AI BLOCK

TECHNICAL WHITE PAPER

The world's simplified blockchain ecosystem
for building advanced intelligent applications

AIB Community
https://www.aib.one

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Abstract

AIB is a UXTO-based dual value crypto asset with high potential growth. AIB offers something for everyone: direct ratio token generation incentives for investors, a focused user-friendly ecosystem for token creators and a flexible community driven developer stack. With three years of development, AIB's time tested robust public blockchain makes it easy to take part in the tokenized economy.

Features

Tokens

Tokens are programmable assets that exist in the form of electronic data. With blockchain technology, tokens can be decentralized, trustful, traceable, highly transparent, and free of intermediaries. On the AIB blockchain, users are able to register, trade, and circulate multiple types of token base on AIB. Proving the connection between token and economy values is possible through private keys.

Dual values

Tokens are build on the public blockchain with special protocol with dual values and enclosure cycle for the new build token to build up its own ecosystem. However , the value backup the whole public chain by reuse, and slowly deflating from to whole system to retain the value for individual tokenized economy.

Dual digital values in one UXTO system: Base value and Token value. Base value can be recorded in the UXTO legge. Token value are recorded on top of UXTO scripting protocol to issue limited , slowly deflating, unchangeable, provable, swappable, tradable tokens, expirable

Private Key

Private key refers to the identity information of individuals, organizations, and other entities that exist in electronic form.In the context of AIB is a secret number that allows aibs to be spent. Every AIB wallet contains one or more private keys, which are saved in the wallet file. The private keys are mathematically related to all AIB addresses generated for the wallet. Because the private key is the "ticket" that allows someone to spend bitcoins, it is important that these are kept secure.

AuxPow

AIB still believe proof of work is the most stable to support the blockchain to work fairness. By using Multi-AuxPow merge mining to use less energy to hash computation and everyone could participate the blockchain maintaining. It also separate with token value and mining rewards. By slowly deflating every token eco to finally End of Life of a token and Rebord a new one instead of it.

Application and Ecosystem

Ecosystem is the vitality of the open source community. In order to achieve the goal of an intelligent economic network, AIB will be committed to the development of its ecosystem, providing mature development tools, improving development of documents, organizing education and training activities, and providing financial support. We plan to support the following AIB-based applications and ecology and to reward improvements to the design of the experience:

◆ **Node Program**

- A fully functioning Full node PC program
- A light node PC program with a better user experience
- Web / Android / iOS clients that do not need to synchronize with the blockchain
- Hardware wallet

◆ **Blockchain Explorer**

◆ **SDK Development Kit**

- Support Java, JavaScript, Python, Go

◆ **Decentralized Applications**

- Token Creator
- Token Wallets
- Token Impact Index
- Social networking
- Automated tokens liquidity providers
- Decentralized exchange
- Secure communication protocol
- Data exchange market
- Intellectual property trading market
- Computational power sharing marketplace
- high TPS partial on-chain payment solution
- Decentralized mining
- Prediction market
- Advertising market
- Hashpower market

AIB Management Model

Economic Model

AIB has two form of tokens, AIB (Base value symbol AIB) and Scripting Protocol (on top of AIB to stay a small subset of value). AIB use Iterative method to develop their ecosystem. Issue Token is one of important and exchange friendly mechanism to liquidating the values

Distribution Mechanism

AIB distribution:

AIB's 31.4 billion tokens is divided into three portions. There is 29 billion token issues and split into 2 accounts managed by AIB anonymous foundation, mainly towards foundamatal blockchain project towards the straggy ecosystem.

1 billion towards AIB core development funding. 500 million minable as PoW solution.

◆ 1 billion tokens (3% total) will be used to motivate AIB developers and members of the AIB Council

◆ 10 billion tokens (30% total) will be used to motivate developers in the AIB ecosystem

◆ 5 billion tokens (15% total) will be used to cross-invest in other blockchain projects, which are owned by the AIB Foundation and are used only for AIB projects

◆ 5 billion (15% total) will be retained as contingency

◆ The annual use of AIB in principle shall not exceed 15 million tokens

Mining fee distribution:

Mining fee is generated with each new block. The initial total amount of Mining fee is zero. With the increasing rate of new block generation, the total limit of 5 million Mining fee will be achieved in about 10+ years. The interval between each block is about 45-90 seconds, and 0.5 million blocks are generated in about one year.

Governance mechanism

Chain governance: AIB token holders are the network owners and managers, managing the network through voting in the network, using the Mining fee generated from AIB to utilize the functions in the network. AIB tokens can be transferred. AIB could issue any tokens

Off-chain governance: AIB Foundation consists of the founding members of the AIB project, under which the management committee, technical committee and the secretariat, respectively, are responsible for strategic decision-making, technical decision-making and specific implementation. The AIB Foundation is responsible to the AIB community for the promotion and development of AIB ecosystem as its primary objective.

AIB technology implementation

Consensus mechanism: Random Multi-AuxPow

AuxPow is merge mining consensus to use less resources. However, the core development will use the token voting impaction to define a random multiple choice of AuxPow to prevent centralized and monopoly mining solution. The ecosystem define the mining won't profitable at the initial stage but to very stable in the long run .

AIB Integrated system:

AIB's integrated consists of three parts:

AIVM - Universal Blockchain Virtual Machine Standalone:

AIVM is a lightweight, general-purpose virtual machine whose architecture is very close to the JVM Runtime, similar to a virtual CPU that reads and executes instructions in the contract in sequence, performs process control based on the functionality of the instruction operations, logic operations and so on. It has a good start-up speed and versatility, is very suitable for small programs such as smart contracts, can also be ported to non-blockchain systems, or integrated with the IDE to provide an optimal development experience. AIBVM's functionality can be extended, like introducing a JIT (real-time compiler) mechanism, thereby enhancing the efficiency of the implementation.

DevPack - Compiler and IDE plugin:

DevPack includes the high-level language compiler and the IDE plug-in. Because AIVM's architecture is very similar to JVM and .NET Runtime, the compilers in DevPack can compile Java byte code and .NET MSIL into AIVM's instruction set. Java / Go, C# developers do not need to learn new languages and will be able to immediately start developing smart contracts in VS, Eclipse and other familiar IDE environments. **This greatly reduces the learning curve for developing smart contracts, allowing us to easily build a vibrant community around AIB.**

AIB can create a smart contract call tree through static analysis before running a smart contract. **Through the deterministic call tree, the AIB node can dynamically fragment the simple contract to achieve theoretically unlimited expansion**, which overcomes the "jamming effect" caused by the static fragmentation of other block chain systems.

Cross-chain interoperability agreement: AIScriptX

AIScriptX protocol that implements cross-chain interoperability. AIScriptX divided into two parts: "cross-chain assets exchange protocol" and "cross-chain distributed transaction protocol."

Cross-chain assets exchange agreement:

AIBX has been extended on existing double-stranded atomic assets exchange protocols to allow multiple participants to exchange assets across different chains and to ensure that all steps in the entire transaction process succeed or fail together. In order to achieve this function, we need to use AIBContract function to create a contract account for each participant. If other blockchains are not compatible with AIB, they can be compatible with AIScriptX as long as they can provide simple smart contract functionality.

Cross-chain distributed transaction protocol:

Cross-chain distributed transactions mean that multiple steps of a transaction are scattered across different blockchains and that the consistency of the entire transaction is ensured. This is an extension of cross-chain assets exchange, extending the behavior of assets exchange into arbitrary behavior. In layman's terms, AIScriptX makes it possible for cross-chain smart contracts where a smart contract can perform different parts on multiple chains, either succeeding or reverting as a whole. This gives excellent possibilities for cross-chain collaborations and we are exploring cross-chain smart contract application scenarios.

Distributed Storage Protocol: AIFS

AIFS is a distributed storage protocol that utilizes Distributed Hash Table (DHT) technology. AIBFS indexes the data through file content (Hash) rather than file path (URI). Large files will be divided into fixed-size data blocks that are distributed and stored in many different nodes.

The main problem with this type of system is the need to find a balance between redundancy and reliability. AIFS plans to solve this contradiction by means of token incentives and the establishment of backbone nodes. Users can choose the reliability requirements of the file. Files with low reliability requirements can be stored and accessed for free or almost free. Stable and reliable services for files with high reliability requirement will be provided by backbone nodes.

AIFS will serve as one of the InteropService interoperability services under the AIB system, enabling smart contracts to store large files on the blockchain and set access for those files. In addition, AIFS can be combined with digital identity so that digital certificates used by digital identities can be assigned, sent, and revoked without a central server to manage them. In the future, the old block data can be stored in AIFS , so that most of the full nodes can release the old data for better scalability and at the same time, ensure the integrity of historical data.

Summary

AIB is a distributed network that combines multi value tokens and simple scripting. The AIB system will use Multi-AuxPow, AIScriptX, AIFS ,and many other original technologies, as the infrastructure for the advanced intelligent application platform.