ComingChat：a trusted social-economic metaverse

Abstract

The development of humans will be divided into two trends: broad, that is, exploring the universe; internal, that is, toward the virtual. The Internet is about to undergo the next wave of upgrades, and we are welcoming the era of metaverse. We think that the metaverse refers to the universe. The virtual world also refers to the entire Internet, including the entire scope of enhanced actual combat. The ultimate vision of connecting the physical world and the digital world is still in the future.

ComingChat's commission is to build the metaverse of the entire ecosystem. On the one hand, ComingChat, based on the economic structure of Bitcoin, enables a simple, secure and private global payment and financial infrastructure, and at the same time, it provides support to billions of people around the world. On the other hand, ComingChat strengthens the interaction system between the Internet and reality, uses CID as the user's digital identity, building a programmable identity system, and thus becomes the portal to the Web3.0 era. ComingChat provides unprecedented interoperability with a unified digital identity, and brings the new metaverse concept of "Simple Payment + Global Privacy Communication".

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1. Inspiration

A. Metaverse

Metaverse is a new type of Internet application and social form that integrates multiple new technologies. It provides an immersive experience based on extended reality technology, generates a mirror image of the real world based on digital twin technology, and builds an economic system based on blockchain technology. , The virtual world and the real world are closely integrated in the economic system, social system, and identity system, and each user is allowed to carry out content production and world editing.

Through the construction of the metaverse, the information of the real world will be greatly supplemented by the virtual world, and the way of interaction between humans and the virtual world will be brand-newly improved. On this basis, a business model full of imagination will be born. There will be qualitative changes in games, socialization, entertainment, consumption and so on.

- **Metaverse reshapes the digital economy system**

  With the changes of the Internet, human-computer interaction will infinitely approach or even exceed the interaction experience between people. Massive digital assets will be created and traded. With the digital migration of labor and decentralized digital asset transactions based on blockchain, the digital world may become a more open and unlimited world.

- **Metaverse needs a decentralized identity system**

  The metaverse must provide unprecedented interoperability, and users can use a unified identity in the metaverse. At the same time, the metaverse is not only a parallel universe constructed by mapping the real world, but also a surreal universe that merges reality and virtuality. The immersive social system and social form brought by a unified identity are the expansion of the dimension of human existence.

B. Why Metaverse Matters?

- **The current Internet structure is moving towards Web3.0**

Whether in terms of content, propagation, interaction, participation and interactivity, Web3.0 brings breakthroughs in the Internet structure and promotes the development of the Internet into an iteration of the metaverse.

The development of the Internet has evolved from Web1.0 to Web2.0, and then to Web3.0. Web1.0 is read-only, and the structure of Web2.0 is applicable to all kinds of popular applications on the Internet today; all user data is hosted on a central server, and personal data is controlled by the person operating the digital platform, and the user cannot control their data and assets. Web3.0 represents a new vision and focus: from centralized and unified management applications to applications built on centralized protocols, it ensures that all users' data ownership and control rights are decentralized. The decentralized and distributed network structure of Web3.0 uses smart contracts to define application logic and deploy them on decentralized state machines to guarantee trust, enhance privacy, increase transparency, eliminate intermediaries, and promote data ownership and digital identity. The architecture of Web3.0 has far exceeded the Internet functions running on the decentralized layer.

This is exactly the metaverse that ComingChat is building to realize a stable and secure decentralized network structure and provide various innovative functions.

- **User demand for social networks is shifting to the pursuit of a more open and editable world**

The high degree of integration between the virtual world and the real world brought about by the metaverse can further improve the efficiency of social operations, or will profoundly change the way humans interact in all walks of life.

In today's Internet era, the winner takes all, leading to absolute dominance of its social network, and there is no way to avoid the uncertainty in the social network. Centralized social software and media manipulation issues are catalysts for reassessing how we design social networks.

The open protocol brought by the metaverse has enabled mankind to walk out of the closed system. People's pursuit of digital personality and asset protection brings people's demand for identity. Thanks to the high immersion of digital identities in metaverse, users can generate strong and effective connections through content production, content consumption and other behaviors, forming a new social networks.

ComingChat starts with the construction of the decentralized identity of the metaverse, flattening the roles in the real world, and truly realizes a decentralized account system through the world's only digital identity CID, so that there will be a qualitative change in benefits for those who are truly in the metaverse social network. Since the data is open source, based on the existing account system, other developers can build new social networks at any time, which will activate competition in social networks and break the monopoly of data.

- **Real capital is unlocking the potential of digital assets**

The metaverse built on the blockchain makes ordinary users become the proletariat in the digital age, eliminating the possibility of monopolistic violence and monopoly currency economy. The fuzzy boundaries of production relations and productivity covered therein will shield the exploitation of real capital.

In the era of digital economy, people's time and energy will migrate from the physical world to the digital world. In the future, people's work and life will continue to be digitized. The ultimate form of the metaverse is the combination of technology and humanity, the gift of technology to human experience and efficiency, and the reshaping of the economy and society by technology.

The widespread online of digital assets has formed a recyclable internal ecology within the metaverse. Blockchain technology has the characteristics of openness, transparency, non-tampering, collective maintenance, etc., which makes the emergence of digital currency to prevent the birth of a monopoly economic system in the metaverse.

ComingChat applies BTC technology to establish a simple global payment system and financial infrastructure in Metaverse, creating the first application linked to Bitcoin and serving the public, helping more people to obtain free and equal financial services.

- ## New technologies are in need of new products

Metaverse feeds back the virtual world to the senses in the real world through emerging technologies such as AR, VR, and gets rid of the sense of time and space in the physical sense.

Based on the application of various technologies, the superposition of the metaverse and the real physical world can produce a large number of virtual and real replacement, fusion, and superimposition scenarios. The birth of the metaverse has promoted the overwhelming imagination of a variety of new technologies.

ComingChat not only realizes the expansion of human consciousness from the real world to the virtual world, but also realizes the expansion of the biological dimension of human beings from the real senses to the virtual senses. The ecological environment of users in metaverse will be more integrated.

2. Core Driving Force

Everyone's concept of the positioning of the metaverse is diversified, but no matter from which point of view, its fundamental concept is inseparable from the internal economic system and the decentralized identity system.

A. Blockchain-based BTC economic system

ComingChat establishes an embedded ecosystem, that is, a simple, secure, and private global payment system and financial infrastructure. It introduces a business model of internal production. It only uses Bitcoin as the only M0 of the network. The most important thing is that we will not issue our own tokens in the network, and Mini Point will be the only cost of on-chain operation and maintenance. The network in which users participate will naturally promote the establishment of a social-economic network that benefits all users. The clear economic system in ComingChat satisfies the fundamentals of the metaverse and drives the development of the metaverse.

- **Technical Support**

   Whether it is technology or product, we aim to make Bitcoin available to more people. Based on our research and given the unique cross-chain technology of ChainX (established in June 2017), we decided to implement its BTC layer 2 network technology to achieve a completely decentralized cross-chain of Bitcoin and allow the network to support more transactions and relieve blockage.

   ChainX pioneered the adoption of a multi-signature light node cross-chain scheme. The user deposits BTC to the designated multi-signature address to generate the mirror asset XBTC on ChainX, which realizes the BTC on the Bitcoin chain to ChainX and becomes XBTC. With the launch of Substrate 2.0, ChainX will also be upgraded to ChainX 2.0 version in November 2020. In the 2.0 era, ChainX focused on the decentralized cross-chain of Bitcoin, continuously improved the degree of decentralization of cross-chain solutions, and built ChainX into a Bitcoin layer 2 network to solve the problem of high transaction fees and high latency of BTC.

At the same time, ChainX is combined with the Lightning Network. By deploying the Lightning Network and moving its off-chain node accounting to the ChainX blockchain network, it uses a decentralized accounting method to prevent individual node failures and individual nodes from doing evil, and achieve no custodial assets transferred across chains. A non-custodial approach is adopted to establish LBTC to realize the practical application development of Bitcoin non-cross-chain. By integrating the Lightning Network into the user's Bitcoin wallet application, we have combined the Layer 1 and Layer 2 accounts into one, avoiding the custodian involved in the process and the trust issues caused by it.

- **Mini Point is the only consumption of the metaverse**

ComingChat developed MiniX Chain with priority given to scalability, security, storage and throughput efficiency, and future adaptability. MiniX Chain is an open consortium chain based on the Substrate framework and adopting the aura + grandpa consensus. ComingChat will be the first use case to deploy its centralized digital identity and NFT applications to the MiniX consortium chain.

The MiniX Chain network supports the deployment of smart contracts in virtual machines and execution environments such as WebAssembly (Wasm) and EVM. Ecological applications such as Ethereum, BSC, Polkadot, etc. can be migrated and deployed on the MiniX Chain network. Therefore, with MiniX Chain, the value of Bitcoin is not only reflected in its investment but can achieve a richer application ecology than Ethereum. In the future, DAPPs that will access GameFi, DeFi, NFT, social and other fields will be created and developed on the basis of the Bitcoin ecosystem.

MiniX Chain will not issue tokens, but in order to prevent DDOS attacks on the chain, Mini Point will be issued, and Mini Point will be the only supported point system.

The total amount of Mini Point will remain at 1.25 times the total number of released CIDs, and Mini Point will be the only token on the MiniX chain. The ComingChat team uses sophisticated algorithms to control the total amount of Mini Points and the number of destroyed so that they can maintain value and liquidity. ComingChat will continue to be managed over time to

maintain the value of Mini Point. As a modular utility token, it can power the ComingChat network. This includes decentralized trading markets, governance of ComingChat clients, community management of content, and membership privileges such as auctions. We also proposed a Fiat-to-Mini Point trading platform, showing the development of the network based on our research on users.

B. Programmable decentralized CID identity system

ComingChat designs CID based on cryptographic digital identities to build a programmable global identity system. CID is the basis of human digital survival, as the only digital identity, and the only pass for human beings to enter the metaverse. This identity is used globally and only needs to be self-certified, without the involvement of any intermediary.

- **The total amount of CID issuance meets the needs of the global population**

  CID plans to issue 1-12 digits digital numbers, the total amount is close to 1,000 billion, which is enough to carry the global population. CID has nothing to do with any mobile phone number or email address and is only associated with the corresponding public keys and private keys. Public users can earn 6 digits or more through registration, and the number of issued digits may be adjusted to a certain extent due to the market or the team's future plans.

- **DApp accesses to achieve metaverse**

  Another major component of ComingChat is the DApp smart platform, which we position as a new information and collaboration application platform.

    o For **enterprises**, enterprises can use standardized templates to create DApps on the platform to complete automated chain deployment.
    o For **users**, each ComingChat user will have a unique decentralized digital ID-Coming ID (CID). You can use CID to conveniently log in

to various decentralized applications with one click without having to log in to each chain or register a set of addresses and private keys on all of them, just like using Google authorization to log in to the App.

3. Framework

The ecosystem currently built by ComingChat satisfies all our imaginations about the metaverse. By building a trusted metaverse that provides global users with decentralized identities, secure economic systems and private social platforms.

We are a platform that enhances user interaction services based on user needs, drives a decentralized **social** system through the blockchain, uses the cutting-edge technology of the Bitcoin ecological network to land on the actual **wallet** application of the Bitcoin network, and promote user governance participation through **DApp**, and provides the token economy through **GameFi**. At the same time combines the advantages of NFT, builds an **NFT ecosystem**, and in the future will provide immersive experience through more artificial intelligence functions, and will serve the digital transformation of thousands of industries and achieve high-quality innovative development.

A. Social

ComingChat is a brand-new social network constructed based on metaverse. In terms of user experience, it is the same as traditional social networks, attracting users to socialize, but its main difference is that it runs on the blockchain architecture from the beginning. Without permission and openness, it realizes a decentralized social world created entirely by users. ComingChat does not require any mobile phone number or email address, provides privacy, breaks the conventions of traditional social software, supports multi-currency payment, and builds user privacy on any rights and interests beyond traditional social attributes.

ComingChat implements end-to-end encrypted communication through the double ratchet algorithm, and uses asymmetric encryption technology to solve the trust problem between nodes in the system. The asymmetric encryption algorithm generates two keys: a public key and a private key. Each node has its own public key and private key. Each message in ComingChat is encrypted with an independent key on the terminal, and the original data is only stored locally, and the server cannot read any information. Users have the inherent right to control the retention of their legal data.

ComingChat uses distributed servers and uses distributed database technology to store each data backup in storage units distributed in different regions. There are dozens or more of them, even if a certain storage unit is attacked or destroyed. It will not affect the overall use of big data in the power grid, and the data stored in the destroyed storage unit can be easily restored through backup, which greatly improves the reliability of data storage. At the same time, the distributed database disperses the data call requests of each node, improves the concurrency of the database, reduces the cost of data transmission, and its high scalability also saves a lot of system capacity expansion costs.

B. Wallet

ComingChat, as a new digital asset product based on blockchain technology, has completed the establishment of a reliable and interoperable global payment system and financial infrastructure to provide frictionless payments to billions of people around the world.

ComingChat wallet will be composed of two parts at this stage, and the two parts work together to create a more inclusive wallet application.

- **Aggregated Wallet**

Aggregated (multi-chain) wallets use a set of mnemonic words as input and generate corresponding public and private key pairs according to different chain-specific algorithms to achieve the effect of a set of mnemonic words to manage multi-chain assets. ComingChat users can currently use a set of mnemonics to manage assets on the BTC chain, ETH chain, and ChainX chain.

- **Threshold Wallet**

Even if Bitcoin's multi-signature transactions account for 11% of the total transaction volume, the multi-signature wallets on the market are still extremely lacking. And since the signature process of a multi-signature transaction requires repeated data transfer, the mainstream solution mostly adopts the method of "storing transaction data on the server, using the identification number to read the transaction data, and completing the signature" to use the multi-signature account.

The traditional multi-signature technology acts on the blockchain transaction layer (or logic layer, which implements multi-signature logic through code), while the threshold signature acts on the cryptographic layer (private key generation and signature scheme). The traditional multi-signature using the ECDSA signature algorithm needs to transmit the signatures corresponding to multiple private keys on the chain, and each node must verify each signature separately. Therefore, each node has to pay gas fees. The threshold signature is to aggregate the private keys of multiple node users under the chain, and then transmit the aggregated complete signature to the chain, so only a gas fee is required.

C. DApp

ComingChat is committed to building a middleware platform that achieves the unity of all curriculum programming standards and accepts side loading, allowing developers and creators to freely access corresponding non-specific contract platform programming and deployment, including:
- Public chain smart contract platform: Ethereum, BSC, POlkadot
- Consortium chain: such as ant chain, Tencent chain
Personal programming

We believe that the design and management of an open and widely interoperable payment network should meet high standards.

- **GameFi**

(1) Mining
We have created a unique P2E mechanism that allows your NFT to work. Users only need to hold the NFT, and users can get the token KSX on the SherpaX network.

Each NFT will generate a specific computing power based on the number of bits on its card surface, and can superimpose the watermark on the NFT and the computing power bonus of the special card surface. Users can use the NFT Redeem mechanism to upgrade from low-digit NFT to high-digit NFT to increase computing power.

- **NFT Ecosystem**

ComingChat integrates the access of global digital identities and NFTs, enriches the social attributes of ComingChat through social elements, and integrates chat and social interaction. In order to build a true user-driven NFT ecosystem, ComingChat provides an NFT creation platform for the community to use. Whether you are a game developer, artist or NFT collector, users can use the NFT creation platform to create and make money.

At the same time, build an NFT trading platform to promote the trading and circulation of NFTs. ComingChat is more diversified in the design and planning of NFTs. At this stage, the unique identity card C-Card corresponds to NFT, and more elements will be added in the future, including C-Audio, C-Video, C-Media, etc., and it will even be displayed in the form of C-VR.

(1) NFT Creator
With the development of metaverse related infrastructure, there will be a variety of transaction behaviors, and then there will be a development of labor, productivity, and the use of NFT's digital identity will become more and more extensive, and NFT will be interspersed in the entire economic system. . NFT Creator is a platform for artists and designers to create and publish their own unique NFTs for use in the NFT Marketplace "*Comfuture*". The NFT creation platform encourages community participation and believes that community input should be rewarded accordingly. At this time, the metaverse is not the product of any industry giant, but the crystallization of the co-creation of countless individuals. It will form a new economic system on its own, allowing different participants to play their own roles on the platform.

By removing all technical barriers by understanding smart contracts, ComingChat will make the process as simple as possible and provide users with all the tools needed to earn rewards for their creations.

At present, creators can contact the ComingChat official team, submit NFT works, and officially publish works on the *Comfuture* platform. 70% of the final sales price will be sent to the creator wallet as NFT creation rewards.

(2) NFT Marketplace "*Comfuture*"

ComingChat NFT Marketplace "***Comfuture***" is a decentralized exchange where users can trade and auction CID NFT. In order to provide the best experience and the lowest fees, we have optimized the trading contract specifically for *Comfuture*.

Users can use Mini Point to trade on the ***Comfuture*** market.

Comfuture V0.0.1 was released in November 2021 as a semi-open trading platform, allowing creators to upload and users to purchase. ***Comfuture*** plans to launch a fully open trading platform with version V0.0.2, allowing all users in the ecosystem to trade. In the future, more blockchain projects will be connected. Our vision is that any NFT node should not be a single node, but each node can be connected to each other through the platform and the platform, the game and the platform, in order to enhance the interoperability of NFTs to increase the value of each unique NFT.

D. Virtual Reality

The future has come, and changes in user experience applications stem from changes in technology carriers. In the early days of the Internet, programmers used computers to develop applications. The development of computer performance and network bandwidth brought PC-side games. With the progress of network bandwidth and the application development of Flash technology, the development of terminal games has entered a bottleneck period. The desktop end is more able to attract users, and the development of the times has brought PC-side page games; later, due to the popularization of smartphones and the upgrade of 3G networks, users rely more on mobile applications, bringing new attention to mobile games And opportunity.

The changes of users to software applications change with the changes in the carrier, and now it is the era of transforming from mobile to virtual reality. The arrival of the metaverse will bring about the rise of a new batch of software applications, and the user's dependence on the original software applications will also undergo earth-shaking changes.

ComingChat will build and support the development of the virtual reality metaverse project based on the blockchain, which uses the world's advanced 3D creation technology to visualize user experience in the virtual world. Users can experience immersive content in metaverse, such as communication, buying and selling transactions, earning income, developing industries, and so on.

ComingChat hopes to create an ultimate virtual reality center and an encrypted space each, focusing users in an immersive and fascinating environment, where users can access encrypted information and immersive content in one place, and access different levels of blockchain Educational resources, virtual offices, games, and anything else you can imagine through virtual reality experiences.

When users log in to the virtual reality metaverse project with CID, they can not only customize their clothes to create a personalized image, but also choose to enter the metaverse space anonymously or non-anonymously. Different from using traditional electronic devices such as mobile phones or laptops to visit metaverse, users have the opportunity to experience more than just playing games. The scenes we provide with virtual reality will be more abundant.

Applying the BTC economic system to intervene in the digital world of Metaverse, users can make profits in the digital world. The integration of Metaverse and the real world will enable users to bring income from Metaverse into the real world, thereby fostering new product forms, Production methods, and consumption patterns.