WEMIX3.0 WHITEPAPER

v.1.15

WEMIX

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I. INTRODUCTION

WEMIX began this great journey with a solid vision to create a blockchain gaming platform servicing various games with their own tokenomics on the blockchain network. This was the beginning of WEMIX, the very cornerstone of the blockchain gaming era.

In August of 2021, the flagship title MIR4 was published on WEMIX platform to more than 170 countries across the globe as the world's first commercially successful MMORPG that implemented a blockchain technology in the form of tokenomics. This triggered an unprecedented paradigm shift in the gaming industry that bolstered the adoption of blockchain technology onto existing games. This is what we refer to as WEMIX2.0; the second phase in the lineage of WEMIX, leading the industry by pioneering a phenomenon known as P&E(Play-and-Earn).

The next evolution of WEMIX was to become more than a single platform. WEMIX3.0 is built as an experience-based, platform-driven & service-oriented mega-ecosystem designed to expand the experience cycle of the global community through easy-to-understand and comprehensible services devised through its native platforms. Facilitating the perfect environment for developers to build various projects and provide innovative solutions to the community.

II. OVERVIEW

1. WEMIX3.0, A WHOLE NEW APPROACH

The WEMIX3.0 Mainnet, built on an EVM-compatible architecture and secured by the SPoA(Stake based Proof of Authority) consensus mechanism, prioritizes both security and scalability.

- EVM-compatible Public Chain
- Stake-based Proof of Authority(SPoA) Consensus
- 40 Highly Qualified Node Council Partners(Authorities)
- Max 4,000 TPS Throughput
- PMR(Permanent Minting Reward) with ‘block reward halving’ mechanism

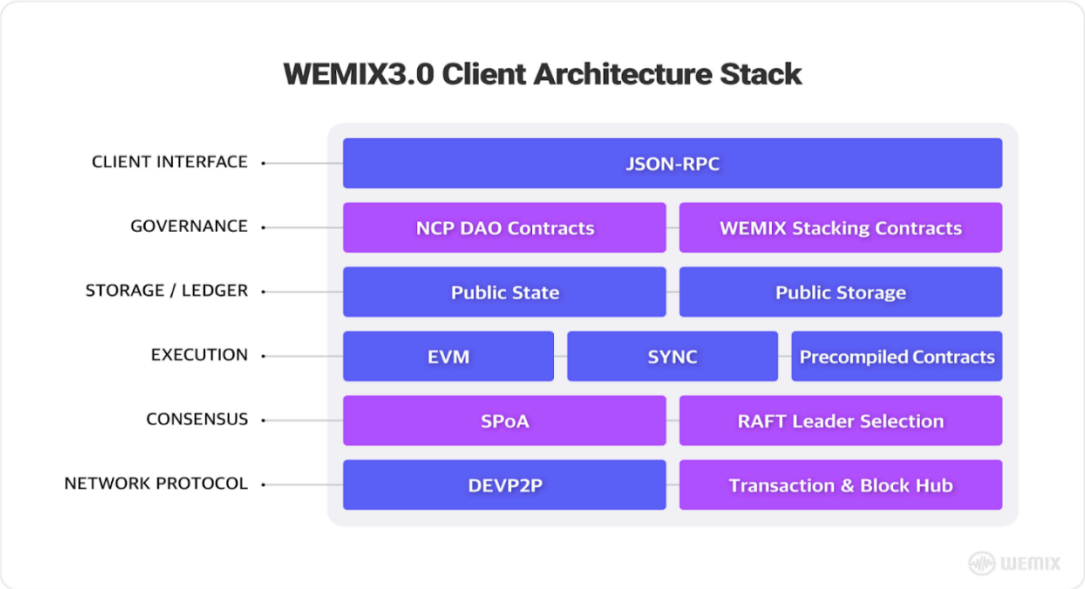
III. WEMIX3.0 DESIGN

1. DESIGN

(1) ARCHITECTURE

1) WEMIX3.0 CLIENT NETWORK

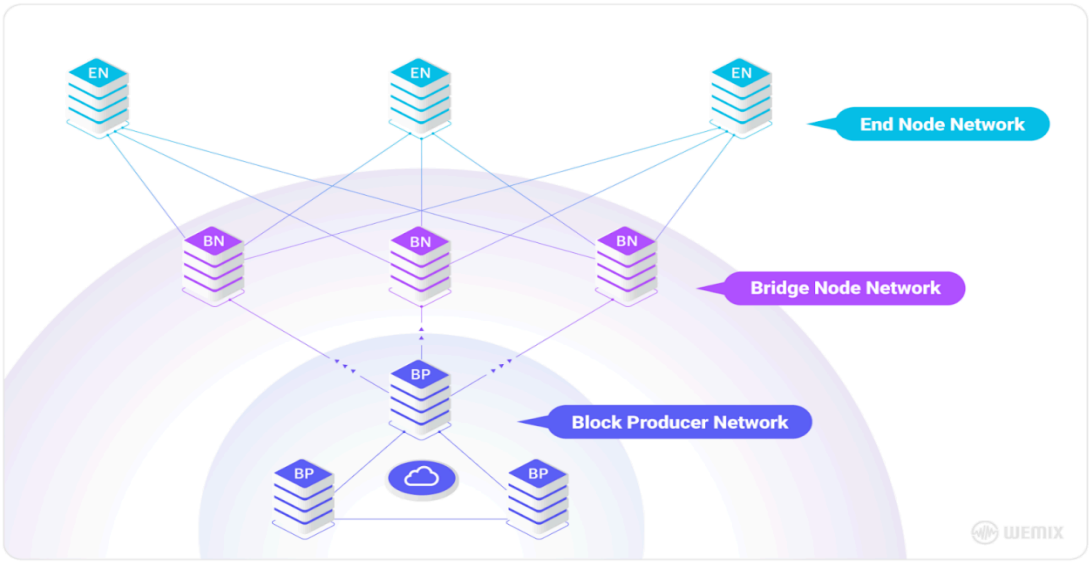
WEMIX Blockchain Client is an implementation of WEMIX3.0 that keeps network data safe and accurate by validating every transaction in each block. In Phase 1, WEMIX3.0 was created by forking Go-ethereum Version 1.10.16 based on the Go language, and has applied the London Hard Fork. In Phase 2, WEMIX3.0 is reflected up to Version 1.10.18 and the codes will continue to be updated.



WEMIX3.0 Client has a layering system as shown in the figure above and achieved high-performance real-time performance by modifying Governance, Consensus, and Network Protocol elements in go-Ethereum.

2) WEMIX3.0 NETWORK STRUCTURE

The WEMIX blockchain network consists of three types of logical networks: BP, BN, and EN. These networks make up the Block Producer Network (BPN), Bridge Node Network (BNN), and End Node Network (ENN), respectively. The figure below shows the overall topology of the WEMIX Mainnet. An End Node Network (ENN) can be viewed as a perimeter network directly connected to a Bridge Node Network (BNN).



(A) Block Producer Network(BPN)

Since BPN applies RAFT(Reliable and Fault Tolerant) on the network, each BP must strictly meet the hardware and network resource requirements to perform the RAFT consensus mechanism with adequate performance. To support high-performance real-time service, BP's technical operations are all handled by WEMIX.

(B) Bridge Node Network(BNN)

The BNN primarily has the function of physically protecting the BPN from direct external attacks. Its primary function is to verify the valid transaction propagated from the End Node Network(ENN) and send it to the consensus node. Conversely, it is to confirm the block reproduced from the BPN and propagate it to the ENN. Also, some of the Bridge Nodes that exist in BNN provide the functions of Boot Nodes. All new nodes except Block Producer Nodes must download all block data generated so far from neighboring nodes connected to the P2P network in order to participate in the blockchain network. Boot Node is a service node always online and provides a Bootstrapping service that connects these new nodes

participating in the network to the P2P network by unconditionally performing P2P Hand Shaking. WEMIX conducts the corresponding operation of the network.

(C) End Node Network(ENN)

The outermost subnetwork, ENN, is an endpoint of the WEMIX network and consists of blockchain End Nodes that directly handle user services. Anyone can install and operate blockchain nodes.

(2) CONSENSUS

The SPoA consensus mechanism(algorithm) is a method of reaching consensus among trustless parties. Blockchain technology is used to determine whether a block is valid. A blockchain network's performance depends on the chosen consensus mechanism's performance and significantly impacts the usability of blockchain applications. Here, we will look at how WEMIX implemented a high-performance consensus process.

1) RAFT(RELIABLE AND FAULT TOLERANT) ALGORITHM

RAFT is a consensus method that ensures consistency of datastores on all nodes in the cluster by the selected leader. Nodes participating in RAFT are either a Leader or a Follower; anyone can become a Candidate during a leader selection. A Leader must create and share data that needs to be synchronized with followers. A Leader announces the leader's existence by periodically sending a heartbeat message to all followers. Each follower randomly selects a timeout value for the leader's heartbeat, and if a heartbeat is received during the timeout period, the timeout will be reset. On the other hand, if they do not receive a heartbeat after the timeout, the follower changes its status to a candidate and participates in the leader selection. Conflicts occur if multiple nodes simultaneously participate in a leader selection, therefore the timeout is set according to random logic for backoff.

2) WEMIX3.0 CONSENSUS MECHANISM: SPoA

The WEMIX Blockchain is a public blockchain that realizes the high-performance real-time service. To reach this goal, block generation is stacked based on the voting of the authorized members in advance. Therefore, the basic consensus algorithm follows PoA. However, WEMIX exacts to stake more than a specific amount to give a substantial penalty for the malfunction of the elected authority on-chain. This WEMIX blockchain consensus method is defined as SPoA.

3) AUTHORITY

Authority members participating in the consensus algorithm of the WEMIX Blockchain implies a consortium that performs the same role as the miner of the consensus mechanism PoW, such as Bitcoin. WEMIX Blockchain, the process of being included in or deleted from the Authority, is determined by voting of the existing authority members. The traits of authority members or activities of the authority members are as follows:

- Clear identity
- Enter into legally effective contract with WEMIX Foundation offline
- Disclosure of basic personal information
- Staked WEMIX sent to the system registry contract

After staking is confirmed, any of the existing authority members can propose an Authority member proposal to the governance contract. If more than 50% of the current authority members approve, they will be registered as a new Authority member.

When the Authority receives the transactions created by users, it verifies the transaction details and temporarily stores the transactions that have passed the verification in the mempool. When an Authority member is elected as a miner, it creates a block header including hash information of the previous block. This process is done automatically by software, and there is no need for the authority member to monitor the network status continuously. However, the authority member should be responsible for managing the firewall and private key of the account so that the computer generating the block is not used maliciously.

Voting, which can be processed in the On-chain Governance contract, is currently supported in the form of dApp by voting for or against and will support various votes in the future. In Phase 1, voting weight is proportional to the amount of staked WEMIX but, in Phase 2, the same voting weight is applied regardless of the amount of staked WEMIX. If malicious behavior is detected, the party can be forcibly disqualified from the Authority's voting, and the staked WEMIX is confiscated and may not receive block generation compensation.

The reason for the staking and reward system is to create a justification for all participating authority members to operate under the agreed protocol and to maintain the soundness of the WEMIX blockchain network autonomously.

4) MINER SELECTION

Taking Bitcoin's PoW as an example, a miner that generates a block header hash that satisfies the difficulty calculated by the protocol can generate and propagate blocks. Since there is no independent authority for block creation, blocks are created by mutual competition. For this reason, resources are inevitably wasted for block generation competition. Work that satisfies the difficulty condition must be proven, so the block generation time is given a physical constraint (BTC 10 min avg. ETH/15 sec). As a result, PoW has a scalability trilemma, and the introduction of PoS or sharding has been

proposed and researched as a realistic solution to solve this problem. However, so far, no public blockchain has operated as PoS in a fully distributed manner.

The WEMIX Blockchain determined that providing the desired service in the public domain was impossible using methods such as PoW or PoS. Initially, consensus such as DPoS, PoA, and PBFT were considered methods, but the WEMIX Blockchain devised SPoA. This new Consortium consensus mechanism borrowed the advantages of DPoS and PoA as the most suitable consensus algorithm. SPoA is introducing the concept of staking to prevent inappropriate actions of the authority members who have formed the Authority and participated through transparent identity information and legal contracts.

5) REWARD DISTRIBUTION

Existing consensus algorithms often concentrate block rewards and transaction fees within the block producer, the entity responsible for block creation. This presents a challenge in non-competitive systems like Delegated Proof-of-Stake (DPoS) and Proof-of-Authority (PoA), where fair distribution of block creation authority is paramount. Frequent leader changes to achieve equal opportunity can hinder performance due to increased communication overhead for Block Producers (BPs) processing transactions.

To address these challenges, WEMIX3.0 introduces a Stake-based Proof-of-Authority (SPoA) consensus mechanism. This mechanism distributes rewards proportionally to the amount of WEMIX staked by each authority member, regardless of who creates the block. By doing so, it incentivizes continuous participation from all BPs while maintaining network security. Block producers must include transparent reward distribution details within the block header. Any violation of the predetermined rules, documented within the governance contract, will prevent other authorities from propagating the block.

To achieve fair and sustainable reward distribution, WEMIX3.0 employs a dual structure for tokenomics, focusing on both block rewards and performance shares. Initially, rewards are distributed through block minting, ensuring that all participating members receive a portion of the block rewards. Over time, the system will transition towards an increasing allocation of performance shares tied directly to transaction fees. This shift is guided by a block minting halving mechanism that gradually reduces the minting rate until the maximum supply of 590 million WEMIX tokens is reached, at which point block minting will cease entirely.

Number of halving	0	1	2	3	···	16
Minting	1	0.5	0.25	0.125	···	0.000015
Transaction fees	α	α	α	α	···	α
Block reward	1+α	0.5+α	0.25+α	0.125+α	···	0.000015+α

As block minting rewards decrease, the reduction will be offset by an increasing share of transaction fees allocated as performance shares. This strategic shift ensures a balanced and fair distribution of rewards among all participants, promoting long-term network growth and sustainability. The meticulously crafted dual reward structure serves to fulfill WEMIX3.0's aspirations of becoming a leading commercial entity while offering a rational and sustainable reward system. WEMIX3.0 may implement a policy to burn part or all of transaction fees.

All accounts that receive rewards (one per member) are registered by voting, except for the governance coin base account, which distributes the first system contracts to the governance contract. The authority member generating the block updates the balance state of the accounts, and the calculation result is reflected in the root hash value of Patricia Trie.

6) BLOCK GENERATION

The governance contract determines the interval between block creation of the WEMIX Blockchain. BP has the logic of generating blocks at a set time (1 sec. of the initial set value) to ensure activity and block finality, regardless of transactions in the mempool. The block creation interval is the value of a variable that can be changed by permission voting.

7) BLOCK VERIFICATION

When a block generated by a miner is propagated to a network through p2p, each full node (including an authority member) receiving the block must self-verify and determine its validity. Authority nodes verify whether the block is generated by a member selected as the miner, the reward is customarily distributed, and transaction details are reflected in the state of the entire system. After the verification, the authority nodes spread the blocks to the neighboring nodes.

The non-authority full node that receives this propagation checks whether the signature of the member included in the header is correct and verifies the transaction details. When it is determined that the transaction recorded in the block is generated according to the rule, it stores the block on the local disk and propagates it to neighboring nodes.

When verifying the propagated block, there are two things that all full nodes must verify first before proceeding with the above process: Miner_Limit and Max_Consecutive_Blocks.

Miner_Limit is defined as follows. When a specific member is determined as a Miner in RAFT, an epoch that can create a block is given, and the purpose of this epoch is to prevent it from being given continuously. All blocks are valid only when the following Miner_Limit is satisfied.

Miner_Limit = floor(SIGNER_COUNT / 2) + 1 (Number of consecutive epochs out of which a miner may only occupy one)

Max_Consecutive_Blocks is the maximum number of consecutive blocks the same Miner can create in an epoch. This value is a variable introduced to limit the height of a diverged block when a hacker attacks the network. In WEMIX3.0, Max_Consecutive_Blocks is 1.

2. WEMIX3.0 GOVERNANCE

1) ON-CHAIN GOVERNANCE

(A) 40 WONDERS

40 Node Council Partners(NCPs) will become the foundation of a new Web3 life built on WEMIX3.0 by contributing to the development and growth of the mega-ecosystem while providing impenetrable security on our new layer 1 Mainnet. We call these NCPs as WONDERS.

These WONDERS will be the authority members chosen to represent the interests of the WEMIX community as a whole via governance.

(B) STAKING

WEMIX staking is one of the prerequisites to becoming an authority member, otherwise known as Node Council Partners(NCPs) or 40 Wonders. The Staking method is possible by sending WEMIX while calling a predefined function to the governance contract known as the system level. Staking can only be done through Governance dApp, and the minimum amount required for Staking may be changed by voting process. In Phase 2, voting power has the same weight regardless of the amount of staked WEMIX which is locked. The result of voting determines whether the WEMIX Staking will be locked or unlocked. Once locked, WEMIX can be unlocked and retrieved by voting after the default locking period has passed. If your authority as an Authority is forfeited due to the detection of malicious acts, your locked WEMIX will be forfeited to the Eco Fund. In Phase 1, all participating authorities had the minimum/maximum amount of 1,500,000 WEMIX for staking, so all authorities had the same voting power. In Phase 2, the minimum WEMIX staking required for an NCP remains at 1,500,000 WEMIX, but the maximum constraint of the staking is removed. In other words, each NCP can increase its reward by making additional WEMIX staking.

(C) VOTING

The WEMIX Blockchain(governance contract) stores system variables that can be changed by voting and have functions related to the participation, withdrawal, and replacement of authority members.

In Phase 1, each Authority had voting power in proportion to the amount of Staking, but in Phase 2, all Authority have the same voting power regardless of the amount of Staking. A proposal can be passed only if more than 50% of the votes are in favor of the proposal during the voting duration(1-7 days).

Only the Authority members can apply for the following voting. Voting duration can be determined within the minimum/maximum value range at the time of application and is designated as the minimum value when not specified. Voting starts and ends when a member votes for the first time in the application list and runs for the maximum voting duration. Even within the voting duration, if more than 50% of opinions are raised, voting ends, and follow-up work is carried out. Only one vote is conducted at a time; As a result, if voting is already underway, new voting cannot be initiated.

The voting types supported by the current version are as follows. Voting results are reflected based on block number, and voting results completed in block number ‘n’ are valid from block number ‘n+1’.

- Authority member(add): When the vote for adding an authority member passes, the staking amount of the member is locked and included in the authority member.
- Authority member(withdrawal): Unless there are exceptional circumstances, as the vote for processing the authority member’s withdrawal(penalty) ends, staked WEMIX held in the governance contract address is automatically unlocked. In Phase 2, both NCP staked WEMIX and user-delegated WEMIX, along with any accrued rewards, can be claimed or withdrawn by the respective parties. The remaining WEMIX may later be transferred to the Eco Fund address, if applicable.
- Authority member replacement(address change): When the vote to replace an existing authority member or change node information passes, if it is the same address, the node information is changed; if it is a different address, the new member's staking amount is locked, and the existing member's staking amount is unlocked. However, if you change your own node information (including voting address) in your staking account, the corresponding information will be changed immediately without voting.
- Governance Contract Address(change): When the vote to change the address passes, the existing Governance Contract is upgraded
- Voting Duration(Minimum): The default is one day for the minimum voting period value. When passed, the minimum voting period is changed.
- Voting Duration(Maximum): The default is seven days for the maximum voting period value. When passed, the maximum voting period is changed.
- Authority member staking(Minimum value): When passed, the minimum number of staking of WEMIX value changes when participating as a member.
- Authority member staking(Maximum value): When passed, the maximum number of staking of WEMIX vaule changes when participating as a member.
- Block generation time: The default is 1 second for block creation time. When passed, the block creation time is changed.
- Block reward distribution method: Voting to determine the transaction fee and the distribution rate of the newly created WEMIX. In Phase 2, the default is 50% for block producers, 25% for ecosystem, and 25% for maintenance. When passed, The distribution rate, ecosystem, and maintenance distribution address are changed.
- MaxPriorityFeePerGas: Voting to handle changes in MaxPriorityFeePerGas. Once passed, the MaxPriorityFeePerGas is changed.
- Gas Limit & baseFee: Voting to handle changes in Gas Limit, range of baseFee and the increase rate of baseFee.

2) OFF-CHAIN GOVERNANCE

If the foundation needs a hard fork, such as a "change of protocol", and explicit agreement of the council is required, the NCP agreement process is carried out using an Off-Chain service such as https://snapshot.org/. Although the service is Off-Chain governance, the foundation can change the blockchain protocol based on the agreement of the explicit council because it receives more than half of the council's signature and performs voting.

IV. MEGA ECOSYSTEM

1. DISTINCT CHARACTERISTICS OF WEMIX3.0

WEMIX Blockchain Ecosystem (the "Ecosystem")" is an experience-based, platform-driven, and service-oriented mega-ecosystem enabling various DApps to be built and operated within the scope of WEMIX3.0's design (the "Mainnet") and three native platforms (the "Platforms").

(1) EXPERIENCE-BASED

The foundation of WEMIX3.0 and its mega-ecosystem is based on accumulation of experiences gained while providing blockchain game services to millions of gamers within the WEMIX gaming community. Key components of the WEMIX3.0 mega-ecosystem stems from understanding and acknowledging the needs and wants of our community members, focused on expanding their experience cycle through on-chain services and solutions.

(2) PLATFORM-DRIVEN

WEMIX3.0 features three native platforms designed to individually function as its own thematic ecosystem while collectively creating a synergetic interconnected mega-ecosystem that will offer a complete on-chain life experience to all community members within WEMIX3.0.

These platforms are: ⓐWEMIX PLAY(P&E Games), ⓑWEMIX Stake(Staking), and ⓒNILE(DAO, NFT, Life). The native platforms will provide necessary solutions and services for other DApps and projects to become onboarded with ease and effectively facilitated within the WEMIX ecosystem.

(3) SERVICE-ORIENTED

One of the fundamentals of the WEMIX3.0 ecosystem is the service-oriented nature of the WEMIX blockchain. Through a variety of DApps and services, WEMIX3.0 aims to accommodate members of the ecosystem. By providing intuitive, convenient, and easy Web3 services, WEMIX3.0 achieves the mass adoption of blockchain technology which is quite often considered as unapproachable by the public.

V. WEMIX3.0 TOKENOMICS

1. MINTING

WEMIX, the native coin of the WEMIX mega-ecosystem, serves as the primary medium of exchange and payment within the WEMIX3.0 mainnet. With the introduction of the 'Brioche' hard fork, WEMIX tokenomics have undergone significant transformations, creating a sustainable and value-driven ecosystem. The hard fork permanently reduced and capped the maximum supply at 590 million WEMIX to preserve the token's value and stability.

The 'block minting halving' mechanism, introduced by the Brioche hard fork, is designed to gradually reduce the minting rate of WEMIX per block called 'Permanent Minting Reward (PMR)' over time. Initially, WEMIX was minted at a rate of 1 WEMIX per block, amounting to 86,400 WEMIX per day or 31,536,000 WEMIX per year. The first halving reduced the annual minting amount to about 15 million WEMIX. This systematic reduction continues in 63,115,200-block cycles, progressively decreasing the number of tokens minted and fostering a more stable and advanced tokenomic structure.

In addition to the reduced maximum supply and the new minting mechanism, the allocation of WEMIX has been updated to support the ecosystem's growth and development. The foundation's holdings are now categorized for various essential functions, with a significant portion of the remaining tokens burned. This strategic move effectively manages the token supply, removes the perception of a dominance structure, and fosters a more inclusive ecosystem, promoting greater participation and ownership.

WEMIX is based on the ERC-20 standard (Ethereum Request for Comment-20), ensuring transferability and compatibility via bridging to other EVM chains. This foundational technology underpins the robust and versatile nature of the WEMIX ecosystem.

(1) EIP-1559 & GAS PRICING

EIP-1559 is a dynamic transaction pricing mechanism applied in Ethereum London Hard-fork. This mechanism resolves network congestion algorithmically by burning a part of the block's transaction fee and adjusting the maximum gas usage of a block up and down by a 1/1024 scale.

WEMIX3.0 uses SPoA, a consensus algorithm capable of high-capacity, high-speed processing. It can support up to 3.5 times the block size of Ethereum(default block gas limit: 105,000,000) and 1/12 times the block generation time of Ethereum(default time: 1 second). In a way, unlike Ethereum, it may be a reasonable option for WEMIX3.0 to use a fixed gas price policy determined by the Governance.

However, fixing the gas price in the policy causes a problem. It may also affect the gas price for controlling DDoS attacks on the network according to the price volatility of the native coin WEMIX.

Of course, it is possible to change the fixed gas price by on-chain Governance, but it cannot be dealt with promptly and involves the risk of impairing the safety of the network.

Therefore, in WEMIX3.0, we applied the EIP1559 protocol with the following conditions to protect the network from DDoS attacks and excessive transactions generated by the bots.

In WEMIX3.0, the BaseFee and the CurrentGasTarget are calculated per block by the following equations:

< BaseFee and CurrentGasTarget >

$$BaseFee_{h+1} = BaseFee_h(1+\frac{baseFeeMaxChangeRate}{100}(\frac{GasUsed_h - GasTarget}{GasTarget}))$$

The baseFeeMaxChangeRate(default: 55%) in the above formula is fixed but can be adjusted through the Governance.

Also, to prevent the Base Fee from becoming infinite and all WEMIX being used as transaction fees, the maximum value of BaseFee, maxBaseFee(default: 50,000Gwei), has been set. This value can also be adjusted through Governance.

< Range of Base Fee >

$$1wei \leq BaseFee_n \leq maxBaseFee$$

In the formula below, gasTargetPercentage(default: 30%) and PreviousGasLimit(default: 105,000,000) are subject to change by governance voting but are always the same unless changed by Governance.

< Gas Target >

$$CurrentGasTarget = PreviousGasLimit \times (\frac{gasTargetPercentage}{100})$$

WEMIX3.0 users can generate transactions using the fixed gas price maxPriorityFeePerGas(default: 100Gwei) value and the variable gas price BaseFee(default: 1Gwei) value recorded in the latest block. This algorithm is compatible with all wallets that support EIP1559.

(2) DISTRIBUTION PLAN

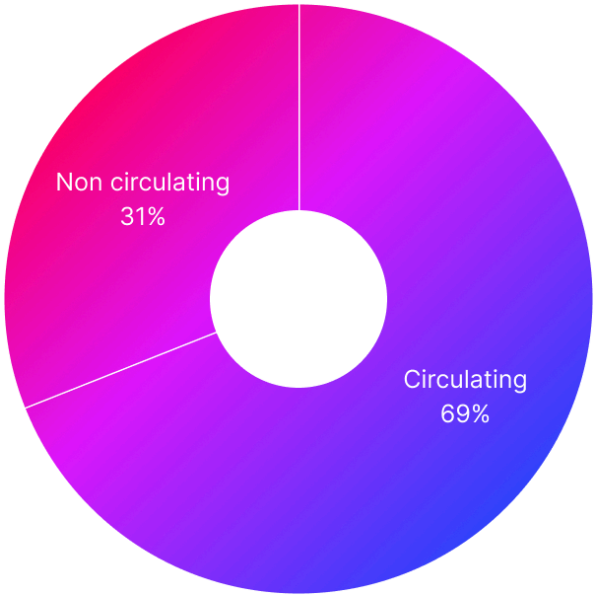
The Brioche hard fork capped the maximum supply at 590 million WEMIX, and the Foundation has burned a significant amount totaling over 400 million WEMIX, from the Foundation’s Reserve. The remaining amount from the Reserve, approximately 14 million WEMIX, will be automatically

included in the circulating supply and used for platform development in the future. The Foundation also established the Ecosystem Development Fund with the minimum amount necessary for essential growth. The Permanent Minting Reward (PMR) will cease once the maximum supply is reached, and the allocated funds will be distributed accordingly. The ecosystem is transitioning from the era of distribution to the era of collective growth, reaffirming the Foundation's holdings as a shared resource for ecosystem development:

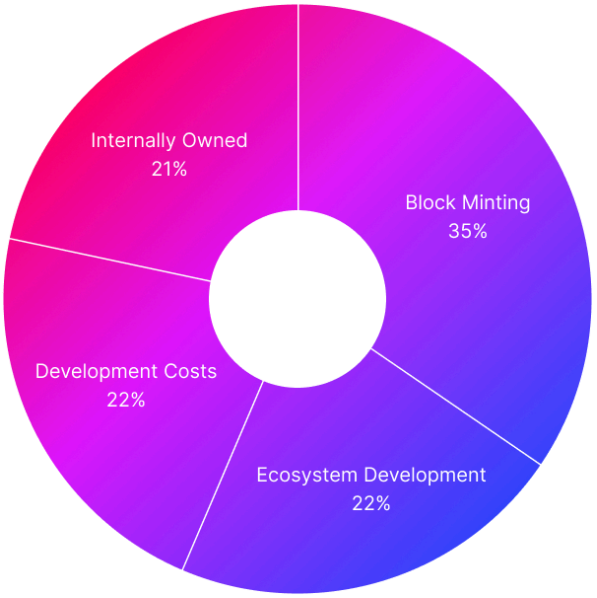
- **Ecosystem Development Fund:** A total of 50 million WEMIX is allocated to the Ecosystem Development Fund. 40% of this fund will be dedicated to Community Promotions and Marketing initiatives aimed at enhancing the WEMIX ecosystem. The remaining 60% will be invested in partnerships and ventures with outstanding companies and teams contributing to the ecosystem. The Ecosystem Development Fund will be utilized over a 5-year period. Any remaining balance or proceeds from investments will be reinvested to ensure ongoing operation and value enhancement for the community.
- **Development Costs:** An additional 50 million WEMIX is allocated to cover Development Costs, including development expenses and team rewards over a 5-year period.
- **Reserve:** The remaining approximately 47 million WEMIX will be gradually distributed over a 5-year period.

Additionally, due to users who did not unstake from the WEMIX Classic GP staking service on the Klaytn chain, approximately 2 million WEMIX are held in the Staking Box. These WEMIX will be transferred to a non-circulating Staking Box wallet and will not be available for circulation.

CIRCULATION



NON CIRCULATING ALLOCATION



(3) PERMANENT MINTING REWARD

WEMIX is minted per block and used as a reward as below.

Minting Reward Distribution	Phase 1	Phase 2	Phase 3
NCPs	40%	50%	to be determined
WEMIX stakers	10%	0%	to be determined
Ecosystem	25%	25%	to be determined
Maintenance	25%	25%	to be determined

2. WEMIX DOLLAR

(1) WEMIX$

WEMIX$ is a secure stablecoin issued on the Mainnet with 100% collateralized USDC reserved in the Treasury. The native stablecoin protocol is designed to constantly maintain 1:1 volume peg to the reserved USDC in the Treasury by minting and burning WEMIX$ according to the Treasury volume. In doing so, the price stability of WEMIX$ is achieved and allows expansion and contraction of the total WEMIX$ volume based on the state of the ecosystem.
The following are the key components which function as a means of maintaining the value of WEMIX$.

1. Treasury: Securely stores USDC as collateral against the total supply of WEMIX$.
2. MINT: Component in which WEMIX$ is minted and burned accessible only through AMA.
3. DIOS: Stability protocol designed to function as an equilibrium that maintains the price balance between WEMIX$ and USDC through TIP/TOP.
4. Authorized Mint Access(AMA): AMA is an automated access authority granted solely to the DIOS protocol to mint/burn WEMIX$ to match the total supply of the reserved USDC in the Treasury.
5. Master Liquidity Pool (MLP): Main liquidity pool for WEMIX$/USDC.
6. Blockade: Stability mechanism to tentatively(for a block) halt MLP access if WEMIX$ and USDC price deviation increases.

(2) DIOS PROTOCOL

DIOS(Dollar In and Out Stabilizer) protocol prevents depegging of WEMIX$ using dual(TIP and TOP) protocols.

TIP(Treasury In Protocol)
Demand of WEMIX$ will grow along with the growth of the ecosystem and depegging will likely to happen with WEMIX$ value rising in USDC/WEMIX$ Master Liquidity Pool. In this case, DIOS will activate TIP and MINT contract will trade WEMIX$ with USDC in MLP. Here, stabilization arbitrage will occur since a single WEMIX$ value will be higher than a single USDC. USDCs that have been traded will be transferred to the Treasury, from where additional WEMIX$ equivalent to the occurred arbitrage will be issued and transmitted to DIOS Reward Pool.

TOP(Treasury Out Protocol)
Should, for some reason or for a vicious attack, the demand for WEMIX$ decreases due to downscaling of the ecosystem, USDC/WEMIX$ MLP will witness depegging of WEMIX$ value dropping. When TOP is activated, Treasury will emit USDC and will trade the USDC with WEMIX$ in MLP. Here, because a single WEMIX$ value will be lower than a single USDC, 1 USDC will be able to obtain more than 1 worth of WEMIX$. This much of WEMIX$ will be sent to MINT and burnt while the left WEMIX$ will be transferred to DIOS Reward Pool as an arbitrage. Therefore no

matter what, total supply of WEMIX$ and total volume of USDC in the Treasury will remain equal.

TIP & TOP exchange rate
As for TIP & TOP, when the gap between MLP exchange rate exceeds a certain percentage, smart contract will automatically attune the exchange rate so that it would retain 1. TIP & TOP will be facilitated in a way that it does not generate loss considering extra fees and slippage. Certain variables may be changed in accordance with market situations.

DIOS Reward Pool is a contract where arbitrages occurred through DIOS are stored in WEMIX$. It will be distributed to stakers in DIOS Staking, which is one of the Staking Services.

Blockade
Blockade is a stability mechanism solely applied in MLP, that controls the market volatility of WEMIX$. If the exchange rate of USDC-WEMIX$ in MLP fluctuates more than 5%, blockade will be triggered and the following steps will be carried out:

1. Only DIOS is authorized to access MLP
2. DIOS will proceed with Automated Market Operation (AMO) until the fluctuating exchange rate of the pool returns to its original value of 1. After the stabilization of the exchange rate, the pool will resume permission-less trading for all the participants.

Reward Pool
Accrued seigniorage (WEMIX$) as a result of the DIOS protocol operation is stored in the reward pool. Participants of DIOS Staking can claim their rewards in WEMIX$ upon unstaking. The stakers will be given points which can be converted into multiplier points. With multiplier points, participants can expand their rewards by compounding the staking amount with Multiplier Points(MP). Since more points are given to the early stakers, the system incentivizes and encourages early participation.

VI. ROADMAP

Our ultimate goal is decentralized technology and democratized governance. To achieve this, we will introduce a multi-phase democratized governance where the community is empowered to impact the 40 authority node governance structure through a delegated staking module.

This is the fundamental principle of our governance roadmap, a means to illustrate true democratization through adoption of meritocracy based on the ecosystem contribution.

Phase 01: DAO-centric governance through WONDERS consisting of 40 NCPs

Node Council Partners, also known as WONDERS, are 40 selected members who operate secured validating nodes for the WEMIX3.0 Mainnet.

40 WONDERS are constituted by Technology Sponsors that contribute to the secure operation and innovation of WEMIX3.0, and Ecosystem Sponsors that contribute to the establishment of the experience cycle created through the on-chain/off-chain ecosystem via WEMIX3.0.

Each NCP must stake 1.5M WEMIX, and the PMR (Permanent Minting Reward) is distributed automatically to NCP (40%), Stakers (10%), Eco fund (25%) and Maintenance (25%).

WEMIX Grand Staking will become available to the community which will yield the 10% Staking Reward allocated through the PMR. However, staking participants for the WEMIX Grand Staking may not withdraw from the staking pool prior to the implementation of Phase 2.

Phase 02: Transition into a free, unlimited competitive staking with 40 NCPs as a basic governance system

Upon Phase 2 launch, 1.5M fixed WEMIX Staking per validator node, is abolished and shifted to competitive staking to encourage active ecosystem contributions from NCPs.

In Phase2, The 10% PMR paid to WEMIX Grand Staking participants is abolished. As the NCP reward increases from 40% to 50%, the initial PMR distribution ratio changes.

In doing so, WEMIX holders may then choose to delegate their stake volume to one of the 40 validator nodes, effectively increasing the chosen node's total staked shares above the median; generating increased reward rate for the node and community members that are participating in the delegation.

Phase 03: Complete and final installation of a democratized governance through decentralized technology of WEMIX3.0 supporting open and voluntary node participation

Validator node operation by 40 selected authority partners known as WONDERS, will be discontinued and the governance module will shift into an open & autonomous node participation system where anyone can become the validators of WEMIX3.0 based on staking volume.

Based on the total WEMIX staking volume per node, the top 40 nodes will be periodically selected to validate transactions, transforming from an SPoA model into a PoS model.

A slashing policy will be implemented to enforce fair operation of validator nodes, especially in the event of willful collusion against the interests of the ecosystem but also possible result of a misconfiguration of the node. Slashing will penalize the node by removing a portion of its existing stake and is irreversible.

Democratized governance is completed at this stage, and the Mainnet will be upgraded to WEMIX4.0. The schedule is yet to be determined.