XBEAR NETWORK

WHITEPAPER

THE FIRST LAYER-2 BLOCKCHAIN WITH A DUAL-CHAIN PARADIGM

XBEAR NETWORK EXTENDS BEYOND A COMMON BLOCKCHAIN AS XBEAR'S COMMUNITY MEMBERS CAN PARTICIPATE IN NODE OPERATIONS TO EARN REWARDS. XBEAR NETWORK HAS FEATURES THAT SUPPORT A DIVERSE CURRENCY ECOSYSTEM, INCLUDING GLOBAL REFERENCE CURRENCIES. OUR INITIAL IMPLEMENTATION FOCUSES ON A MOBILE-CENTRIC MONETIZATION SYSTEM.

xbear.network

Words from Founder

Cryptocurrencies offer faster and cheaper payment options than traditional fiat currencies, with transparent and secure transactions accessible globally via smartphones. They also allow for programmable financial functions without intermediaries. However, challenges to widespread adoption exist, including price volatility due to supply and demand dynamics and the complexity of generating and using public/private key pairs for transactions. These user experience issues can hinder adoption rates significantly.

To thrive, a cryptographic social payments system requires simplicity in transactions and stability in currency value.

The xBear Network protocol addresses both these challenges effectively. It introduces address-based encryption, allowing users to utilize friends' phone numbers as public keys, simplifying payment processes akin to sending a text message. Additionally, to ensure currency stability, it implements an asset supported by elastic supply rules and a variable-value reserve.

Furthermore, xBear Network establishes a governance framework facilitating the creation of various stable-value currencies, bolstering stability with each successful addition.

Abstract

Two significant obstacles hindering the widespread adoption of cryptocurrencies for everyday transactions are the complexities associated with ease-of-use and the inherent volatility in purchasing power.

Recognizing these challenges, we proudly present the xBear Network, a pioneering protocol meticulously designed to tackle these issues head-on. The xBear Network implements a revolutionary address-based encryption scheme, simplifying the transaction process to an unprecedented degree.

Moreover, xBear Network introduces a groundbreaking stable-value asset, addressing the critical need for stability in cryptocurrency values. This innovative approach sets the stage for the creation of a vibrant monetary ecosystem, encompassing a wide array of currencies, from globally recognized reference currencies to locally and regionally tailored stable-value currencies, all supported by a social dividend mechanism.

Introduction

Built on the multichain, xBear Network is a decentralized platform that will enable a family of crypto-collateralized and seigniorage style stable value assets. This document analyzes the behavior of xBear Network stable value assets over a set of simulated scenarios.

Moreover, the xBear Network introduces a mobile block reward mechanism, broadening user participation and accessibility to block rewards. In our inaugural application, we unveil a cutting-edge social payments system specifically tailored for mobile phones, demonstrating the immense potential and versatility of the xBear Network protocol in reshaping the landscape of digital transactions.

Together, these components form a robust foundation for an effective social payments protocol.

What is xBear Network?

xBear Network is the first Layer-2 Blockchain with a Dual-Chain paradigm on Multichain

Built on the Multichain, xBear Network is a Layer-2 blockchain dedicated to use the power of smartphone to earn.

xBear Network goes beyond a conventional blockchain by allowing community members to engage in node operations for rewards and participate in voting for future governance proposals.

xBear Network operates independently yet is interconnected through a network of hyperbridges, ensuring the fastest and most reliable interoperability with zero transaction fees.

TECHNOLOGY

xBear Network stands at the vanguard of technological innovation through its seamless integration of Federated Learning, Edge Computing, and NPUs from mobile devices.

From there, xBear Network enables collaborative model training across multiple devices without data sharing, vital for privacy-sensitive fields. This computing paradigm brings computation and data storage closer to users, reducing latency and improving responsiveness. Utilizing specialized hardware, like NPUs from mobile devices, xBear Network accelerates machine learning tasks, significantly enhancing performance over traditional CPUs and GPUs.

Making a safe place for everyone to build their blockchain-based solutions and conduct transactions securely and efficiently. Everyone can ease of use through lightweight identity and making a stabilizing value for xBear Network

Architecture

xBear Network employs a cutting-edge dual-chain system:

- A Proof-of-Work (PoW) AI algorithm ensuring security and decentralization
- A Proof-of-Authority (PoA) consensus algorithm ensuring swift and efficient transactions.

xBear Network Dual Chain

POW Chain:

- Security, Safety & Robustness
- Decentralized & Sustainable

POA Chain:

- Fast, Efficient & Scalability
- Environmentally Friendly

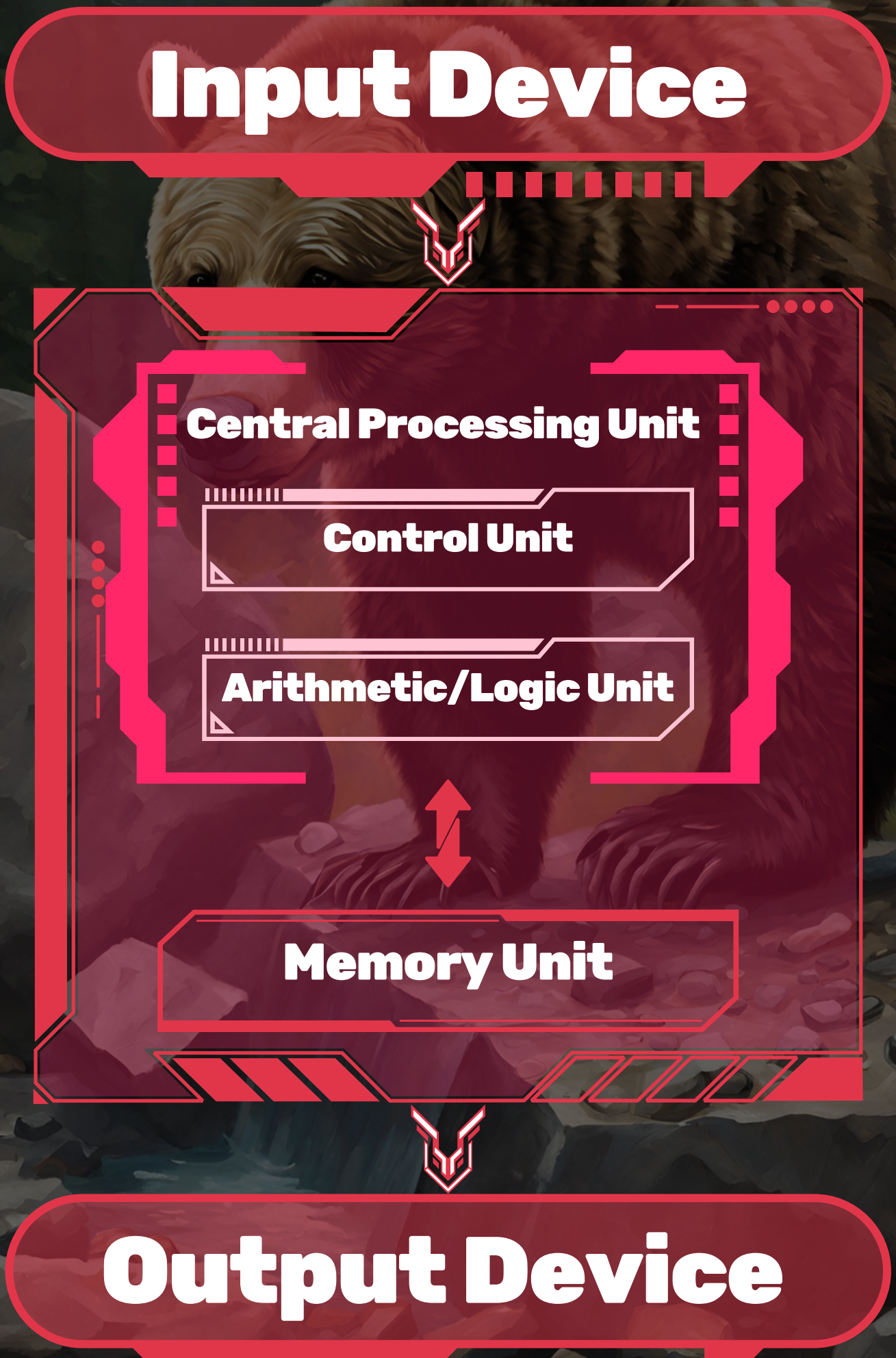
Infrastructure for AI
Infrastructure for the digital economic

Architecture

The PoW AI chain harnesses a user's NPU strength on their phone for tasks like image processing, verification, AI model training, and video processing. Users earn native tokens as rewards for validating AI tasks, encouraging network participation. As users contribute, they receive native tokens, incentivizing network engagement. Increased user participation enhances the security, decentralization, and potency of the xBear Network.

Integrating memory and processing units, the NPU excels over CPUs and GPUs in handling AI applications. Unlike CPUs and GPUs, which follow von Neumann architecture with separate memory and processing units, NPUs streamline data processing. CPUs/GPUs must repeatedly read data from memory, compute, and rewrite results, incurring performance constraints from data transfer costs between components.

Architecture



Architecture

The integration of memory and processing units within a single chip characterizes the seamless architecture of an NPU, or Neural Processing Unit, representing a remarkable fusion of hardware elements essential for efficient neural network computations. Synaptic weights, the neural network's equivalent of biological nerve synapses, find their abode directly within the chip, eliminating the need for off-chip storage and retrieval during operations. This design innovation allows the NPU to access these crucial synaptic weights instantaneously, bypassing the latency inherent in external memory retrieval mechanisms. Consequently, the NPU operates with heightened efficiency, minimizing processing delays and significantly enhancing the overall speed and responsiveness of artificial neural network computations, thus underscoring its pivotal role in accelerating the advancement of AI technologies.

Architecture

The PoA consensus algorithm operates on the secondary chain to swiftly validate transactions, ensuring their efficiency. A specific set of authorized nodes assumes the duty of validating transactions and upholding the chain's integrity, drawing upon their reputation, expertise, and stake within the network. This setup ensures a streamlined validation process, enhancing overall efficiency.

Seamless chain interoperability enables effortless asset transfer, fostering innovation. PoA's focus on efficient validation marks a milestone in blockchain, meeting evolving needs while ensuring security.

By utilizing a dual-chain approach, the xBear Network is able to provide the benefits of both PoW and PoA consensus algorithms, resulting in a more secure, scalable, and energy-efficient blockchain architecture.

Consensus

Proof of Authority (PoA) operates on the basis of a predefined group of validators entrusted with the task of validating and generating new blocks within the blockchain. Unlike the Proof of Work (PoW) and Proof of Stake (PoS) models, PoA dispenses with the need for participants to engage in solving intricate cryptographic puzzles or committing substantial amounts of cryptocurrency. Instead, it relies on a select cohort of "authorities" – nodes that hold explicit authorization to produce new blocks and uphold the integrity of the blockchain.

For a block to attain validity within the PoA framework, it necessitates majority approval from these designated authorities. This approval serves as the gateway for the block to be permanently enshrined in the blockchain's immutable ledger. Essentially, PoA networks achieve consensus through the collective validation of trusted authorities.

Consensus

Within consortium settings, PoA networks exhibit distinct advantages over PoW counterparts. They boast heightened security measures, effectively guarding against potential threats posed by malicious actors or compromised authorities seeking to disrupt network operations or tamper with transactions. Moreover, PoA networks alleviate the computational burdens associated with PoW-based systems, as they eschew the resource-intensive mining processes integral to maintaining security in such setups.

The performance of PoA networks is further enhanced by the utilization of the Aura consensus mechanism, which streamlines transaction acceptance and reduces latency. Additionally, the predictability inherent in PoA implementations ensures that blocks are consistently generated at predetermined intervals, thereby facilitating smoother network operation and transaction throughput.

Consensus

PoA implementations have demonstrated versatility across various environments, spanning from sophisticated enterprise-grade solutions to open, publicly accessible networks.

The Görli test network, in particular, serves as a notable illustration of a PoA-based system that has gained widespread adoption within the blockchain ecosystem. These networks offer a unique blend of security, efficiency, and predictability, making them an increasingly attractive option for a wide range of blockchain applications and use cases. As the demand for reliable, scalable, and secure blockchain solutions continues to grow, PoA networks are poised to play a pivotal role in meeting these diverse needs effectively.

Consensus


AUTHORITY LIST
ROUND/ EPOCH
LEADER ID/ NODE IDS
SELECTED
NO
VERIFIER
YES
TRANSACTIONS
PROPOSER
BLOCK

Consensus

- **Authority List:** Within a Proof of Authority (PoA) network, a set number of validators is designated to generate new blocks and verify transactions. These validators are usually recognized entities, commonly individuals or organizations esteemed for their reliability within the network. The selection procedure might be supervised by a central entity or executed collaboratively by a consortium of stakeholders with a shared interest in upholding the network's integrity and security.

- **Round/Epoch:** A "round" typically denotes a specific phase within the consensus process. In a round, validators or nodes alternate in proposing and validating transactions or blocks. When each validator has had its opportunity, and consensus is achieved, a new round commences.

Consensus

- **Block Proposal:** Validators take turns in a sequential rotation to propose new blocks. When it's a validator's turn, identified as the leader, they gather a batch of pending transactions and compile them into a new block.

- **Transaction Validation:** The validator scrutinizes the validity of each transaction within the proposed block. This entails confirming that the sender possesses the required permissions and ensuring that the transaction complies with the network's regulations and smart contract logic.

- **Consensus and Block Approval:** After confirming transaction validity, the validator broadcasts the block. Consensus swiftly follows when a supermajority of validators agree on its validity, aided by the limited validator count.

Consensus

- **Block Finality:** Upon reaching consensus, the block attains finality and becomes part of the blockchain. Finality signifies the block's immutability, preventing any reversals or alterations. This swift finality stands as a prominent advantage of PoA, mitigating the likelihood of forks and ensuring rapid transaction confirmations.

- **Validator Rotation:** Validators' roles may rotate periodically to uphold decentralization and thwart the concentration of power. This rotation facilitates the distribution of responsibilities for block creation and validation among a wider array of participants.

- **Rewards and Penalties:** Validators receive rewards for participation or penalties for misconduct, ensuring network security and integrity.

Consensus

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Consensus

There are two main types of validator sets:

- **Comprehensive set of validators:** A sorted list of validators, organized by their respective weights, who have been selected to engage in the validation procedure.

- **Prospective validators:** A list of addresses meeting criteria undergoes a review for potential inclusion as validators, as shown in the following illustration.

The engine integrates with the RelaySet contract, forwarding calls to an internal validator set contract and enabling relayed contract upgrades. It includes an initiateChange function for the relayed contract to trigger a change event within the relay. The owner of the validator set retains authority over set management, including validator additions or removals.

What are Layers?

In the context of cryptocurrencies and blockchain technology, "layers" refer to different levels or protocols that build on top of each other to provide a stack of technologies, each serving a unique purpose within the ecosystem. This layered architecture allows for scalability, flexibility, and efficiency in processing transactions and executing smart contracts.

- **Layer 0**

Layer 0 is the foundational network layer. It consists of the underlying infrastructure or protocols that other blockchain networks can be built upon. This includes hardware (like servers and miners), networking protocols, and consensus mechanisms that enable blockchain connectivity and interoperability. Layer 0 solutions aim to improve the scalability and interoperability of blockchains through technologies like sharding or sidechains.

What are Layers?

- **Layer 1**

Layer 1 is the foundational level of blockchain networks, such as Bitcoin and Ethereum, with built-in consensus mechanisms (e.g., Proof of Work, Proof of Stake). It forms the core protocol for processing transactions and running smart contracts. Enhancements in Layer 1 focus on boosting the blockchain's scalability, security, and decentralization.

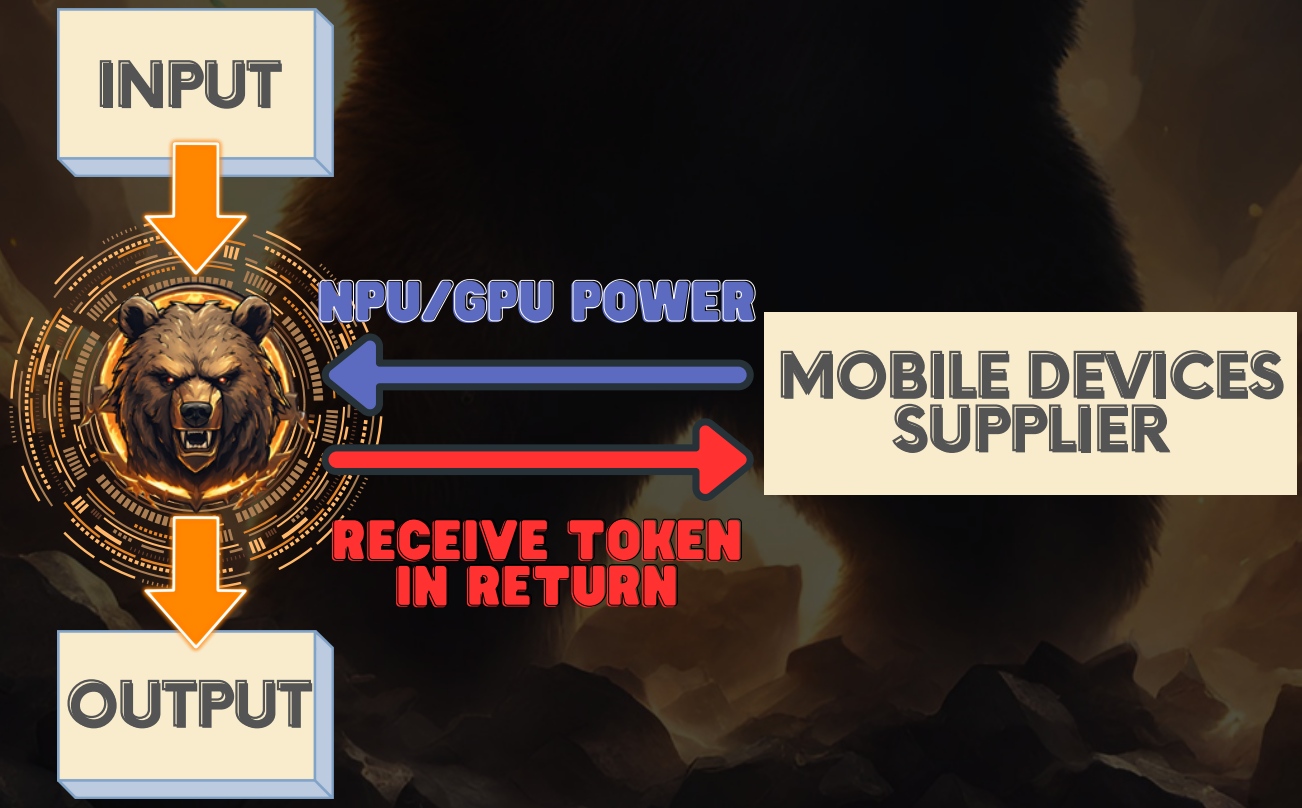
- **Layer 2**

Layer 2 operates atop Layer 1, aiming to overcome its scalability and speed constraints by processing transactions off-chain. Solutions like Bitcoin's Lightning Network and Ethereum's rollups and state channels enable quicker, cost-effective transactions while maintaining the security of the primary blockchain.

Boosting User Experience with Smartphone NPUs

xBear Network adopts an AI-Train to Earn approach, enabling economical use of distributed AI computing power, notably the Neural Processing Units (NPUs) in smartphones and personal computers of users.

By leasing out NPU capacity for AI model training, users generate passive earnings. Concurrently, businesses requiring AI training benefit from these computational resources at a fraction of the cost associated with dedicated server investments.



Boosting User Experience with Smartphone NPUs

This approach utilizes the unused processing power of billions of mobile devices, offering an affordable solution for AI computing. It alleviates the economic strain on businesses in need of AI training, marking a departure from conventional practices.

With over 6.7 billion smartphones worldwide, about half lie dormant at any moment. These devices, equipped with potent AI chips, are rarely used to their full capacity. By tapping into this enormous reserve of idle computational power, the Train to Earn model can transform it into a significant source of passive income for users.

For xBear Network, this scenario presents a prime chance to enable the efficient sharing and use of excess AI resources on personal devices, reducing costs for businesses requiring AI capabilities and connecting unused potential with real-world AI market needs.

Advantages of PoW/PoA as a Layer 2

Integrating Proof of Work (PoW) and Proof of Authority (PoA) within Layer 2 leverages their unique strengths, significantly enhancing blockchain functionality. This blend combines PoW's security through computational efforts, seen in Bitcoin, with PoA's efficient, authority-based validation, marking a significant evolution in blockchain capabilities through strategic Layer 2 incorporation.

This approach greatly enhances scalability and transaction capacity without compromising speed, strengthens security beyond the blockchain's base layer, and improves efficiency, making blockchain more usable and accessible. By merging PoW's decentralized trust with PoA's rapid validation in Layer 2, this integration not only enriches the foundational blockchain but also significantly expands its application potential, promising to transform the blockchain landscape.

Advantages of PoW in Layer 2

- **Security Enhancement:** PoW's extensive computational work requirement for validating transactions and blocks makes it inherently secure against fraud and attacks. Integrating PoW into Layer 2 can bolster the security of transactions processed off-chain before they are finalized on the main chain.

- **Decentralization:** By requiring proof of computational work, PoW can contribute to maintaining decentralization in Layer 2 solutions, preventing any single entity from gaining control over the network.

- **Trust Minimization:** Leveraging PoW in Layer 2 can reduce reliance on trust, as transactions can be verified through computational work, making it more challenging for malicious actors to manipulate the system.

Advantages of PoA in Layer 2

- **Efficiency and Speed:** PoA ensures faster validations with fewer validators than PoW's computational method, boosting Layer 2's throughput and speed, ideal for rapid transactions.

- **Energy Conservation:** Unlike PoW, PoA does not require significant energy consumption for transaction validation, making Layer 2 solutions more sustainable and environmentally friendly.

- **Scalability:** A limited validator set in PoA enhances transaction capacity and scalability on Layer 2, avoiding PoW's mining delays.

- **Cost-Effectiveness:** Operating costs for Layer 2 networks utilizing PoA are lower due to reduced computational requirements. This can make Layer 2 transactions more economical for users and developers alike.

Combined Advantages in Layer 2

When PoW and PoA mechanisms are creatively combined in a Layer 2 context, they can complement each other's strengths, offering a balanced solution that enhances security and decentralization (through PoW) while also ensuring high efficiency, scalability, and lower costs (via PoA). Such a hybrid approach could lead to innovative Layer 2 solutions that address the limitations of Layer 1 blockchains more effectively, providing a versatile infrastructure for various applications, from microtransactions to complex decentralized applications (dApps).

However, the successful implementation of PoW and PoA in a Layer 2 context requires careful design to mitigate the inherent trade-offs, such as the energy consumption of PoW and the centralization risk of PoA. The unique combination could pave the way for new blockchain scalability solutions, offering an optimized blend of security, performance, and cost-efficiency.

Tokenomics

Token Name: xBear Network

Symbol: XBEAR

Blockchain: Binance Smart Chain

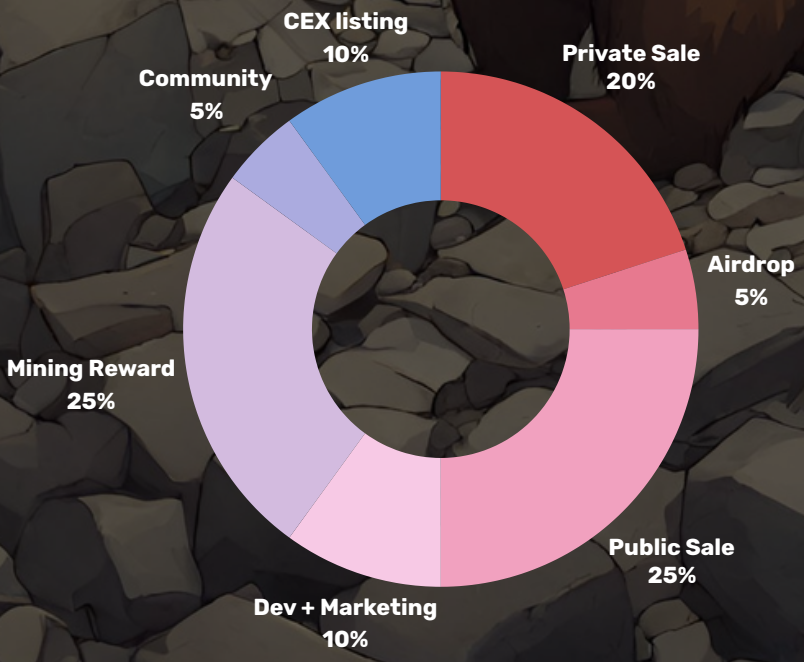
Contract: 0xa5541fD58df790d41A8D8960451Da62FD1BA400B

Token Type: Presale, Airdrop, Rewards for run Nodes

Total Supply: 100,000,000 XBEAR

***Note: This token will be transferred to the mainnet at a 1:1 ratio**

TOTAL SUPPLY	100 000 000
PRIVATED SALE	20 000 000
AIRDROP	5 000 000
PUBLIC SALE	25 000 000
DEV + MARKETING	10 000 000
MINING REWARD	25 000 000
COMMUNITY	5 000 000
CEX LISTING	10 000 000



$XBEAR Token

On the innovative xBear Network platform, individuals are given the unique opportunity to enlist as service providers, effectively putting to use the untapped computational capabilities of their personal smartphones. By participating in this way, they become integral to the network's operational processes. To maintain a high standard of contribution and to ensure that the network remains efficient and reliable, the platform is set to introduce a sophisticated evaluation and credibility rating system. This system will meticulously assess the quality and reliability of the services provided by each participant, thereby safeguarding the platform's integrity and the value it delivers to all users. In return for their valuable contributions, these individual service providers will be compensated with service fees, which are disbursed in the form of XBEAR tokens, the currency of testnet platform.

$XBEAR Token

This innovative compensation model not only rewards participants for their active involvement but also offers them flexibility in how they choose to manage their earnings. Participants have the option to convert their earned XBEAR tokens into XBE tokens, the platform's native digital currency, without facing any penalties for doing so.

1 $XBEAR = 1 $XBE

Alternatively, they may choose to hold onto their XBEAR tokens, a strategy that could potentially enhance their standing and credibility within the network. Accumulating XBEAR tokens not only signifies a provider's commitment and reliability but also could afford them greater influence and benefits on the xBear Network platform, fostering a mutually beneficial ecosystem where contributions are recognized and rewarded.

Referral Rewards Program

Get rewarded for spreading the word about the xBear Network! We've launched an exciting referral rewards program to thank you for inviting your friends to join our growing community. Here's how it works:

Invite & Earn: For every friend you successfully introduce to the xBear Network, both of you will receive a reward based on the current tier level.

The xBear Network's referral rewards program is designed as a heartfelt thank you for spreading the word about our platform. It's an encouragement for you to share the unique benefits of xBear Network, contributing to the growth of a more robust and dynamic ecosystem. By inviting friends, you're not just earning rewards; you're also playing a crucial role in enriching our community.

Mechanism Rewards

USER (N): The number of people on each tier

REF (R): The number of tokens the promoter receives for each referral

REF' (R'): The number of tokens for referrered

RATE (T): The number of tokens mined per hour

TIER	USERS (N)	REF (R)	REF' (R')	RATE (T)
1	≤ 1 000	150	50	50
2	≤ 4 000	120	40	40
3	≤ 8 000	30	30	30
4	≤ 12 000	20	20	20
5	≤ 25 000	15	15	15
6	≤ 50 000	10	10	10
7	≤ 80 000	5	5	5
8	≤ 200 000	2	2	2
9	> 200 000	1	1	1

xBear Network Voyage Campaign

The xBear Network Voyage is an initiative that invites community members to deeply engage with and comprehend the workings of the xBear Network. By participating, members not only contribute to our ecosystem's growth but also help in spreading the word about our network to potential new users.

The xBear Network Voyage utilizes the app to assign tasks and quests to its members. Each completed quest, campaign, or action rewards participants with $XBEAR tokens.

Discover how the xBear Network plans to address the challenges of attracting millions of members. The team behind xBear Network is confident that the minimal entry requirements for the xBear Network testnet and ecosystem will enhance the experience of testing, exploring, and discovering the xBear Network, making it both enjoyable and informative.

Roadmap

PHASE 01: Explore Blockchain Uses and Create A Detailed Plan

In the initial phase, xBear Network prioritizes foundational development. Recruit key team members and outline whitepaper. Build Ecosystem, refinement and test the ecosystem for security, scalability, and functionality.

PHASE 02: Release Testnet and Optimization

In Phase 2, xBear Network advances its platform by prioritizing user experience enhancements on testnet, optimizing scalability, and fostering cross-chain compatibility. Strategic partnerships and starting IDO, market expansion further solidify xBear Network's position in the decentralized ecosystem.

Roadmap

PHASE 03: Community Engagement and Growth

In this phase, Xbear Network prioritizes community engagement, fostering growth through events and direct interactions. Collect feedbacks about the platform from early partners and users. Strategic partnerships amplify xBear Network's visibility and user base.

PHASE 04: Release xBear Network Mainnet

Start Airdrop campaigns to attract more users. Transparent investor relations, regular updates, and platform development and ecosystem expansion, ensuring sustainable growth and confidence.

Roadmap

PHASE 05: Global Expansion and Adoption

xBear Network drives global expansion by entering new markets and fostering local partnerships. Integration with major blockchain platforms ensures broad compatibility, expanding xBear Network's reach and adoption potential worldwide.

PHASE 06: Continued Innovation and Partnerships

xBear Network drives continuous research and development, exploring cutting-edge technologies. Strategic partnerships and acquisitions enhance product offerings, while ecosystem support and persistent marketing efforts fuel sustained growth and visibility.

XBEAR NETWORK

WHITEPAPER

THANK YOU FOR WATCHING

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