betting is like peer to peer betting, but in this case multiple users can take the complementary position against a larger bet until the total value of the bet is met. Since this mode of betting requires less specificity about the size of the bet, the blockchain can perform the work of matching multiple bets until an equally weighted or minimum contract is achieved.

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3. *Peerless direct chain betting*
   Peerless betting does not require a complementary transaction to forge a contract. Any bettor can initiate a contract on chain, which the Wagerr network is programmed to pay out if the bettor wins. Peerless betting maximizes flexibility for bettors.

   How does Wagerr balance the risks of peerless betting?
   The blockchain pays out winning bets that are confirmed by the Oracle Masternode network, by minting coins for the payout. This means that the blockchain does accrue some risk of coin supply expansion though forging such contracts, but the risk is balanced by several factors.

   Losing bets systematically destroy coins, creating a balance over time. That's because 48% of all betting fees are destroyed, tipping that balance in favor of net coin destruction from direct chain betting.

   In fact, because losing bets destroy more coins than winning bets generate coins on the network, an intrinsic advantage is created for all WGR holders in terms of coin supply. Specifically, on a losing bet of 100 WGR, 96.88 WGR would be destroyed; by contrast, on a winning bet of 100 WGR, only 94 WGR would be generated. This imbalance constitutes the house edge of approximately 3%.

   The final technological balance is a development called, "dynamic odds balancing." When peerless betting creates an imbalance in risk, where the payout liability is higher for winning than for losing, the network dynamically adjusts odds to encourage complementary betting that will balance the network liability.

   Peerless betting is by far the simplest solution for sports bettors because it requires no planning, and eliminates the risk of finding complementary partners.

   Peerless betting also attracts traditional sports betting operations that routinely manage their own payout liability by placing bets with peer organizations. Now, instead of relying on their peers to take the other side, major sports betting outfits can enjoy low fee betting on the trustless Wagerr system instead of entrusting assets to competitors.

   That's important because regulated competitors are subject to regulatory insecurity and unregulated competitors have no legal obligation to honor agreements. Wagerr, a decentralized technological system, does not require sports bettors or sports betting organizations to trust any one party whose trustworthiness cannot be verified. Users instead entrust verifiable open source code that they can inspect for themselves.

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6.0 Economics: Structural dynamics of Wagerr's economic system

Sports betting market context:
The estimated scale of the traditional sports betting market (including both legal and illegal bets, internationally) is in the trillions of USD. An estimated $400 billion dollars illegal bets are placed annually in the United States alone. China's illegal betting market is even more extensive. Traditional sports betting in many locales is driven underground, leading to corruption, unfairness, and violence. Wagerr offers this untapped market the opportunity to choose a safe, private, and accessible way to bet through decentralized blockchain technology.

Because Wagerr is (better) decentralized, private, and lower-fee with a compelling value proposition, Wagerr has the potential to win substantial market share in the long run. However, even if Wagerr only captures a fraction of the trillion dollar market, the world will be a little safer and the mechanisms built into the Wagerr model will have a powerful and overwhelmingly positive effect on the Wagerr economy, and long term token value.

"Value coupling," in particular, creates an extraordinary value proposition for sports bettors, the sports betting industry, and for investors at every scale.

6.1 Value coupling: Price tied to usage

- Value coupling: price tied to usage
    - Basic: supply and demand; burning vs minting
    - Advanced: Price dynamically affects burn rate
        - High priced WGR = declining burn rate (market stabilization)
            - Stable price helps bettors predict potential winnings
            - Higher prices are always a win
        - Low priced WGR = accelerating burn rate (mitigates inflation)
            - Self-balancing system
            - Price declines are temporary

"Value coupling" defined:

> *The value of the Wagerr token (WGR) is systematically tied to the use of the sports betting blockchain.*

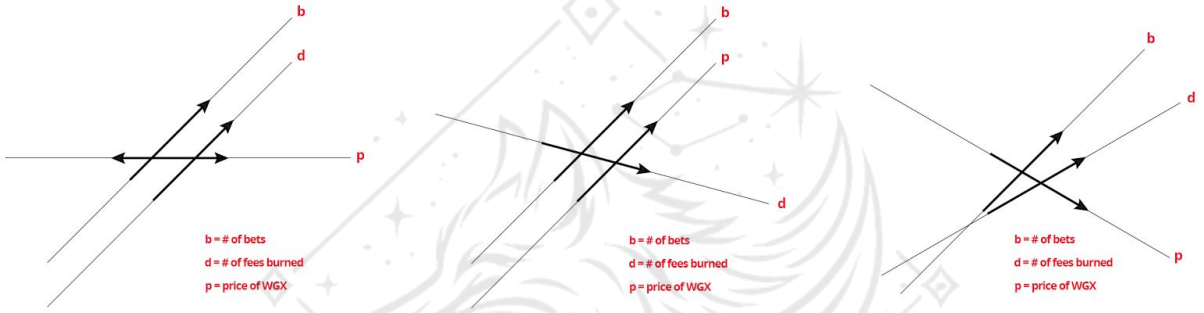
The Wagerr network reduces the risk to value and protects holders of WGR tokens by linking betting volume to coin supply. This "value coupling" between usage and supply is a

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built-in deflationary mechanism that destroys 48% of the fee from every bet. With fees of 2%-6%, the net result is nearly 1-3% of every bet permanently removed from the network.

For example, if price falls dramatically, significantly more outstanding supply is destroyed with every bet, because bets now require more WGR. Conversely, if price rises dramatically, significantly less supply is destroyed. Over time, this leads to less market volatility and an asset value that more accurately reflects both adoption and usage.

Wagerr's systematic destruction of fees thus creates supply scarcity over time. As the average volume of betting activity over the Wagerr network rises, the value of Wagerr rises with it, enabling all investors to participate in its strong growth potential simply by holding WGR tokens.



At any point in time the price of Wagerr combined with the volume of bets defines how much deflation takes place on the Wagerr blockchain. See for yourself how these three variables interact with the Interactive Value Calculator on wagerr.com.

Wagerr is designed to be more than a blockchain, it is designed to be a responsive and price linked economy. For users to feel safe holding the token and to bet with it, they need to have confidence in the value backing the coin. In Wagerr's case the method of ensuring that the value grows over time is by creating a deflationary economy.

Why not make Wagerr an asset backed coin?

Asset backed coins are powerful and have proven to be valuable in the crypto space. Wagerr, however, was designed to be fully decentralized. Since ownership and control by a central authority are required to back the value of an asset, the requirements are incompatible with the function of the Wagerr network.

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6.2 Value proposition for sports bettors

- Lower fees
    - Wagerr incentivizes bettors to use the network and to acquire, use, and hold WGR
    - Use: lower fees inherently better
    - Better margins for players: higher probabilities through lower fees
    - Potential to win bigger value
    - Potential to win just by holding

Wagerr is custom built for sports bettors and the sports betting industry. For a low fee, players can place their bets in secure escrow. Winners get automatic payouts after the event outcome is confirmed on the blockchain through consensual validation.

The Wagerr network confirms real world gaming results accurately because of strict enforcement of the requirements for Oracle Masternodes participation. The penalties for Oracles that attempt to feed bad data to the network are prohibitive. Supermajority (75%) consensus among the Oracle Masternode network is required in order to post game results on the blockchain, making result security extraordinarily robust.

There's no risk of overleveraged betting in the Wagerr system because no one can bet more WGR than they have. Loan sharks and associated violence are excluded from the Wagerr network.

Higher probability play through lower fees
Since Wagerr's fees are lower than traditional sportsbooks, the probabilities of success over time improve because the bettor doesn't need to win as often to make their sports betting practice profitable long term.

Buy low, use high
Sports bettors who buy Wagerr when its price is low may choose to use it for betting when the value is high to get even more value per token. By buying low and spending high, bettors leverage Wagerr's advantageous ecodynamics to amplify their betting power because they can place larger bets with smaller amounts of initial capital.

Bet high, win higher
Since returns on betting is a matter of probabilities, buying low and spending high increases the likelihood of profit, by first reducing the initial investment and, second, increasing the value of the payout.

Win higher, bet higher still

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Actually, if the price continues to rise, successful bettors can repeat the process: waiting until the winnings increase in value again before placing a new bet would mean that the initial capital at stake remains nominal while the reward potential continues to grow.

6.3 Value proposition for holders of WGR

You don't have to be a bettor or an investor or even a trader for a high probability chance to win simply by obtaining and holding Wagerr. Wagerr is optimized for growth. The mechanisms for controlled scarcity of the coin supply mean that as Wagerr adoption rises, systematic destruction of fees puts upward pressure on the price of the coin. Those who hold WGR and operate a standard staking wallet will accrue newly minted WGR as the wallets contribute to network security. The probabilities of winning stake rewards increase with the amount of WGR held in the wallet.

6.4 Value proposition for the sports betting industry

Arbitrage through peerless direct on chain betting

Traditional sportsbooks frequently find that they have taken on too much payout liability when their customers' bets are unbalanced, strongly favoring one side. If the overweighted team wins, the sportsbook has to carry that cost against their bottom line. They typically manage their liability by placing bets, themselves, with competing sportsbooks. Wagerr offers lower fees, automated payouts, and strong security against manipulation. Even though Wagerr will function as a competitor to traditional sportsbooks, the blockchain also offers a potent solution at a competitive price.

For additional information on mechanisms that safeguard the network for arbitrage functions, please see discussion of "dynamic odds balancing," under, "*Peerless direct chain betting*."

6.5 Value to investors

- Market share + value coupling = [burn rate > mint rate] = deflationary economy
- Rewards for contributions that increase and maintain Wagerr network value
    - Oracle Masternodes
        - Forge smart contract with multiphase transactions
            - Phase 1: Initiate conditional contract
            - Phase 2: Validated conditions trigger payouts
        - Retrieve and validate data
        - Collect, distribute, escrow, and burn fees
        - Be the house

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Because of value coupling, betting volume drives WGR token value. The enormity of the existing sports betting industry suggests that when the disruptive technology of Wagerr wins even a fraction of the sports betting market share, the betting volume would be enough to drive a deflationary economy, one in which the rate of coin destruction exceeds the rate of coin generation.

Investors have three key options for investing in WGR. Buying and holding WGR, staking WGR in standard staking wallets, or acquiring enough WGR to operate an Oracle Masternode. The last option, Oracle Masternodes, offer the most to investors because they win ongoing staking awards, and they also earn fees for forging betting contracts and updating real life event outcomes on the blockchain. While all who hold WGR can benefit from the house advantage described under Peerless direct chain betting (Section 5.3), the Oracle Masternodes' function is analogous to the house: 50% of fees players pay for betting services go directly to Oracle Masternodes

Smart incentives
Oracle Masternode rewards are strategically designed to promote behaviors that add value to the Wagerr network. To recap the rewards: Oracle Masternode operators win in three ways:

- Earn a percentage of block rewards (direct, static reward)
- Earn sports betting fees (direct usage-based reward)
- WGR value improved by network ecodynamics (indirect, usage-based rewards)

The system of rewards incentivizes Oracles' crucial role as consensus agents, retrieving and consensually validating sporting event outcomes, a crucial role in the sports betting blockchain. Static block rewards incentivize node operators to hold WGR and operate wallets with 24/7 connectivity. Failure to consistently retrieve and post data that aligns with consensus results in deactivation.

Because the rewards for operating Oracle Masternodes is predictably far greater in the long run than liquidating them, investors will be loath to give up the residual income they generate. Masternode and staking rewards keeps coins in active use in the network, and keeps their holders from adding sell pressure to the market.

Oracle Masternodes are also vehicles of blockchain governance. Since no one has more invested in the wellbeing of the Wagerr network that drive the value of the WGR token, Oracle operators exercise governance through the distributed network of Oracle Masternodes.

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6.6 Value to the field of digital currency

Standing on the shoulders of giants
Wagerr integrates core technology developed by brilliant teams. The Wagerr team stands on the shoulders of giants. That's partly possible because open source technology facilitates asynchronous collaborations that can advance technological capacities. Even before the idea of Wagerr, the core technology that Wagerr has been using to build its sports betting network already existed. The existence of the core technology should reassure potential investors of the feasibility of fully achieving the Wagerr network vision. So, what does Wagerr bring to the table that's relevant to the field of digital currencies? While the components, like "smart contracts," are familiar to those who stay current with blockchain technology, it is what Wagerr does with the components that contributes to the field.

Crafting a coin to cultivate an economy
The Wagerr team didn't set out to make a "currency." Instead, the Wagerr team has *engineered an economy*. The key to the model's design has been the structuring of incentives to reward and maintain behaviors that add value to the Wagerr network, and devising subsystems that translate the Wagerr network value to the WGR token value.

ICO structure incentivizes maximal distribution
From the beginning, the ICO structure gamifies participation by rewarding early investors with the prospect of progressive bonuses contingent upon the ICO's incremental success. Early investors thus are not only invested in the wellbeing of the coin, but also in the optimal success of the ICO. As the ICO approaches sale of the maximum number of coins, the Wagerr network becomes increasingly distributed, meaning that more and more people are invested in Wagerr. The very structure of the ICO promotes a basic goal of decentralization which makes the network more robust. Secondarily, this gamification of the ICO makes it more fun, aligning with Wagerr's commitment to the freedom to pursue happiness.

Value coupling creates incentives for participants to contribute network value
Value coupling mechanisms incentivize all who hold Wagerr to contribute to the value of the Wagerr network, with greater rewards incentivizing greater investments in Oracle Masternodes which perform the security operations, consensus agent functions, and contract management roles at the heart of the sports betting blockchain.

Price stabilization enables currencies to function as a store of value
Since the key value coupling mechanism involves destroying a percentage of all betting fees, increased betting volume augments the network value by means of a self-regulating coin supply. Because this mechanisms adjusts dynamically with the price of the WGR token, the system favors balanced growth, mitigating price fluctuations in either direction. While bitcoin, the first mover, remains king among digital currencies, its unmoored value

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prevents long term commercial adoption as a store of value beyond its momentary use in value transactions. In other words, a coin that ranges in value from $200-$3000 in a year is too volatile to serve all of the functions of a currency.

Bitcoin still clearly plays a vital role in international economics as a pressure valve in times of crisis. Bitcoin's volatility also makes for exciting opportunities for speculative trading. Wagerr, however, hopes to see other developers designing digital currency economies that solve real world problems and fit into the lives of people whose current everyday economies depend primarily upon centralized currencies.

7.0 Betting Engine & Technical Architecture

The innovation and technical leaps that Wagerr makes is contained in its simple but powerful Smart Contracts and powerful 2nd layered consensus agents known as Oracle Masternodes

The Wagerr network has two layers. The first layer is the standard Proof of Stake (POS) blockchain that allows users to send coins from one standard address to another. The second layer of the network is comprised of Oracle masternodes. This layer allows players to place bets on events that the Oracle masternodes confirm and post as real world matches.

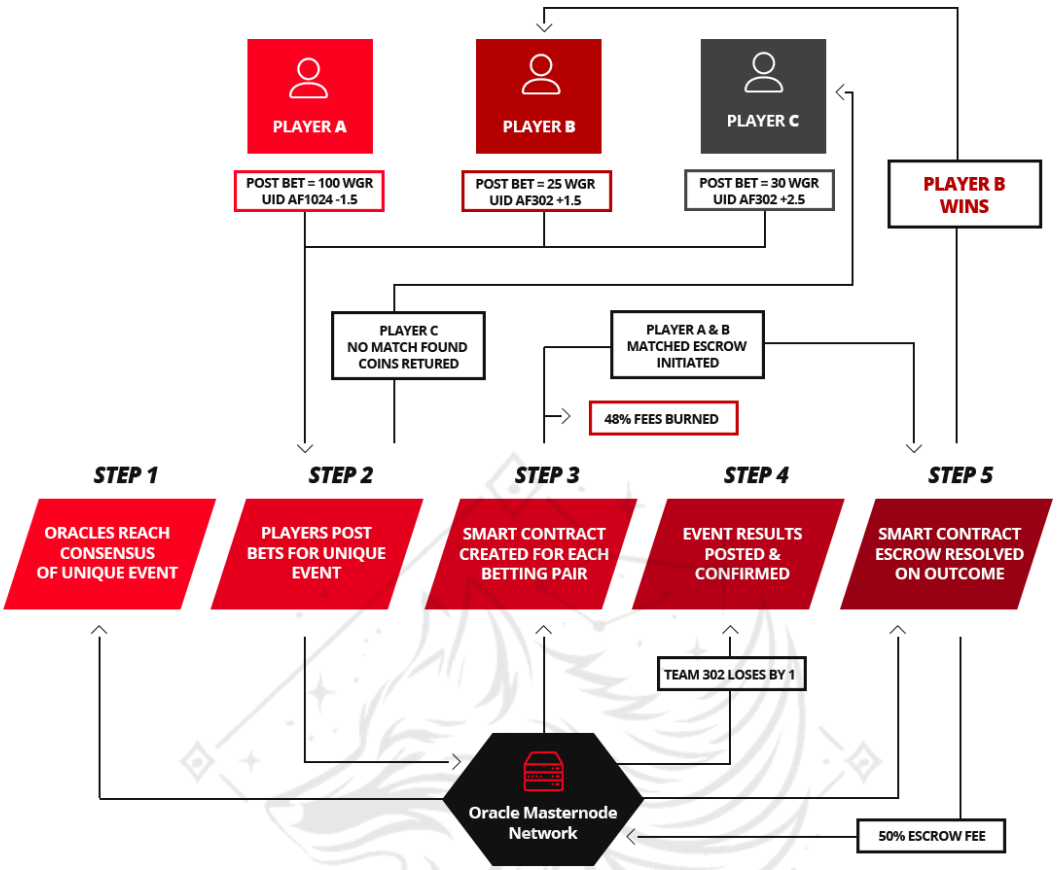
There are three types of betting transactions on the Wagerr network.

- Head to Head
- Multi User
- Peerless Direct on Chain

7.1 Head to Head Betting Process

The blockchain mediates bets between two players taking opposite sides on upcoming sporting events. The fee for an executed contract is 2% of the payout. 1% goes to the processing Oracle and 1% gets burned. Here is the flow of a head to head bet from start to finish.

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Wagerr System Allows

1. **Step 1** Oracles actively searching for new events inside supported leagues, always trying to build consensus for upcoming events. Consensus for a new event requires a supermajority; Of the 2000 possible Oracle Masternodes, 1500 need to report the same event defined by the Event's UTC Time, and their unique identifying codes.

2. **Step 2** User are able to view the posted events and place bets against existing posted bets or set a new line and matched amount (for a taker or bet partner to fill). Once betting pairs are determined to be complementary, a smart contract can be created and initiated on the Wagerr blockchain

3. **Step 3** Now that a smart contract is initiated, the development and burn portion of the fees within that bet contract are distributed and burned. (48% destroyed, 2% to Wagerr development fund) The Oracle Masternodes create transactions dependent on the two opposing bets predicted outcome.

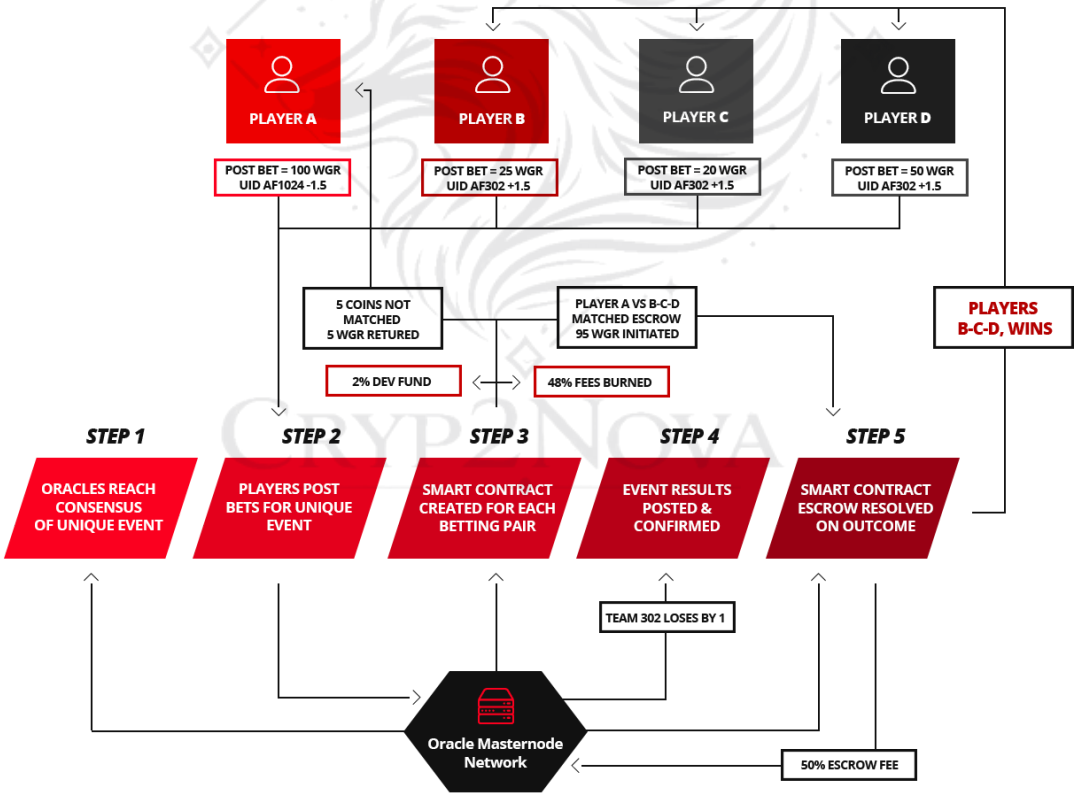
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4. **Step 4** After the event concludes, the Oracle network relies again on supermajority consensus to determine the outcome of the event. This posting allows the contract to be signaled for resolution.

5. **Step 5** Once the bet has been signalled for resolution the winning bets are processed and paid out accordingly. All non-resolved events in the issue of a tie or event never occurring the contract is resolved via the Oracle masternode network and both sides receive their bet back minus the fee. Once the smart contract is resolved the oracle who processes the bet receives their portion of the fee.

7.2 Multi User betting

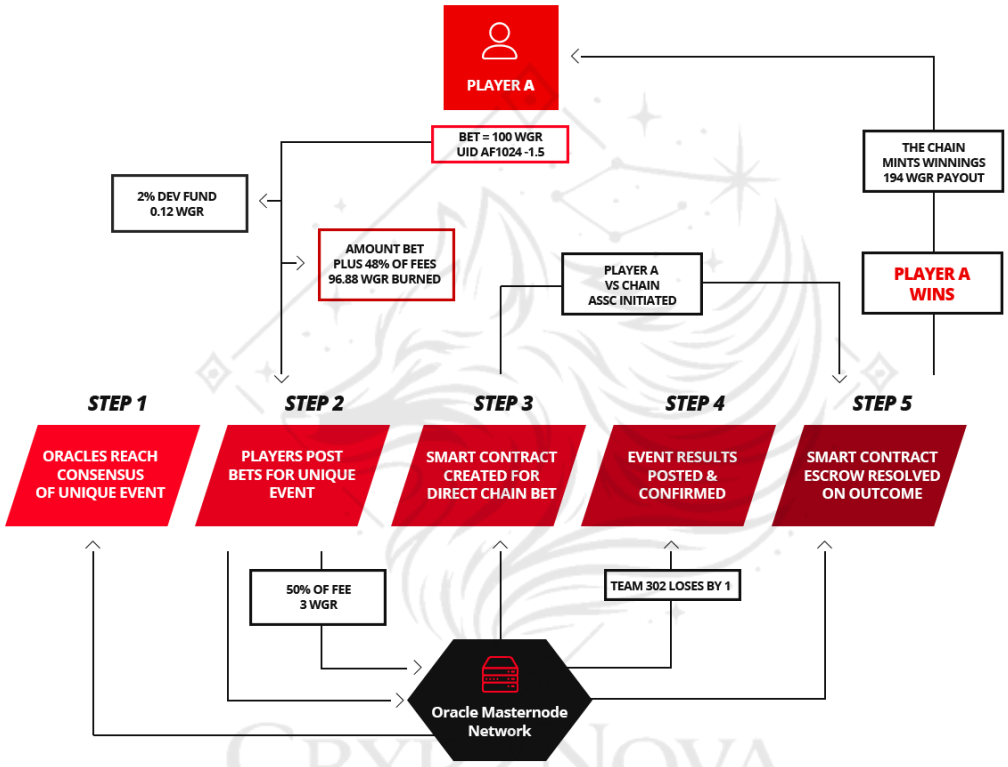
To make it easier to find and fulfill more bets on low volume events, the system allows multiple players to be paired against a single bettor. This ensures that large bets do not require an exact match to forge a contract. The fee for this transaction is 4 percent. 2% of the fee goes to the Oracle processing the transaction and 2% gets burned. Here is the Flow of a multiple user bet from start to finish.



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7.3 Peerless Direct Chain betting

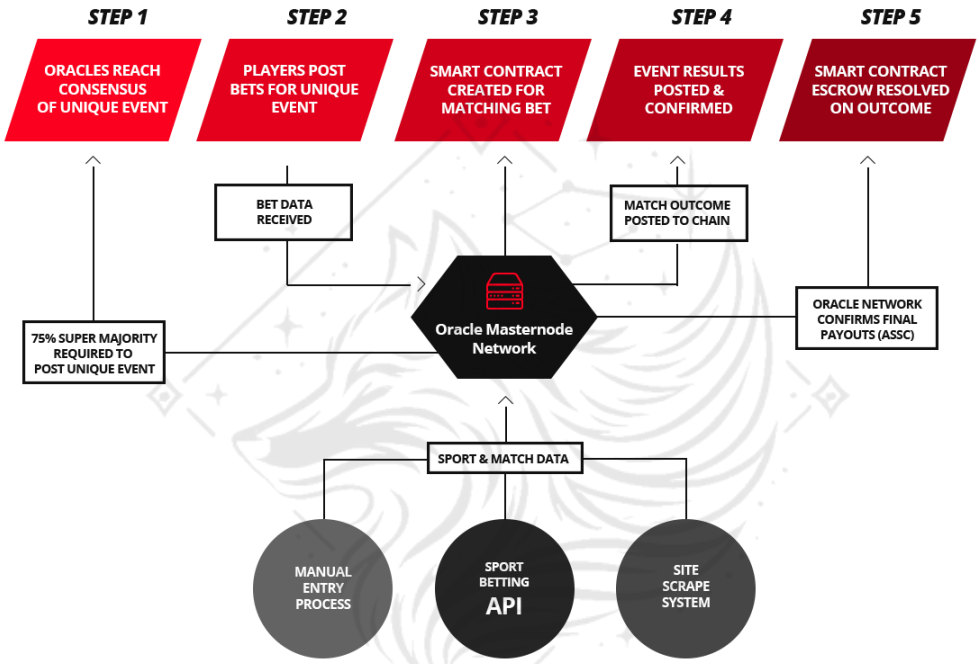
In the final phase of major development of the token, Wagerr gives the player the option to forgo looking for a match and bet directly against the chain, using the chain itself to take their bet automatically. The fee for this transaction is 6 percent. 3% of the fee goes to the Oracle that processes the request and 3% is automatically burned. Here is the Flow of a multiple user bet from start to finish.



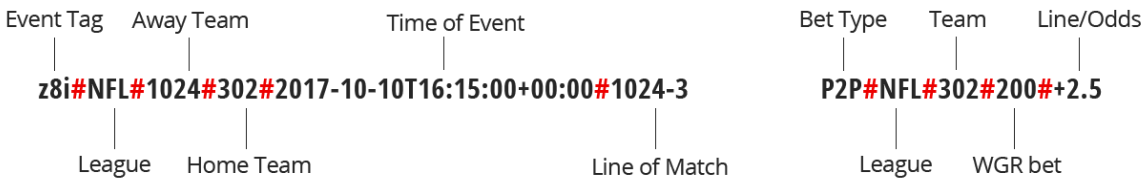
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7.4 Creating and Resolving events

Once the event is completed, the Oracle Masternode network can begin to post the outcome data. An event outcome is confirmed only after 75% of all Oracle Masternodes achieve consensus on the outcome. Once the outcome is finalized and posted, the Wagerr network recognizes completion of the contract, and the winning user is paid out accordingly.



Creating events is dependent on The Oracle Masternodes posting data that can be consensually verified. Wagerr achieves this through creating a unique means of structuring events and bets. Below you can see exactly how the bets will be posted and how unique events are distinguished as single events.



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7.5 Time Related Conditions (Atomic Pairing)

Betting closes 10 blocks before the event is scheduled to begin.

Most contractual conditions surrounding bets are related to real-world time. Block times are dynamic, not static, while events are coded in Coordinated Universal Time (UTC). Block time closing in on bets being accepted is no later than 10 blocks before the event happens. (10 Blocks = 10:40:00) (target/approx)

When a user posts a bet on the cusp of approximately the 10 minute mark, one of two events will occur on the blockchain, resulting either in contract formation (match and confirm), or transaction failure (in which case, the transaction would not be accepted, and the pre-bid coin locations remain unaltered).

In order for the transaction to confirm, two conditions must be met: first, there must be a match between the amount of the initiating bet and the amounts of the complementary bets taking the other side. Second, the official time that the block containing this transaction is first confirmed on the chain (encoded in UTC time) must be prior to the T-minus-10 minute mark for the sporting event.

In technical terms, “atomic pairing” is the synchronization of two conditions (the two sides of the betting contract) occurring at the same time.
and the bet is taken, the bet is an atomic transaction (meaning that the transactions happen at the same time or in the same block) This ensures that the bets that are taken they get accepted and processed in time. It also ensures that users do not have to pay fees on bets that are never matched.

The timeframe for a payout to take place will be a target time of 1 hour after the event outcome is resolved. Oracle Masternodes post data for all supported leagues every hour as long as Oracles are in agreement of the outcome the payout should take place no longer than 90 minutes after the event ends.

In the event of a tie, push, or the event not taking place, the Oracle Masternode network will resolve the and confirm and initiate the return of the wagered amount back to the bettors original wallet addresses minus the betting fee. This process can take up to 24 hours to ensure the Oracle Masternode network has time to achieve consensus.

7.6 Activating an Oracle Masternode

Activating an Oracle Masternode is the process by which an individual chooses to promote their node, engage in a 30 day contract of service and become a consensus agent. This contract ensures that owners have to maintain a level of service and agree to lock the collateralized coins in a simple smart contract that initiates a timed release.

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Oracle Masternode requirements:

- 25000 WGR collateralized over a 30 day service contract
- Uptime 99%+ (measured weekly)
- Retrieve and input sporting event outcomes data
- Public IP with a forced network port number
- Bandwidth to accommodate the total volume of API calls

7.7 Promotion queue

In order to balance opportunities to operate Oracle Masternodes against the efficiencies of the two-tier network and the need to have WGR tokens available for betting, the network will cap the total number of Oracle Masternodes operating on the network.

Once the network has reached its maximum designated Oracle count, all wallets that apply for promotion to Oracle Masternode status enter a queue awaiting an opening (either voluntary withdrawal or involuntary demotion of an acting node). Promotion is on a first come, first served basis, i.e., the nodes that have spent the longest time in the queue get promoted first.

Oracles that are promoted must submit and synchronize match data every hour. This allows for quick payouts of resolved events. When events cannot be resolved due to the match not being played or other extenuating circumstances, the bets are refunded after 48 hours without a resolution.

7.8 Demotion

Non-Participating or underperforming Oracle Masternodes can be demoted from (or promoted to) the network depending on a combination of several factors:

- Network connectivity uptime
- Less than 50% participation on submission in all leagues
- Results submission accuracy
- Non-renewal of 30 day collateral contract

7.9 Governance

Once the distributed network is established and stable, the original Wagerr development team will fully relinquish control of the github and distribute the role of governance to the network. The Wagerr network achieves decentralized governance through a voting system in which each Oracle Masternode holds the franchise. This second tier of the network

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extends the principles of proof of stake to the most heavily invested Oracle Masternodes which perform the essential functions of the sports betting blockchain.

Funds have been allocated for continuous investment of ongoing development to contribute growing value to the network and to fund adaptations to any unanticipated phenomena not accounted for in the original design. The Oracle intranet collectively has the power to vote on network rules, development targets, and the allocation of dedicated development funds.

7.9.1 Payout dispute

In the event that a user or node believes they did not receive a proper payout, there are measures users can take to signal and petition the Oracle Masternode network to request a review of the resolution to their bet. Signaling for a review is as simple as submitting a contract. Supermajority consensus (75%) of the Oracle Masternodes must be obtained to overturn or invalidate betting contracts.

7.9.2 Penalized nodes

If a node continues to submit match data that falls out of consensus after they have been demoted in the past, the Oracle network can vote to penalize the node of any of the fees collected since its promotion. The network recovers these coins via the collateralized coins via 90% supermajority vote in the terms of the smart contract.

7.9.3 Oracle Masternode voting

A decentralized voting mechanism within the Wagerr wallet allows network and protocol changes to be proposed. From there, the Oracle Masternodes as a whole vote on the proposal. Each change or modification passed with two thirds majority is deployed to the main network automatically.

Example: An Oracle operator would vote on a protocol or core change simply by using the command “masternode vote yay” or “masternode vote nay,” votes would then propagate across the network, be tallied, and the instructions would be followed by the network itself.

Operators have the option to abstain by simply not voting. Abstaining Oracle Masternodes are not counted in the voting tally.

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7.9.4 Potential network threats

The structure of the Wagerr network anticipates that some bad actors, given the opportunity, might attempt to feed bad sporting events outcome data to the network.

Consequences for bad actors: See 7.9.2 Penalized nodes.

The Oracle Masternode network requires multiple checks on contracts to safeguard against false winners.

The rigid language of the smart contract structure leaves no vulnerable surface for attack.

Supermajority (75%) vs. simple majority (51%)
Oracle Masternode operators have a deeply vested interest in the security and integrity of the blockchain, event results, core protocols, and coin code.

Events require 75% network consensus, ensuring that the posted data is highly reliable. Consider this 75% requirement in contrast with almost all digital currencies which require a simple majority (over 50%) to be considered “consensus.” Wagerr governance and security protocols are far more secure.

Major protocol changes require two thirds (66.67%) consensus among Oracle Masternodes. The ability to acquire this much of the network would be either cost prohibitive, or logistically impossible due to the anonymity of the system.

Furthermore, even if attackers attained 66.67% of the network, they would have the most to lose by attempting to manipulate the network in their favor. If they were to change the rules to produce unfair outcomes, their bad actions would drive the value of the Wagerr network and WGR token to zero. The more any Wagerr network participant owns, the more incentive they have to enhance network value — and the more disincentive they have to harm the network. Again, the transparency of open source code means that any hostile change would be flagged. The sustained buying pressure necessary to achieve disproportionate network control would drive up the price of WGR, requiring a huge investment, such than any attempt to abuse the system would result in catastrophic losses for the bad actor.

Wagerr eliminates the possibility of low cost network attacks by charging higher fees for activities that consume resources, but detract, rather than add, value to the network. For instance:

- The network restricts high volume/small value bets by requiring minimum bet amounts.
- The network also imposes increased fees for small value bets.

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7.10 Sports data Feeds

Wagerr is dependent on the Oracle masternodes to successfully report real match data correctly to allow for bets to be posted and resolved correctly. There are multiple ways the Oracle Masternodes can gather sports fee information. No matter where the source of information is coming from the requirement of the oracles is to format the data correctly to ensure the post can fall in consensus with the other Oracle Masternodes on the network.

- Sport betting API's (mostly paid services)
- Sport Site scrapes (espn,yahoo,etc)
- Manual entry

Sport betting API's are the easiest and most consistent way to ensure that each Oracle Masternode reports as accurately as possible and participates in reinforcing the network.

Sport site scrapes are the most complex way for Oracle Masternodes to collect data. They require the most work but also are the cheapest method. This requires a script to pull data off of news sites such as Yahoo, ESPN, and CBS Sports.

Manual entry allows the users to directly insert outcomes of unique events. If the operators watch the game or just want to input the day's data themselves they can do so manually through the RPC and virtual interface.

To ensure not all oracles are pulling data from the same source, Wagerr requires the oracle to report to the network its data source, and, if necessary, the network will force a limit on each source.

7.11 Network Add-ons & Enhancements

The Wagerr network will contain an ever expanding list of improvements and add-ons far into the future. The roadmap outlines 3 primary enhancements that are paramount to Wagerr's Success.

- Event Chat Addon
- Rematch Function/friend challenge
- Dynamic Odd Balancing
- Moneyline betting
- Season winner/champions bets
- Fantasy Sports Betting

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7.12 Scalability

Wagerr is a single service blockchain. The smart contracts and the entire network are designed to accommodate only a limited number of betting and transaction types. Application Specific Smart Contracts (ASSC) are a rigid class of contracts that allow Wagerr to know the exact structure of every contract that is proposed and initiated on the Wagerr blockchain. This allows all parties to have access to contracts that are proven to be safe, secure, and resolvable.

Wagerr also relies on the contracts to function as phased transactions. When the bets are made and initiated, the transaction created for contract resolution is already waiting for the result to be posted, then keying off of that result for the disposition. Once the Oracle Masternodes come to consensus on an unique event and post the outcome, the contracts can be completed and paid out in the same block. This allows the network to scale and process large amounts of bets at the same time without causing a delay in resolution.

IP and hardcoded port requirements ensure that every Oracle Masternode is being operated on a dedicated hardware server or virtual private server (VPS). In other words, Oracle Masternode operators are not able to run multiple nodes on a single server. These requirements ensure the second tier network is both as decentralized as possible, and that each Oracle Masternode server is adequately powered to handle the Wagerr network load at any scale.

7.13 Fee Structure

Network fees are imperative for the Wagerr network to succeed long term. Where the fees go and how they are distributed to the network depends on the types of transactions and protections in place.

Bet & General Network fees

- Head to Head betting 2% winning side
- Multi-User betting 4% winning side
- Peerless Direct chain betting 6% winning side
- Network transaction fee 0.0001
- Bet Minimum of below 1 Wagerr bet fees triple

The fees on the 1st layer are standard 0.0001 WGR to transfer WGR from wallet to wallet to prevent a DDoS attack of low cost.

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7.14 Supported Leagues

When Wagerr fully launches the teams and leagues that are supported are critical. The more leagues that are supported the larger the potential user base becomes. The larger

Sport Leagues supported at launch.

- Basketball
    - NBA, NCAA Men's, EuroLeague,
- Baseball
    - MLB, NCAA Baseball, World Series of Baseball
- Hockey
    - NHL, KHL, AHL
- AM Football
    - NFL, NCAAF
- Soccer
    - FIFA, UEFA, COFEDCUP, EPL, MLS, ELO, ELT, FACUP
- Rugby
    - NRL, RFL, EPSHIP, TRC, RWC
- Cricket
    - ICC, CWC, INTC
- Golf
    - PGA, ETOUR, RYDRCUP
- Tennis
    - ATP, DAVISC, ITF, GST
- MMA
    - UFC, BEL
- Boxing
    - International
- Olympics
    - Winter, Summer

Sport Leagues supported for Peerless Direct Chain betting

- Horse Racing
    - International
- Motor Sports
    - NASCAR, FORMULA-1, INDYCAR

Adding new leagues/teams and new supported match types can be done through voting and governance functions that allow Oracle Masternodes to make proposals to add new leagues, change names, and update bet options.

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8.0 Competitive Analysis

The digital currency space is quickly becoming saturated with projects that create new tokens and ecosystems. Wagerr stands out more than most of these projects due to the fact that the network is dedicated to a large single use function: Sports betting. The market for this single purpose is overwhelming and the demands that it puts on the network and chain are significant.

Scalability and security are therefore paramount. The only way to achieve this kind of scale is to be a single purpose blockchain — very good at one thing. For Wagerr to ensure that it can process and payout thousands of bets on thousands of events a day, Wagerr has to be efficient and powerful, and not overloaded with functions and features.

In this comparison chart you can see two projects that also use Ethereum technology — Gnosis, and Augur. Both of these projects differ dramatically from Wagerr in that they rely exclusively on complex peer to peer (P2P) prediction markets, whereas Wagerr offers simple and efficient P2P contracts while taking it to the next level with peerless Direct Chain betting.

Feature	Wagerr	Gnosis	Augur	PeerPlays
Decentralized Oracle	✓	✓	✓	✗
Lotto & Number Gambling	✗	✗	✗	✓
Non market based Gambling	✓	✗	✗	✓
Application ecosystem	✗	✓	✗	✓
Incentivized Oracle Masternode	✓	✗	✗	✗
ASSC smart contracts	✓	✗	✗	✗
Scalable	✓	✓	✗	✗
Value coupling	✓	✗	✗	✗
Partnerless Direct Chain Betting	✓	✗	✗	–
Deflationary Economy	✓	✗	✗	✗

The fundamental differences are as follows:

- Designed as a single industry solution
- Linking usage to Price (value coupling)
- A self correcting deflationary economy
- 2nd tier network properly incentivized
- Rigid smart contracts ensure effective scaling

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Wagerr accounts for the scaling issues by targeting only one industry and limiting what can be implemented on the blockchain. Combining that with the rigid contracts of ASSC, Wagerr can ensure that contracts are not open ended and protect users on all levels.

9.0 Developmental Roadmap

The Wagerr team has been hard at work since September of 2016. Large portions of the betting engine are complete as well as the ASSC contract system. The Oracle Masternode posting mechanisms for how they collect and post data is also near completion.

The development of Wagerr is critical to the project's future success. Even though Wagerr is an open source project and anyone can assist or help build it in the future, the launch team is committed to the long term vision of the project and will deliver on launch commitments.

- Late Q3 2017 -Testnet released. The Wagerr testnet deploys, allowing players to preview Head to Head bet matching and general wallet functions. Oracle Masternode owners can become familiar with their operation and test different configurations for best results.

- Q4 2017 - Head to Head Betting is deployed and the chain goes live. The blockchain mediates bets between two players taking opposite sides on upcoming sporting events. The fee for an executed contract is 2% of the payout. 1% goes to the processing Oracle and 1% gets burned.

- Q4 2017 - Event Chat Add-on. Every event will have its own chat room that will allow those who are betting on the event to communicate with one another. Users can get to know who they are betting against and talk about the event live while it happens.

- Q1 2018 - Multi User Betting. To make it easier to find and fulfill more bets on low volume events, the system allows multiple players to be paired against a single bettor. This ensures that large bets do not require an exact match to forge a contract. The fee for this transaction is 4 percent. 2% of the fee goes to the Oracle processing the transaction and 2% gets burned.

- Late Q1 2018 - Challenge/ Rematch Add-on. The Challenge and Rematch system allows the player to message previous betting partners and issue challenges or ask for rematches. This expands on the concept of an address book by allowing users to see, track, and rematch past players and easily invite friends to use Wagerr to bet against one another.

- Q2 2018 - Peerless Direct Chain Betting. Wagerr gives the player the option to forgo looking for a match and bet directly against the chain, which takes the other side of

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the bet automatically. The fee for this transaction is 6 percent. 3% of the fee goes to the Oracle that processes the request and 3% is automatically burned.

- Q2 2018 - Dynamic Odds Balancing. For Direct on Chain betting, Wagerr incentivizes betting on the other side when one side gets overweighted. This feature allows the Wagerr chain to ensure that it exposes the network to the smallest amount of payout liability.

10.0 ICO Details

The Wagerr ICO starts June 1st 2017 and runs until June 25th. The primary goals for the ICO are to introduce Wagerr to the world in a way that promotes fair, effective, and global distribution, cultivating rhizomatic decentralization.

10.1 ICO Bonus Structure

Wagerr's ICO bonuses are structured very differently than the average offerings. Wagerr designed the bonus structure to incentivize participants that buy in to continue promoting the offering even after they buy. Wagerr achieves this through having the bonuses be dependent on the later rounds success.

With up to 20 rounds of sales, a progressive bonus system rewards early adopters while encouraging word of mouth marketing and the complete sale of each round. Participants in each round win a 1% bonus at the completion of subsequent rounds. For example, Round 1 participants win a total 4% bonus at the completion of Round 5.. Participants in Rounds 6-10 also have a chance to win Golden Tickets. 150,000 coins are allocated for this special random bonus.

Example 1

The ICO fully sells out, round one participants would receive a 9% bonus and round two participants would receive a 8% bonus and so on.
Example 2

The ICO only sells out 5 rounds and ends, participants in round one would receive a bonus of 4%, participants in round two would receive a 3% bonus and so on.

10.2 ICO Milestones

Funding milestones secure the development of major features on the Wagerr road map. With the completion of Round 1, Wagerr pledges to issue tokens, and build a Head to Head

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bet matching system. Completion of Round 3 funds Multi User Betting; completion of Round 5 secures Direct On Chain Betting.

10.3 ICO Contingencies

If Round 1 is not fully funded by the end of the ICO, the ICO will extend or restart. If Round 10 successfully completes on or before June 14th 2017, the ICO will expand to maximize distribution and capitalization for development. The ICO will extend by no more than 10 Rounds. The hard cap for maximum token issuance is 200 million tokens.

10.4 ICO Distribution

The amount of coins that are created for the Wagerr chain are all dependent on how many coins sell during the ICO. Because we do not know the total that will be sold, the ICO operates based off of percentages to ensure fairness for all. The ICO percentages are as follows.

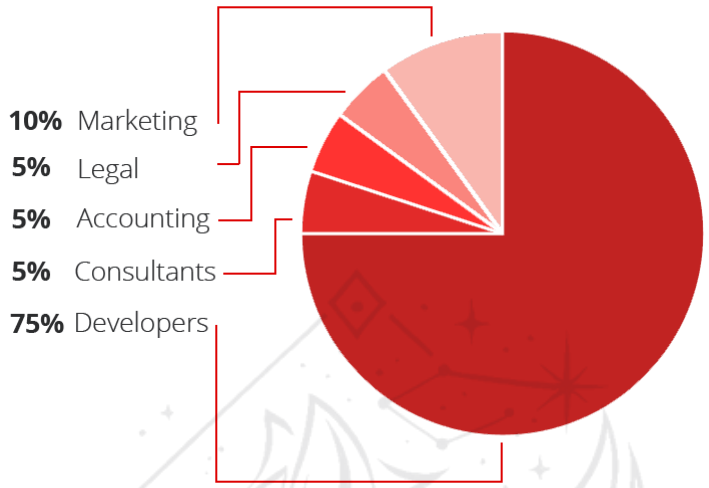
- 85% of Available coins are for sale open to the public
- 4% of Available coins are reserved for bonuses
- 8% of Available coins are escrowed for the Developers
- 3% of Available coins are allocated for marketing

11.0 ICO Fund Allocation & Future Development

- Development - Fund continued development of Wagerr, which is vital to the ability to continue adding new leagues, maintain API advancement, integrate more accurate results and deeper source pools, and implement new betting types. This is the largest reserve of ICO funds, ensuring that talent can be attracted.
- Marketing - Continue advertising to encourage adoption and usage of Wagerr, develop positive public relations, pursue partnerships with entities that advance toward these goals, and promote the advantages of decentralized sports betting.
- Legal - Assist with navigating regulations where needed. The main focus will be on advocacy and lobbying to promote open access worldwide.
- Consulting - Hire industry experts from a wide spectrum of sectors including: Gaming, Business Strategy, Blockchain technology, and Marketing and Communications to advise Wagerr development, messaging, and overall goals.
- Accounting - Ensure responsible management, allow for resources to improve transparency and accountability, improve overall sustainability, and work with Legal and Consulting to advance the project.

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The funds that Wagerr raises during the crowdsale for the WGR token will be used according to the chart shown below. Wagerr will be open and transparent about all fund movements and sales to fund any portion of the plan.



This diagram shows the allocation of funds that are raised via selling WGR in the ICO.

11.1 Developer portion of ICO coins

8% of the coins minted for the ICO will be allocated to the Wagerr developers. 75% of these coins will be escrowed for the first year and if moved all movements will be shared and communicated fairly and openly. The remaining coins will be released and split among the team members and advisors.

11.2 Development Fees

Wagerr was designed to be completely decentralized, and to ensure continuous development in this tradition, developer fees were built into every single bet. The coins earned off of these fees will go into a network address that the Oracle Masternodes control via voting. By having the Oracle Masternode network control these fees ensures that the Wagerr network will always be able to grow and expand far into the future.

11.3 Future Development

Wagerr is and always will be a fully decentralized open source project. The Oracle Masternodes governance will allow the network to vote on proposed changes and improvements. All the development funds collected by its portion of the betting fees (2% of all the betting fees) are controlled by the Oracle Masternode network. This reality ensures that Wagerr will always be able to reward ongoing development for generations to come.

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12.0 Conclusion

Wagerr is more than just a coin. It's a technology poised to disrupt the entire sports betting industry — and a revolution in the design of digital currency economies.

Wagerr pairs cutting edge blockchain technology with a new take on an industry desperately in need of decentralization.

Traditional sports betting requires participants to entrust valuable assets to untrustworthy individuals and organizations constrained by unpredictable regulations, often in jurisdictions that criminalize the core practice. The risks of sports betting are absurdly compounded. The pure fun of sports betting lies in trying to predict an uncertain future. But legacy betting models multiply what bettors put at risk, regardless of the outcome of the sporting event — their assets, their freedom, their lives are all in jeopardy from crooked bookies, law enforcement, and predatory loan sharks. Centralized systems are excessively risky, excessively costly, unpredictable, and unfair to bettors, and often even unfair to licensed participants in the regulated betting industry. When power is centralized in governments, corporate or private books, the bettor is so dependent on the reliability of unreliable elements that sports betting is actually a bit crazy. It doesn't have to be that way.

Wagerr offers not only a decentralized sports betting blockchain, but also a sustainable economy that produces, perhaps for the first time, a digital asset in a decentralized economy with the full functions of a currency. Wagerr is:

- a ledger,
- a medium of exchange, and
- a decentralized store of value.

A match made in blockchain heaven.
Putting these two achievements together — disrupting the sports betting industry and revolutionizing digital currency — what we get is a decentralized sports betting network that dramatically improves the conditions of sports betting. And as long as a modest fraction of the trillion dollar sports betting industry adopts the Wagerr network for betting, the value of the central token, WGR, will systematically be sustained in a relatively stable growth trajectory with dynamically moderated volatility. Sports betting and the blockchain were meant to be.

Wagerr is the future of sports betting. The future of sports betting belongs on the blockchain.

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