



Enchantment

V1.0 White Paper

Create the Global Multimedia

HTML5 Blockchain Engine and Platform

Bestow 1.1 Billion End Users with the Fun of
Multimedia HTML5 Blockchain Engine and Platform

Abstract

As a cross-platform and cross-terminal solution, Enchantment HTML5 technology has been recognized worldwide, which covers the Internet, mobile Internet games, video, advertising with a global market size of \$ 100 billion each year.

With the popularity of the blockchain game CryptoKitties, an HTML5 game was added to the popular application of Ether EUM's smart contract.

At present, with the prompt development of blockchain technology, through combination of blockchain technology with HTML5 technology , Enchantment's world-famous HTML5 technology service provider has formed a global multimedia HTML5 blockchain engine and platform, which truly applies blockchain to e-commerce industries, quickly produces high-quality games and applications, benefiting more than 1.1 billion end devices and users with practical and far-reaching significance for promotion of the development of the industry.

Our mission:

“Bestow 1.1 Billion End Users with the Fun of Multimedia HTML5 Blockchain Engine and Platform”

Industry Background

1.1Background of HTML5 Industry.....	5
1.2Internet Giants Embrace HTML5.....	6
1.3 HTML5 Industrial Problems.....	6
1.4 Background of blockchain Industry.....	7

Our mission

2.1 The World's Largest Multimedia HTML5 Blockchain Engine and Platform.....	9
2.2 Construct Deconcentrated HTML5 User Ecology.....	10
2.3 Create the Real Circulated Ecosystem of Digital Token..	10

Introduction to Enchantment blockchain engine and platform

3.1 Introduction to Core Products and Services.....	13
3.2 Features of Enchantment.....	15
3.3 Enchantment's Core Product Architecture.....	18

Chapter 1

Industry Background

- 1.1 Background of HTML5 Industry
- 1.2 Internet Giants Embrace HTML5
- 1.3 HTML5 Industry Problems
- 1.4 Background of Blockchain Industry

Industry Background



1.1 Background of HTML5 Industry

In recent years, with the hardware upgrade of mobile terminal equipment and the prompt development of Internet technology, we have removed some bottlenecks (flow and compatibility) that previously restricted the operation of HTML5 games. Premised the cross-platform of HTML5, it has been widely used in games, marketing, video and media. With the help of mobile social network, HTML5 content has been widely spread in APP, with creation of a new business model.

At present, HTML5 game users has taken up 47% (nearly half) of the entire mobile game users, which is nearly half. In light of business model, props payment has become the mainstream for its surpassing advertising payment with a proportion of 68%. Generally, HTML5 games have had independent commercial profitability as original games. At its turning of 2017, the market for HTML5 games accounted for more than 10 billion yuan with its prompt growth as the main theme. After more than four years of prompt development, HTML5 game has made prompt development and progress in the business model, user size and market size with continuous evolution of the industrial chain.

The outstanding mobile phone webgame with HTML5 technology in the United States has turnovers of 200 million RMB every month.

As a cross-platform and cross-terminal solution, HTML5 technology has been recognized worldwide, which has covered the Internet, webgames on mobile Internet, video, advertising with a global market size of \$ 100 billion each year.

1.2 Internet Giants Embrace HTML5

Thanks to its advantages of HTML5 technology such as click-to-run, easy social sharing, cross-platform and cloud synchronization, Internet giants have embraced HTML5 and its related technologies:

- Google launched PWA to apply H5 technology to App and search through advocate of the concept of search application.
- Facebook released Instant Game based on H5 technology in Messenger with active over 1 billion users a day, and officially opened advertisements and payment at the end of 2017.

The HTML5 industry will spring up all over the world.

1.3 HTML5 Industrial Problems

• HTML5 technology industry develop promptly, but it also has many problems:

- Lack of a unified and secure payment platform of globalization
- Lack of secure solution for virtual assets of storage user
- The lack of a fair and impartial mechanism to ensure the game and its application
- Lack of distributed back-end communication logic and solutions for fast response
- Lack of effective mechanism to protect the copyright of H5 project products
- It is necessary to build the developer ecology, online exchange community and offline talent training and certification system
- Effective mechanisms are urgently needed to motivate excellent teams and develop games and its applications that are really popular with users.
- Diversified ways are needed to solve the problem of traffic changing into cash.

1.4 Background of blockchain Industry

- In recent years, blockchain technology has been gradually understood and applied to related projects, its advantages and disadvantages are becoming increasingly obvious.

Advantages:

- The centralized account book mechanism is safe, transparent and can not be tampered with.
- Complete fair impartial smart contract.
- Centralized data storage through smart contract with quick response and reliability
- Token and Token system, unified payment and settlement

Disadvantages:

- Extremely imperfect processes of development, testing and upgrade
- Extreme shortage of development tools and development communities
- Extremely inconvenience for users with high learning cost.
- Security of accounts and electronic wallets

As for the current popular HTML5 and blockchain technologies, we set up an Enchantment Lab together with Enchantment. Through the combination of blockchain technology and HTML5 technology as well as mature HTML5 development workflow and blockchain, developers can quickly develop blockchain applications and truly apply blockchain applications to e-commerce industries.

Chapter 2

Our mission

- 2.1 Create the Global Multimedia HTML5 Blockchain Engine and Platform
- 2.2 Construct Decentralized HTML5 User Ecosystem
- 2.3 Create the Real Circulated Ecosystem of Digital Token

2.1 The World's Largest Multimedia HTML5 Blockchain Engine and Platform

The world's largest HTML5 Blockchain Enchantment (HTML5 blockchain Enchantment) is created through integration of blockchain technology with partners' mature tools, communities and content besides introduce of more than 1.1 billion mobile terminals into the blockchain world.

User Ecology:

- We will create recognized passports with digital encryption for all users.
- HTML5 Blockchain Enchantment will provide users with covenant-lite and high secure digital electronic wallets and become a secure payment platform for all HTML5 blockchain applications.
- We will create a digital token for the global HTML5 project: Enchantment to support its transaction and settlement. Construction of healthy and sustainable ecology for users

Technology level

- The function of blockchain is modularized and integrated into the Enchantment engine and its front-end development tools. Enchantment tokens are infiltrated into hundreds of thousands of games and applications, covered with more than one billion users worldwide.
- Blockchain technology is integrated into back-end service logic and provide H5 products with fast communication solutions and reliable intelligent contract service logic through node servers all over the world.
- We will create a complete set of development tools, documents and development communities for developers to provide the most perfect and convenient developer ecology.

Operation:

- Our professional global distribution team of games and applications will globalize the contents of the token payment system based on the existing game platform with a monthly traffic of over 40 million yuan to ensure the global circulation of platform tokens. Our perfect advertising

platform will work with strategic partners of Facebook and Google to promote games and its products premised on Enchantment technology.

2.2 Construct Deconcentrated HTML5 User Ecology

HTML5 content created by using the Enchantment engine accounts for 75 % of the whole industry, covering more than 1 billion mobile devices and users.

Through the Enchantment blockchain, we will integrate the SDK of the token mechanism into the existing tool system of Enchantment, so that users in the content created by developers using the Enchantment tool will be uniquely identified, forming a large and stable user group and a virtuous circle of ecology in all HTML5 content.

The user has a unique token passport in any game or application developed based on the Enchantment blockchain in the world.

- Token's anonymity and encryption mechanism ensure users' privacy of individuals.
- With this unique, anonymous, secure identity, user identity is not limited to a single application. They can play true cross-platform games for enjoyment of virtual life in the virtual world of Enchantment.

Because of the transparency and non-tampering of the blockchain, the user has the unique Token passport. In the whole content system based on enchantment blockchain, we can accurately portray users and build a credit system. Users can safely communicate, make friends and exchange virtual assets with other users around the world in Enchantment.

2.3 Create the Real Circulated Ecosystem of Digital Token

Based on the user ecology of the Enchantment platform, we will create a digital token: Enchantment by engine tools and enchantment solutions all over the world.

- Developers can use sophisticated tools + SDK to quickly develop products that use tokens Enchantment as payment. Users can use tokens to buy props in the game and pay for them.

Users can use tokens to participate in lottery, discount and other preferential activities for any application in the world in the platform.

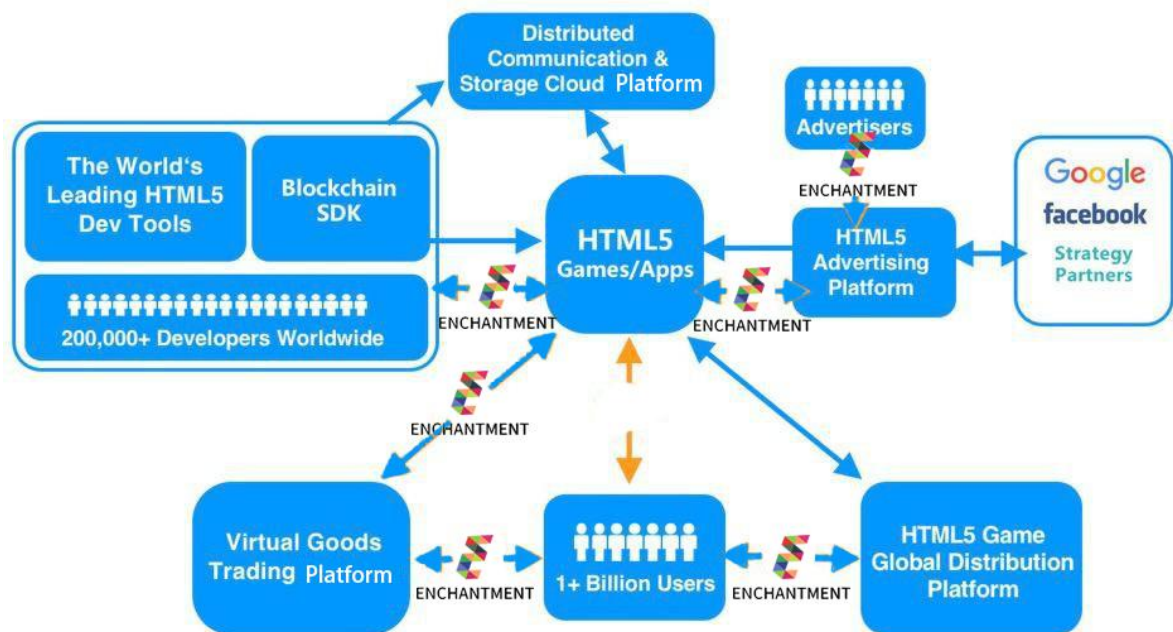
- Users participate in product crowdfunding for games or applications launched by developers on the platform and get token rewards from these products.

- Developers and content publishers can use tokens to advertise on the Enchantment advertising platform.

- Platform channel providers can obtain tokens through content distribution, advertisements.

- The virtual asset e-commerce wallet created on the basis of the user's unique token pass can more securely keep the user's virtual assets, including virtual assets, props, crowdfunding returns and platform rewards obtained from all games and content.

In the whole ecosystem, developers can use the Enchantment blockchain SDK to quickly develop HTML5 blockchain games and applications. The digital token Enchantment will cover more than 1 billion mobile terminals and users through these HTML5 contents, who circulate in various ecological links such as global game distribution platforms, virtual props platforms, advertising platforms and communities.



Chapter 3

Introduction to Enchantment blockchain engine and platform

3.1 Introduction to Core Products and Services

3.2 Features of Enchantment

3.3 Enchantment's Core Product Architecture

3.4 Application case of Enchantment

Introduction to Enchantment Blockchain Engine and Platform

3.1 Introduction to Core Products and Services

The World's First HTML5 Blockchain game development Workflow (HTML5 Blockchain)

The HTML5 workflow operated by Enchantment for three years includes more than 10 products such as engines, IDE visual editors, animation tools, cross-platform packaging tools, etc., which support dual platforms of Windows / Mac.

Through existing development workflows, developers and designers can:

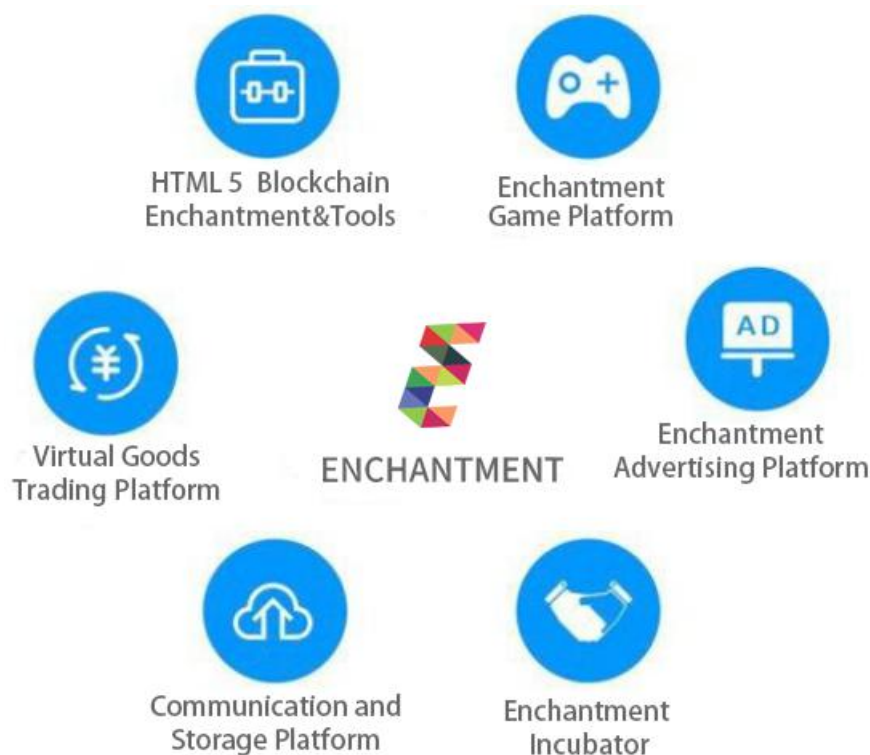
- Edit and debug code efficiently;
- Visually adjust the U - interface;
- Easily create cross-platform animations and interactive media content.

HTML5 content is published as iOS and Android native applications through the packaging tool

We will make it easy for all HTML5 games to support blockchain through Enchantment Technology's existing toolset and the tightly integrated block link interface layer. Through a mature development workflow, developers can quickly create an HTML5 game and application that provides unified blockchain functions such as digital e-commerce wallet passports, smart contracts, and transactions.

The world's largest multimedia HTML5 blockchain platform: Enchantment

The Enchantment platform includes a development toolset based on blockchain technology, four core products and an incubator, which provides comprehensive blockchain solutions and services for players, content providers, channels and advertisers, and builds a perfect ecology. Developers can quickly create blockchain applications through the Enchantment toolset and get comprehensive service support through the game distribution, advertising, trading, storage and communication platforms provided by Enchantment.



Toolset for blockchain game development: Developers can quickly and efficiently develop blockchain games and applications through the world's first complete HTML5 blockchain engine and development toolset.

Distributed communication and storage cloud platform: It is a server-side decentralized, distributed communication and storage scheme based on blockchain mode.

Game distribution platform: It is the official DAPP based on Enchantment. Players can get platform tokens Enchantment through mobile phone mining, play HTML5 games on this platform and pay through Enchantment.

Virtual prop Trading Platform: All players in Enchantment games can use Enchantment to trade virtual props on this platform.

Enchantment Advertising Platform: It is an accurate advertising system based on blockchain KYC, smart contracts and platform digital tokens.

Enchantment Incubator: It supports game development teams and individuals and creates a bridge between players and developers.

3.2 Features of Enchantment

Self-developed public blockchain

DBFT (Delegated BFT) is a common consensus mechanism module, and an improved Byzantine fault-tolerant computing is proposed to make it suitable for blockchain systems.

Consensus mechanism

The Enchantment public chain uses DBFT to implement the blockchain accounting and data exchange mechanism.

High performance

Enchantment is a public blockchain with high concurrent processing capability. Its performance is optimized for the needs of the game industry with a prompter TPS (Transaction Per Second). However, there is an "impossibility" in blockchain technology, that is, scalability, decentralization and security cannot be achieved at the same time, and only two of them can be available.

Dynamic adjustment of parameters

Enchantment can modify system parameters without bifurcation, which can dynamically adjust global parameters such as block size, block exit speed and commission charge by consensus voting.

For example, at present, a block is produced every 3 seconds, of which the parameters can be dynamically adjusted to produce blocks per second. The block size is 2M which can be dynamically adjusted to large blocks, such as that with the size of 8M.

A convenient and efficient development toolset

Various tools used and verified by more than 100,000 developers around the world provides a robust guarantee for Enchantment Blockchain Project, making the development of blockchain application easy, convenient and efficient.

Support for mainstream languages and frameworks

By default, JavaScript, TypeScript, HTML, CSS, NodeJS are supported. More languages and frameworks such as C #, GO, C + +, Angular JS, REACT and so on can be easily supported by extending it.

Intelligent coding aid

It provides intelligent code completion, instant error information feedback, search for references, jump to definitions and other functions for mainstream languages to accelerate developers' coding.

Built-in complete game development workflow

It integrates the visual game development environment, including the whole development process of development, debugging, publishing and packaging, as well as resource management, particle editing, animation editing, cloud publishing and other extensions, bestowing the game developers smoother experience.

Enchantment SDK

We will provide the Enchantment Blockchain SDK, which enables all HTML5 games using Enchantment engine tools to easily access the blockchain and allows developers to quickly create an HTML5 game and application that provides unified blockchain functions such as digital wallet passes, smart contracts and transactions.

- With the help of a few lines of codes, HTML5 games can be given the characteristics of blockchains.
- KYC Certification can encrypt and store user-critical information on the blockchain
- Provide business data storage, object storage, data communication and verification services
- Easy access to digital wallets and easy access to smart contract interfaces

- Developers can access the digital tokens SDK and trade virtual props between games

Digital tokens (Enchantment) circulating all over the platform

In 2017, the global game market was an over 100 billion USD market, but there is no way to link different games, each game has its own independent economic system. However, Enchantment needs to provide a de-centralized digital token Enchantment, which can facilitate and efficiently trade virtual props between games.

Enchantment and Token System, which is provided by Enchantment and circulated throughout the platform, is used to support the unified transaction and settlement of the entire platform. Developers can access the SDK of digital tokens so that the economic system of the game can be connected with Enchantment to realize the circulation of virtual props inside and outside the game.

Wallet

Both game developers and game players need to manage Enchantment digital tokens through their wallets. To provide users with low threshold and high security digital wallets, Enchantment has become a secure payment platform for all HTML5 blockchain applications. At present, it is being developed to run in three different versions: PC version, mobile version and browser version.

It is easy to be expanded and supports the global mainstream public blockchain

From the perspective of long-term planning, the interface framework of blockchain we provide will not only support its own public chain Enchantment, but will also be extended to support public chains such as Ethernet and EOS in the future, so that all HTML5 developers can efficiently create blockchain-based games and applications.

Future code is open source

The future code related to Enchantment will be open source on Github.

3.3 Enchantment's Core Product Architecture

HTML5 Blockchain Enchantment

The Enchantment engine is easy to develop for 100,000 developers worldwide which will provide the Enchantment BaaS SDK so that all Enchantment games can easily access the blockchain and quickly convert existing HTML5 games into blockchain games.

The Enchantment BaaS SDK includes the following API:

EnchantmentGame API

Many game developers want to make their games have the characteristics of blockchain, but the threshold of blockchain technology is too high, and developers have no time to study the underlying technology of blockchain carefully. The Enchantment Game API can facilitate developers easily and quickly access blockchains.

Based on the Enchantment Game API and several lines of codes, HTML5 games can have the characteristics of blockchains. HTML5 games can be combined with blockchain technology by simply introducing the Enchantment BaaS SDK into the game development and then calling the API interface according to the official document tutorial.

KYC Certification

KYC (Know Your Customer) can encrypt and store user information on the blockchain. Blockchain is anonymous and traceable, which directly encrypts the user's information and stores it on Enchantment, safe and reliable. With the blockchain ID obtained by KYC, users can play all the games created by HTML5 Blockchain Enchantment in need of only one register.

Enchantment Data API

What has long been criticized in the game industry is the opacity of the data. The whole game industry has also made a lot of efforts to this end, such as disclosing the drop probability of props in the game, but the players still don't believe in the game developers. What's more, some developers will not only not disclose the drop probability, but also

control the drop probability in the background, thus greatly increasing the game revenue.

Through the Enchantment Data API, developers can store the core data logic of games and applications on Enchantment, realize the disclosure of data storage books and process verification, and make game data open, fair and transparent by combining with smart contracts.

For example, a game developer may write the core data logic of the game, game transaction information and equipment drop value into the blockchain so that players can check the game value information at any time, thus enhancing mutual trust between the game developer and players.

Enchantment API

The API of digital tokens in the Enchantment ecosystem can safely and quickly access the digital wallet system and put virtual props in the game on the trading platform.

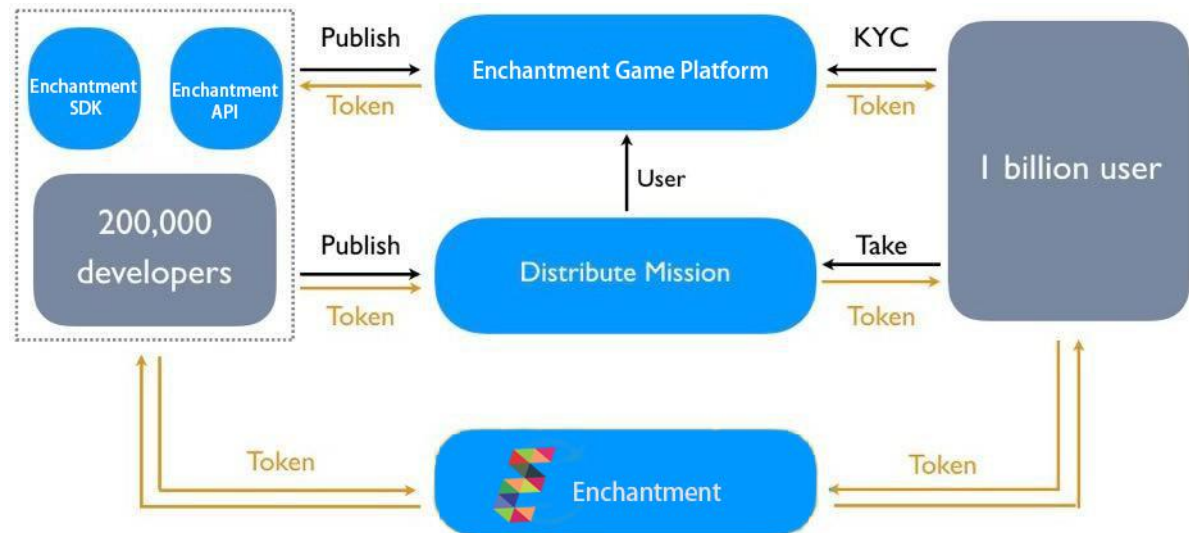
Enchantment Runtime

The Enchantment Runtime is an accelerator component developed by the ENCHANTMENT team to boost the HTML5 game experience, which can be seamlessly embedded as an extension module into browsers or other applications on mobile devices. By using the Enchantment Runtime, game developers can ignore the differences between different operating systems, different browsers, and different terminals, and let HTML5 games run efficiently in the user's mobile phone terminal almost originally. In addition, the Runtime can also access mobile device hardware to optimize the game experience.

The Enchantment Runtime is a comprehensive upgrade that not only fully supports the original Runtime functions, but also integrates Enchantment's blockchain module, placing core functions more securely at the underlying of the application. For example, the EnchantmentBasss Module enables developers to easily call the Enchantment blockchain interfaces in game development. At the same time, it fully supports the DBFT mechanism and realizes the blockchain bookkeeping and data exchange functions based on the underlying of the Runtime.

Global Distribution Platform for Enchantment Games

Enchantment Chain's Open Platform is the world's largest HTML5 game platform, currently containing more than 2,000 channels and more than



65,000 HTML5 games, with 40 million active users per month. Due to the revolutionary development of blockchain, Enchantment Open Platform will be upgraded to a personal-centered HTML5 game distribution platform, which will benefit HTML5 developers and players around the world.

Enchantment Game Platform

As shown above, with the help of the Enchantment and Enchantment Baas SDK, not only game developers can easily access the blockchain, but also players can get the unique ID of the blockchain through KYC so as to play all the games on the game platform.

At the same time, Enchantment can enable players to use digital tokens to purchase virtual goods such as props in the game.

Game developers earn Enchantment digital tokens by running games.

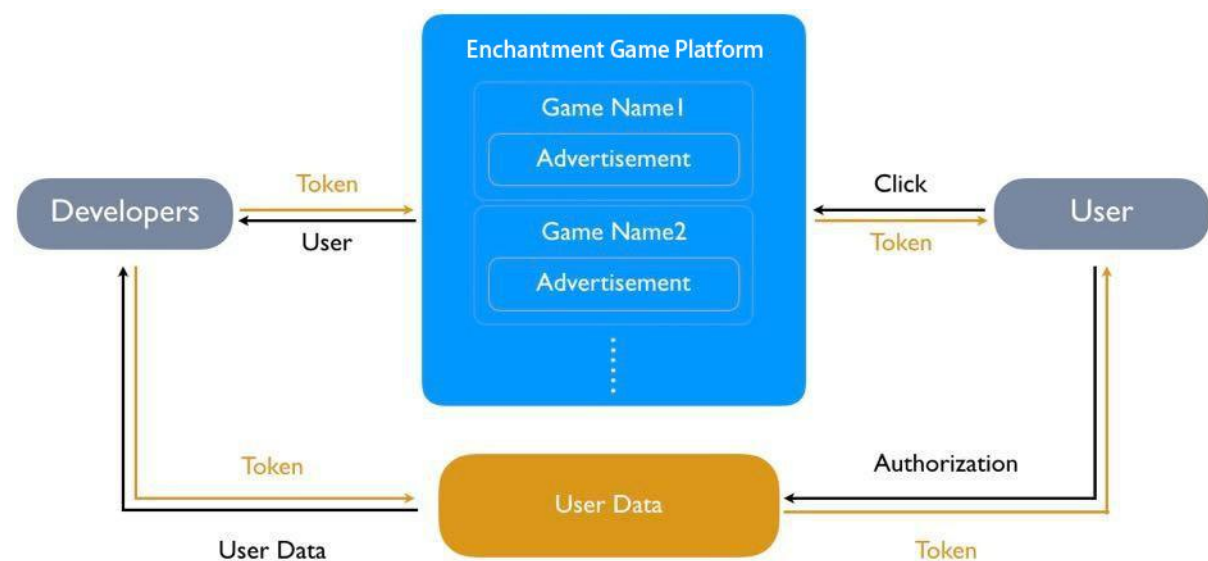
Enchantment Game Distribution Mechanism

The Enchantment game platform is a decentralized HTML5 game distribution platform, in which Game developers can independently put HTML5 games on the shelves and use the Enchantment digital token to distribute tasks so as to realize the player's independent promotion. Players can complete the game promotion task and win task rewards. Therefore, developers can obtain a large number of players through distributing tasks, and players

can get token rewards after accomplishing the distribution tasks, forming a benign ecological closed loop.

Enchantment Prop Trading Platform

For a long time, gamers have been worried about how to ensure the value of props and personal information security. Fortunately, the Enchantment Blockchain Prop Trading Platform can perfectly solve this problem.



Trading Platform Architecture

As shown in the above figure, the player can select a prop in the game to sell on the trading platform by clicking on the game, the game server, the prop classification and the specific items. After finishing the sale successfully, the player can obtain the Enchantment digital token.

On the other hand, players can also use digital tokens to purchase props through the Trading Platform.

HTML5 games can be linked to trading platform transactions through the Enchantment Baas SDK. In the past, the traditional prop and account trading model lacked the foundation of mutual trust, but thanks to the smart contract mechanism of blockchain, buyers and sellers could trade with great confidence without any guarantee from a third party.

Based on the traceability of the blockchain, both parties to the property transaction can view the historical transaction records at any time while the anonymity of the blockchain can well protect the privacy information of both buyers and sellers.

De-centralized advertising platform

We will build an advertising platform based on Enchantment. Premised on the blockchain KYC, it can accurately obtain the user's portrait and cast the advertisement information to cater to their wishes. In addition, the advertisement system based on platform digital tokens enables digital tokens to circulate more smoothly.

As shown in the above figure, the decentralized blockchain advertisement has avoided the drawbacks of the traditional advertisement.

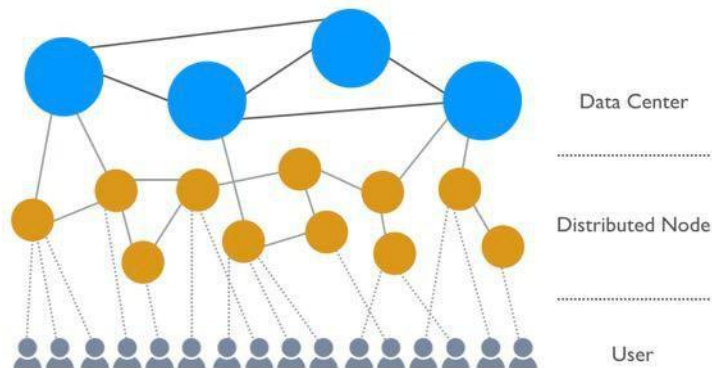
- Advertisers can use platform digital token Enchantment to place advertisements.
- Developers integrate advertising content through front-end tools and SDK to obtain Enchantment tokens profits.
- Developers can also advertise the Enchantment tokens paid by users, thus obtaining more users.
- Based on the blockchain Enchantment KYC, the advertising platform can protect the privacy of users while accurately acquiring user images, efficiently promote the content of interest to users, thus greatly reducing the cost of attracting customers.
- Players can earn digital tokens by forwarding advertisements.

As the first HTML5 advertising strategic partners of Facebook and Google, we have integrated the partner advertising SDK into the tool. We are also actively engaged with overseas partners such as Facebook to look forward to the future of the blockchain.

Enchantment Communication & Storage Service

Enchantment Communication & Storage Service is a platform which adopts a blockchain model of server de-centralization, distributed communication and storage scheme, benefiting all developers.

Enchantment will cooperate with more third-party public blockchain and technology service providers to provide more perfect distributed communication and storage services for developers.



The more developers, the more data content, the wider the distribution of server nodes, the faster reading of stored data and files, and the faster communication between client and server.

Developers enjoy the access to the Enchantment communication service by calling the SDK provided by us, to realize multi-person online fighting, store data files, customize the back-end game logic, etc., with the advantages of easy use, low latency, high availability, scalability, high customization, etc.

In addition to helping developers create an innovative online game, it is also convenient to transform a console game into a cross-regional, global and less-delay online game based on the Enchantment public blockchain technology, greatly reducing the cost of developing games.

Multiple Nodes, Low Latency

De-centralization, server nodes and original 'server frame synchronization' technology all over the world make game data transmission timelier. After the game is successfully connected, players can enjoy the instant synchronization information brought by multiple nodes, so that the game play is no longer constrained by latency. At the same time, in order to meet the needs of large-scale multi-player online games, we take full advantage of our rich experience in platform construction and adopt the "deep coupling" method. Information that does not affect fairness is constructed in a traditional way, and core data

is processed by smart contracts in the blockchain. The seamless and coordinated combination of the two guarantees both fairness and smoothness of the game experience.

Prompt Matching

Back-end communication which is based on the distributed system, enjoys a flexible matching mechanism, greatly meeting the matching requirements under different rules, enriching the game play, helping more players to form connections, and truly achieving the goal of "global service".

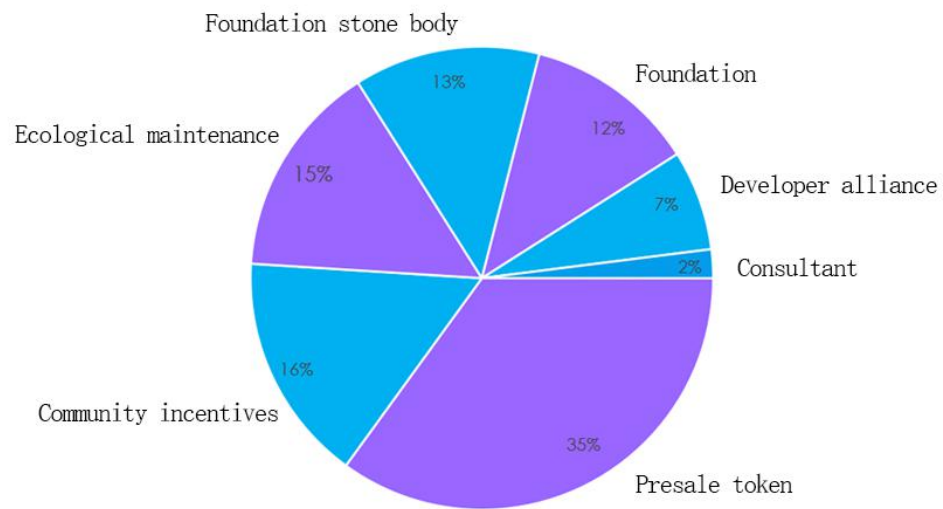
Prompt Access

Fully considering the needs of developers, we modularized the process of game hall, room and game interaction, with the aid of front-end engines and tools, enabling developers to promptly access and develop.

Enchantment Backend Logic Framework Based on Smart Contract

With the basic networking capability, we also provide a server framework based on smart contracts for game developers—the Enchantment Back End Logic Framework, in which developers can expand the networking capability of the server and customize the server game logic. Since the server logic is based on the Enchantment blockchain, the management through a smart contract guarantees the openness, fairness and fairness of the game logic, effectively resisting the cheating program.

Enchantment total distribution



Disclaimer

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The Enchantment platform clearly indicates the intentional users shall clearly understand the risks of Enchantment. Once the investor participates in the investment, he or she expresses his or her understanding and acceptance of the risk of the project and is willing to bear all the corresponding results or consequences.

The Enchantment platform expressly states that it will not bear any direct or indirect losses caused by participating in the Enchantment blockchain project, including but not limited to: any errors, omissions or inaccurate information caused by personal understanding of the reliability of all information provided in this document or any action resulted therefrom.

Risk Warning

There are various risks because digital asset investment is a new investment model. Therefore, potential investors need to carefully assess investment risks and their own risk tolerance.

Judicial supervision risks: Blockchain technology has become the main object of supervision in major countries in the world. If the judiciary exerts influence, the development of Enchantment Blockchain Application or Enchantment Tokens may be affected, restricted, hindered or even terminated.

Project technical risk: Enchantment is built based on cryptography algorithm, so the development of cryptography may also potentially bring risks to Enchantment, such as loopholes in the project development process. Hacker attacks and criminal risks electronic tokens are anonymous and difficult to trace back, so Enchantment is easy to be used by criminals or attacked by hackers, or may involve criminal acts such as illegal asset transfer.

Other risks unexpected: In addition to the risks mentioned above, there are also some risks that have not been mentioned or predicted.



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