

PAB Metaverse

Building the social cornerstone of the metaverse

Preface

Life is kind of like a party. You invite a lot of people, some leave early, some stay all night, some laugh with you, some laugh at you, and some show up really late. But in the end, after the fun, there are a few who stay to help you clean up the mess. And most of the time, they aren't even the ones who made the mess. These people are your true friends in life. They are the only ones who matter.

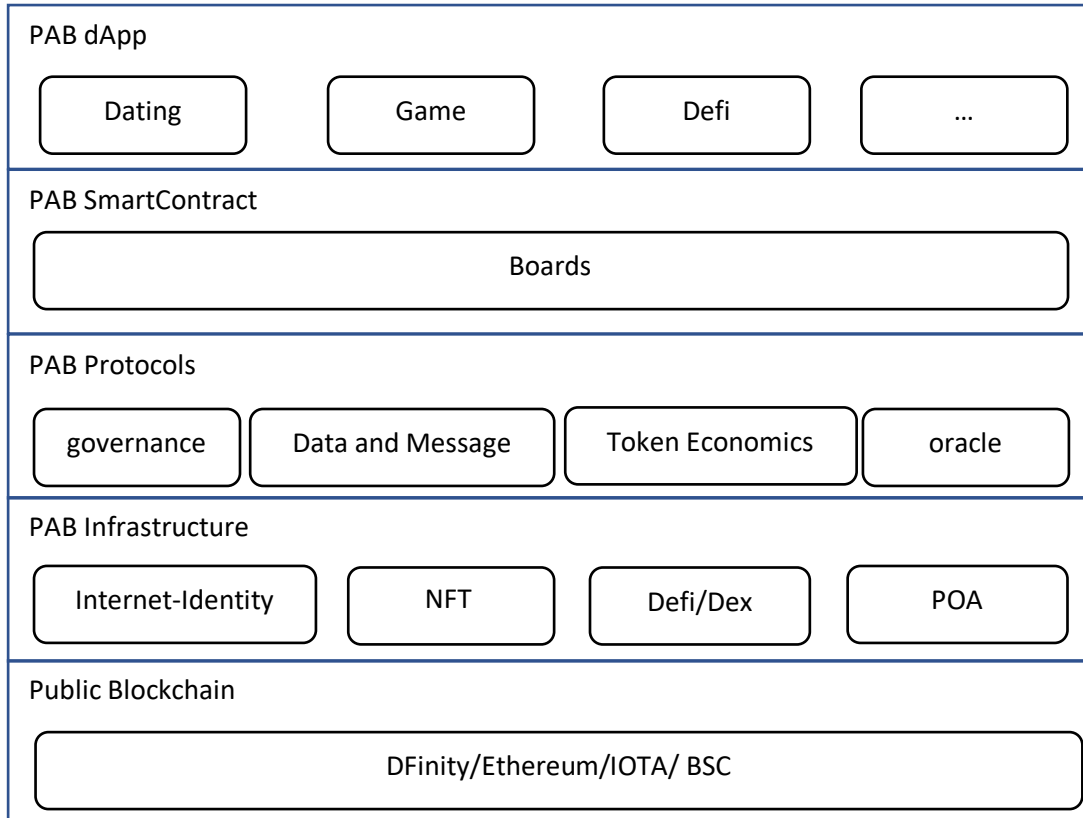
Introduction

PAB (abbreviation of Party Board) metaverse contains two levels of concepts. The first is the Layer 2 protocol built on the blockchain network. The purpose of this protocol is to provide a stable and open social infrastructure for PAB metaverse to be accessed by the second level which is the applications. These applications include existing traditional Internet applications and new applications developed using the PAB protocol. The social networking applications developed by the PAB team include diversified dating, scene-based chat, etc. PAB demonstrates a metaverse constructed through social behaviors and relationship graphs and supports the access of numerous third-party applications.

The PAB social protocol includes the communication model, governance model, economic model, oracle model, consensus model (POA), etc. These models define the social entities and operation mode of the metaverse. The basic principle of the PAB social protocol is that user rights are above all else. It abandons commercialization and middleman, accurately matches social topics and social groups through algorithms, and removes invalid information and ineffective social behaviors. The PAB social protocol is implemented through the smart contract interface on the blockchain.

PAB metaverse is characterized by access at any time, free speech, self-governance, and permanent virtual existence.

Architecture



The PAB Principal

PAB defines the principal of the metaverse as the virtual self (hereinafter sometimes referred to as self). In the metaverse of PAB, the individual rights of the virtual self are paramount. The PAB network rules protect individual freedom from any other individuals and groups. By voluntarily transferring their rights and reaching a consensus with other individuals or organizations, an

individual establishes connections and complete social behaviors. The core elements of the virtual self include:

1. Uniqueness

Just as an individual person is unique in the universe, the self in the PAB metaverse is also unique. This attribute is realized through Internet identity defined by public and private keys. Each entity in PAB is an absolutely independent individual in the PAB network.

2. Static property

Static information is a factual attribute of the self, which usually includes the time of joining the network, the place of joining, the person who invited the self, the length of time on the network, the time of logout, the profile/resume, etc. The profile/resume can be challenged and authenticated.

3. NFT

The permanent acquired attributes of the self usually include honors, roles, events, etc. Individuals, organizations, and systems can create and transmit NFTs. NFTs are stored in the underlying infrastructure of the PAB social network. NFT creation follows the principle of uniqueness, such as: "The Nobel Prize in Literature" cannot be created as an NFT," but the "Nobel Prize in Literature 2012" can.

4. Ability (authority, power)

PAB defines self's ability. The ability is used to determine the self's power in social behaviors in the PAB metaverse. The ability is strongly related to NFT and relationships. The ability includes abilities to make invitations, establish connections with specific entities, browse a board (PAB social portal, explained later), search a board, join a board, release a board, cancel a board, set board rules, vote, trade, pledge, mine, etc.

5. Thoughts (records)

The thoughts of the self are self-published and shared articles, messages, pictures, audio and video, and other content on the PAB network. The PAB network uses local storage, peer-to-peer encrypted transmission, burns-after-reading, privacy calculations, and other technical means to protect self's rights, the ownership and disposal rights (free release, sharing, destruction), creator income rights, and interpretation rights. These records are private data

completely owned by individuals on the PAB network. With privacy protection, PAB provides efficient matching, identity marking and other services.

6. Representation

PAB defines the appearance of the self as the virtual image of the self in the VR world.

7. Relationships

Relationships are the edges in the social graph of PAB. Relationships connects the self in the social network. Relationships are also one of a few factors that determine the ability of the self in the network.

Operation Rules

The basic unit operation of PAB metaverse is a social behavior initiated by PAB entities voluntarily. Social behaviors are submitted and recorded in the blockchain network after self-signing. Relationship graphs, value transmissions, and data transmissions are also submitted and recorded in the block chain network after self-signing.

PAB users enter the metaverse through the invitation mechanism. They then participate in the social board through the inviter, and then establish their own relationship in the metaverse and expand the social circle.

1. Board

The entrance of the metaverse is a “board” , a smart contract on the blockchain. Boards have types, such as dating board, party board, salon board, living room board, etc. Each board has attributes such as name, scene, creator, creation time, duration, and maximum number of people. Boards are created and defined by the entities of the PAB. Each board represents a specific social scene and social infrastructure. The virtual self in the network can join a board to enter the metaverse.

2. Social Rules

The social rules in PAB are represented as a set of external interfaces provided by the board smart contract, which define the digital features such as the scenes, facilities, and services that the board can provide, and also define the access privilege for self to access to the board.

3. Relation Algorithm

The relationship is composed of connection and weight. A one-way connection refers to a single self's following or being followed. A two-way connection refers to the mutual following of two selves. Following itself has an attribute which is called "level". The higher the level, the more privacy of the follower is exposed to the followee. The level is the main factor in calculating the weight of the relationship, and the two are exponentially related. Other factors in the weight calculation, such as social behavior and honor NFT, are linearly related to weight.

4. Network AI system

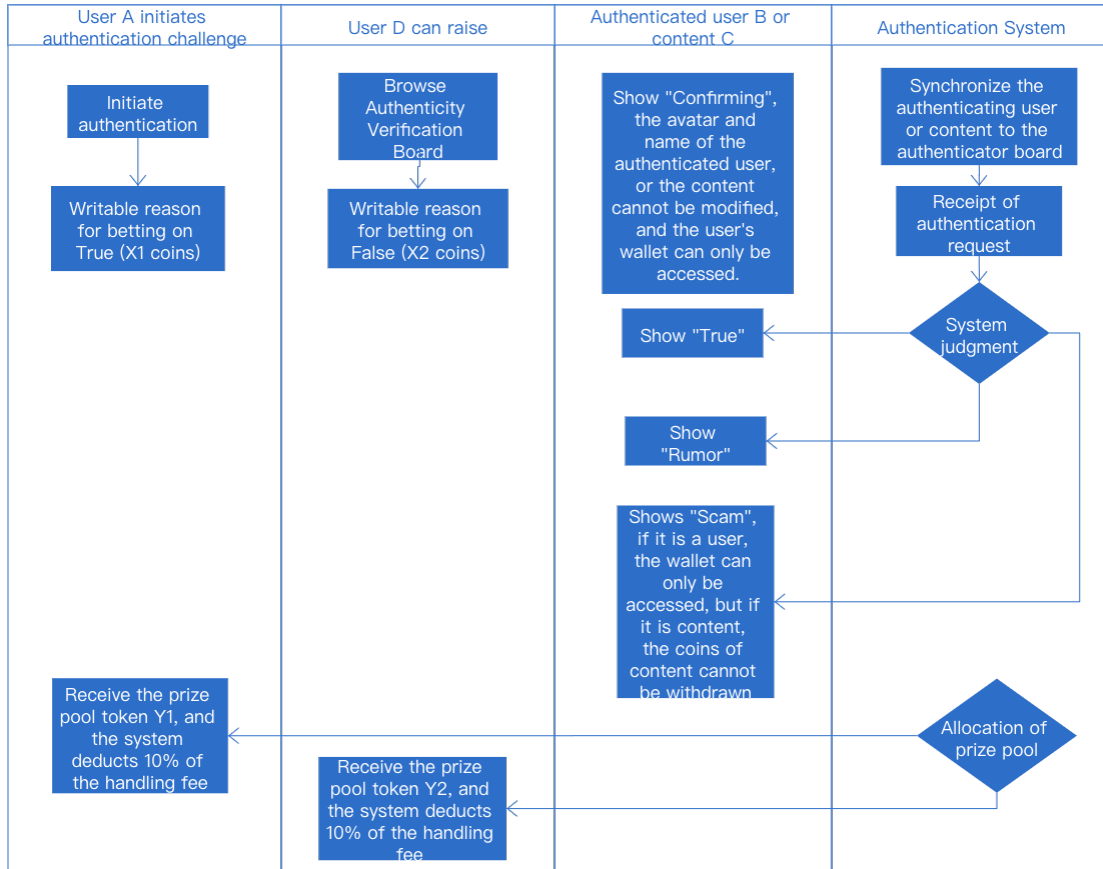
PAB has a Network AI System (NAIS), which is an open algorithmic governance system that can supervise social networks and token economy, build DeFi, ensure decentralized social services, and ensure the security of social networks and scalability.

5. Governance

Governance of the PAB fundamentals is through voting.

Day to day community governance in the PAB social protocol is through authenticity verification, voting, and guess. Authenticity verification can be conducted for all entities in the metaverse. Voting in the verification process is positively correlated with the weight value in the relationship. The results of authenticity verification and voting can be guessed/bet by participants.

Figure 1



6. Value delivery

See PAB token economic model

7. Proof of Activity

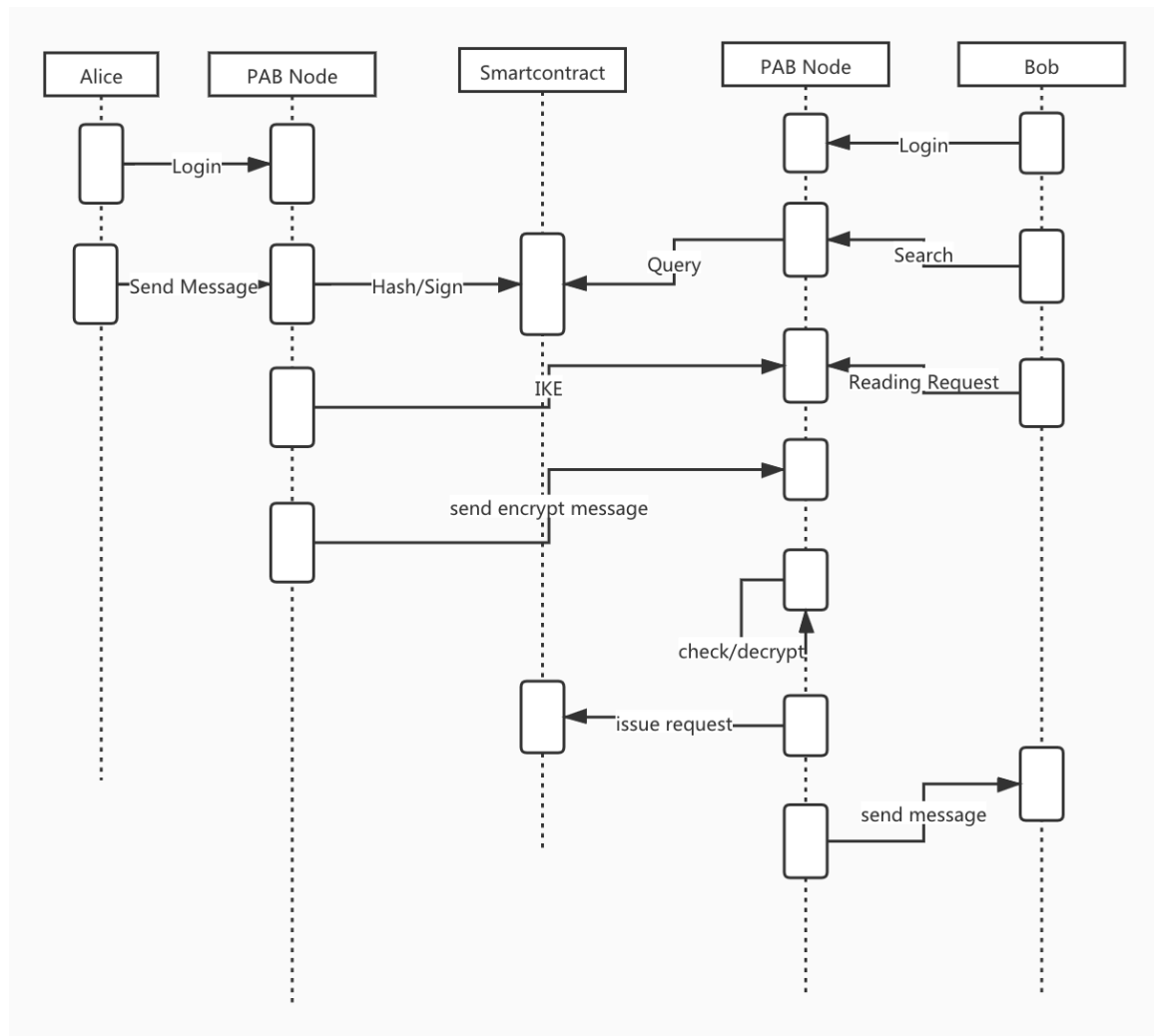
Proof of Activity (POA) means proof of social activities. By measuring the social activities of social entities in the board within a certain time period, the block committers and incentive recipients of the blockchain are selected for reward for that period.

8. Data storage and transmission methods

The thoughts of virtual selves in PAB need the privacy storage to realize the protection of freedom of thought, freedom of disposal, creator income and other rights. PAB has a privacy

data protection mechanism, which requires the support of PAB nodes. Users purchase and lease PAB nodes. After that, the virtual address of the PAB network and the corresponding key pair are obtained. The client program communicates with the mining machine through the communication key derived from the key pair, and the user data edited by the client is transmitted to the mining machine for storage. The digest and signature of the data are released in the blockchain network, and the user content is transmitted and shared through the PAB network point-to-point encryption channel. Sharing first starts with the exchange of shared keys between PAB network miners through the IKE protocol, and the shared key encrypts the user's thoughts. Through the encrypted channel transmission between the mining machines, the receiver obtains the shared content decrypted by the mining machine through the encrypted channel between the client and the mining machine. After the key life cycle ends, the encrypted content on the mining machine of the sharer is also destroyed.

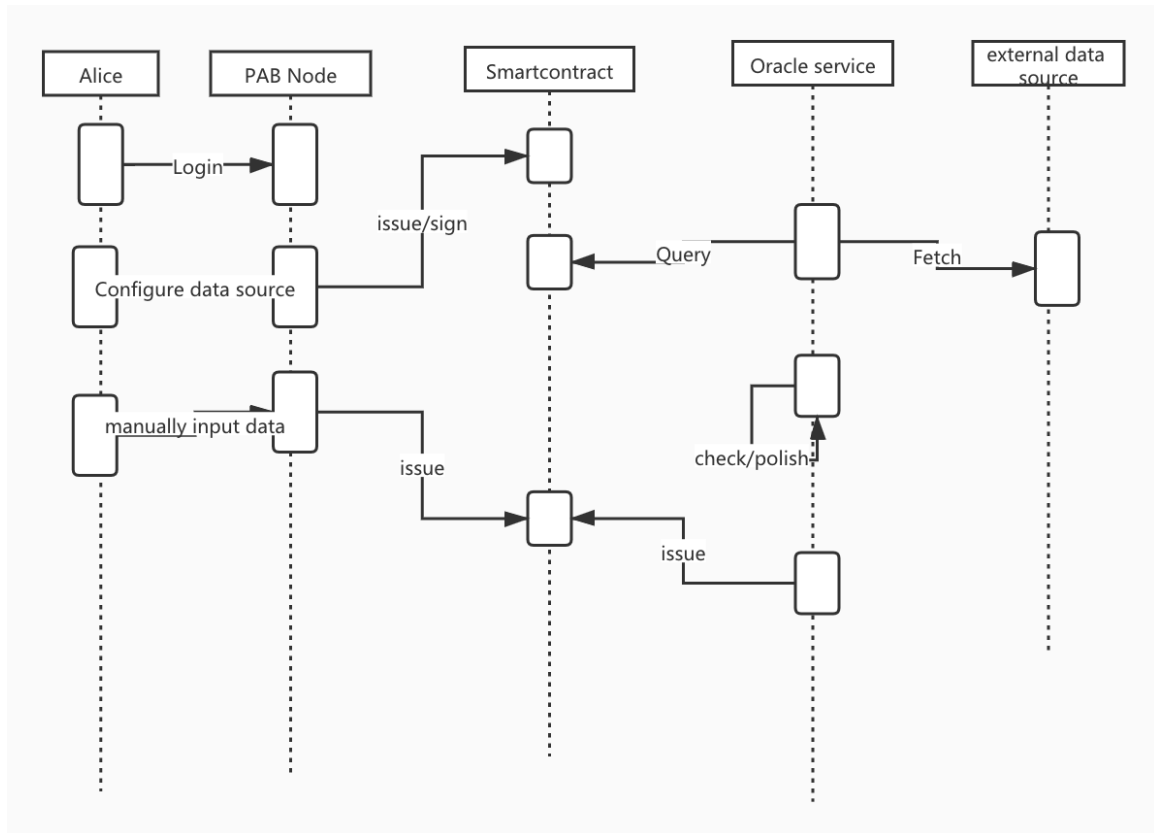
Figure 2



9. Oracle

The role of Oracle in the PAB metaverse is mainly to provide the data of the external physical world to the PAB network, to assist the self to better complete social behaviors and governance behaviors. Oracle's data is divided into two methods: active capture and manual feeding. In active capture, the data source is defined by the board creator. The manual feeding method is realized through the Oracle Board interface.

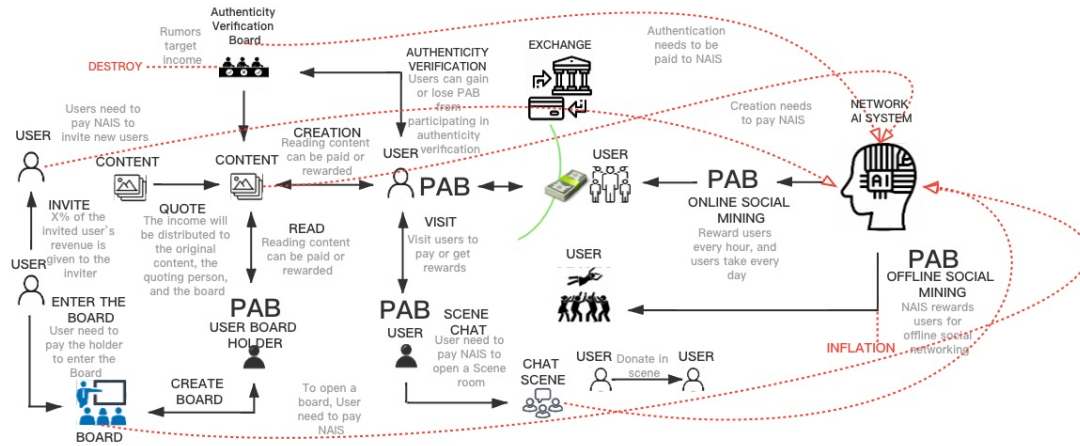
Figure 3



Economic model

The PAB economic model defines the rules of PAB issuance, acquisition, consumption and destruction.

Figure 4



1. The total number of PABs is 100 billion,
2. 60% of PABs will be produced by mining activities. One PAB carrying block will be produced every 10 minutes, and each block will carry 100 PABs. The number of PABs will decline year by year and decline by 30% every 4 years. The block bookkeeping right belongs to the board with the highest activity in 10 minutes. The board creators share 30% of the block reward, and the board members share 70% of the block reward on average, The activity is calculated by weighted average according to the number of effective calls of the board interface.

Block

size	field	description
4 bytes	Block Size	
80 bytes	Block Header	
1-9 bytes	Member id Counter	Number of member who receive the block incentive
Variable	Member ids	The list of member id which reference to the member who receive the block incentive
80 bytes	Board id	The most active board within last 10 minutes
80 bytes	Sig	Issuer signature for all the data

Block header

size	field	description
4 bytes	Version	
32 bytes	Previous Block Hash	
4 bytes	Timestamp	
4 bytes	Nonce	
80 bytes	Pubkey	Public key of issuer

3. In addition to the mining behavior produced by the block, the following will also be rewarded by the PAB

A) First login: 30 PAB Award

B) Check-in: Get 2 PAB per hour and $2 \times 24 = 48$ PAB rewards once a day

C) Thought references: One-time reference yields 0.1 PAB (the quoter returns 0.1 from the payment for each reference, with a limit)

D) Party Social Mining: The number of tokens an individual gets per unit time = $(\text{individual social benefit/distance per unit time}) / (\text{total social benefit/distance per unit time}) \times \text{total number of unit time token}$

4. Consumption behavior: All consumption is deposited in NAIS account

A) Recording: Users record daily thoughts, information, pictures, audio and video material

B) Reference others' records

C) Create Board: Pay PAB

D) Publish posts: Pay PAB

E) Read other users' records

F) Join Board

G) Call the Board toll interface

H) Initiate authentication

I) Guess the authentication result

J) Get NFT

K) Participate in voting

5. Transaction Behavior

- A) Use facilities built into PAB or provided by third parties
- B) Use DEX facilities built into PAB or provided by third parties

6. Destroy

A) If the result of authentication is false, the related PABs of the related entity are locked and destroyed.

PAB Social Applications

Dating

Based on your geographic location, dating NAIS recommends N persons within a certain distance of you each day. Based on the number of common followers you two have on PartyBoard, your shared interests, and your network of relationships, the highest-scored person will be shown first. This improves the matching rate and reduces the chance for users to be rejected. You can browse the pictures of the recommended people and then select the ones you like. If your favorite likes you too, then you are matched and can send messages to each other in the app.

Scene Chat Room

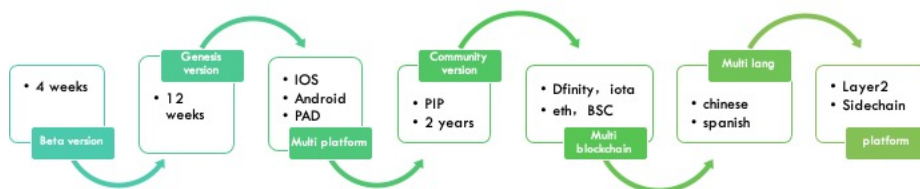
Scene chat room refers to the real-time audio interaction of a multi-person live scene, where the room owner can create scenes in virtual reality and works of art. Audiences can apply to join. The host can host and manage microphones of the room, and achieve efficient and high-quality voice chat.

PAB Token Distribution

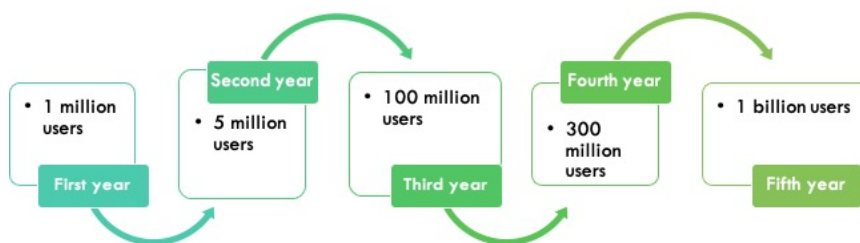
total	100000000000	100%
PE	10000000000	10%
Dev Team	10000000000	10%
incentive	60000000000	60%
ecosystem	20000000000	20%

Milestone

5-year product plan



5-year Marketing plan



Team

The PAB team includes talented developers with successful project experiences and experienced operators who have been immersed in the target industry for many years. The PAB team is a team focusing on building and landing applications in the block chain industry, and now has nearly 10 people in the block chain research, technology and business teams. With the development of PAB and the increasing market share of its applications, PAB will be open to recruit people who are willing to contribute to the community.

Leading members:

Cindy Jiang, CEO, Master's degree in Computer Science, University of Southern California, former Qualcomm senior engineer.

Konnon Lee, Chief Marketing Officer, graduated from the New Media Art Design specialty of Donghua University. Senior expert at creativity and e-commerce marketing. Honorary entrepreneurship lecturer of Xuri Business School of Donghua University. Has 100+ million yuan level experience in e-commerce brand building.

John Tan, Chief Architect, former Google employee, and core Engineer at a unicorn technology company in Palo Alto, California.

Tiff, Chief Financial Officer, Bachelor from Renmin University of China, Master's degree from Peking University, a senior financial expert.

Haoqian, Chief Scientist, Bachelor of Computer Science from Peking University, Master's degree from Hong Kong University of Science and Technology, and PhD in the direction of Block Chain at École Polytechnique Fédérale de Lausanne in Lausanne, Switzerland.

Schawn, Chief Operations Officer, Senior NFT Player, IPFS Project Investor, Master degree in Economics from University of Erlangen–Nuremberg, Germany.

Molly Wu, Doctor of Design, Polytechnic University of Milan, Italy. Experience and social innovation researcher. Space, Product, Brand and Experience Designer. Co-founder of HDI-Milan. Director of the Italian National Association for Industrial Design (ADI) in mainland China.

Kenton L Van Dunk, American TEFL teacher, proficient in Chinese, English, and Spanish. Movie, TV and variety actor, Internet influencer.