

Technical White Paper

NewChat

v1.0

Next-Generation International Instant Messaging System Based on

Blockchain Technologies

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○ Overview

NewChat is a translingual instant messaging system platform created for users of various races, with diverse backgrounds, and speaking different languages.

NewChat is primarily designed for users in Malaysia, Thailand, Singapore, China, Indonesia, Japan, South Korea, and U.S. etc. and is currently available in multiple languages: Chinese, English, Japanese, Thai, Vietnamese, and Bahasa Malaysia. Besides, it realizes instant translation between these languages, helping users through their language barriers.

NewChat v1.0 provides a number of features, such as cryptocurrency wallet, cryptocurrency transfer, cryptocurrency red envelope, instant translation, instant messaging (including texts, voices, emotions, images, videos, name cards, geological positions), group chat, video calls, voice calls, burn- after-reading, mobile contact based friend finding, official accounts, square and moments (realizing features of posting new messages, videos, images, links, like, comment), and wallet top-up, etc. (Some features may not be available in the beta versions).

In the upcoming version 2.0, NewChat will build a decentralized instant messaging system based on the blockchain technologies (with over 20 super nodes globally). In addition to the free and easy-to-use application that has been realized in the existing version, additional features, such as enhanced security, privacy protection and encryption will be added to NewChat. It also works out a solution that helps users who are totally strangers to cryptocurrency to use and manage their cryptocurrency easily, and the decentralized consensus mechanism will help to build a contribution valuation and reward system in the fields of content production.

The decentralized features allow NewChat to realize real-time encryption and data storage: decentralized application are causing a series of problems and troubles, such as system breakdown, security bugs, zero anonym, and zero privacy, etc. In the physical world, all our transaction records, online dialogs, interpersonal interactions, attitudes and opinions are stored in centralized servers which put them in dangers of information leaks which once occur will put us in a position like walking naked on the streets.

We are now in world with fast expanding information. Every person will leave numerous traces on the Internet every day, and people are in urgent need of better privacy protection and information security. In December 2015 when Brazil finally called off its WhatsApp ban and censorship on social media, people in Brazil were surprised to find that their freedom of expression was limited and they need a decentralized messaging system more urgent than ever. The system will can neither be shut down or be subject to any censorship, and won't be attacked by hackers easily. Privacy and security should be the invisible but underlying features of all applications.

All prevailing IM applications today are centralized applications: WhatsApp, Skype, and Viber, etc. These applications realize message transfer and exchanges on and via the servers deployed by their operators. This means that every application may be impacted by the low efficiency of centralized platforms:

system breakdown, security bugs, zero anonym, and zero privacy, etc. Given the current situations, the mainstream users are appealing for a highly secure and efficient IM solution that is based on and driven by the blockchain technologies.

Some efforts have been made so far to create a decentralized platform, such as CoinSpark and Blockom. The needs for decentralized solutions are invincible, and even the US Defense Advanced Research Projects Agency (DARPA) and the British Commonwealth are attempting to establish their blockchain based IM systems. However, none of these solutions become popular among the large conventional institutions, because all these decentralized solutions are not designed for public use. Development projects of governmental organizations are 100% confidential, and some other solutions by large private organizations are developed for users with experience on digital assets.

NewChat focuses its development on blockchain technologies and applications and builds decentralized instant messaging apps for the general public that realize private messaging through p2p interaction. Messages from User A will be sent directly to the mobile device of User B, vice versa. The messaging process involves the two peers only and no servers will be involved (currently centralized servers are required, but 100% decentralized messaging will be realized in future versions.) The p2p messaging process ensures the high privacy of messages. A user doesn't have to worry about information leaks due to the loss of his mobile phone or any other external factors in the messaging process.

As such, NewChat not only passes on the free and easy-to-use features on conventional centralized IM applications, but also provides improved security and privacy protection and high-performance encryption. With the blockchain "memo" sending hash codes via the InterPlanetary File System (IPFS), the message may only be read by the targeted receiver and all audios and videos are encrypted in the transmission process. This helps to avoid the risks of information leaks, potential malfunctioning, security bugs, zero anonym and zero privacy, when messages are sent by the company server via centralized platforms.

By adding a decentralized messenger to the blockchain, it helps users to receive and decode the messages received, but it will consume much system resource, which is almost impossible for mobile devices. This has become the common barrier challenging all applications of similar nature. However, in the NewChat solution, users merely need to download a specific part of the blockchain, other than the entire chain. This reduces the power consumption and data transmission and processing load, and

also reduces the time consumption on the platform.

Besides, NewChat is targeted at global users other than users in a specific region. Currently, most social media applications in China are regional solutions and are in lack of effective security protection mechanism. Many popular China-based IM applications are barely usable outside China, and users inside China cannot access some foreign IM applications normally, such as Twitter and Facebook. NewChat users can communicate with others in different countries totally barrier-free, regardless of your physical location, because NewChat creates a number of nodes using the blockchain technology and all transmission via such nodes are free from regional restrictions.

Cryptocurrency transfer:

In addition to conventional message transmission features, NewChat also provides a solution to fund transfers problems challenging various banks. Although Wechat has become a major power in Chinese IM industry, its users must endure strict censorship by Tencent and are exposed directly to the risks of centralized payment settlement systems on Wechat, because their transactions cannot be encrypted.

On the other side, NewChat protects user data using encryption technologies, so that user assets can be transferred seamlessly using the blockchain. In the future, more digital assets will be supported on NewChat. NewChat users don't have to remember the addresses of digital assets or any specific data, and they may send the bonus, assets and rewards simply on the chatting window, or alternatively, they may send their funds to any user with a known user ID or via a QR code. Companies may create their company account on NewChat, to receive the funds transferred.

With NewChat, fund transfer is 100% free and a large number of digital assets will be supported in highly secure transactions, while users have full access to account management tools that are much more advanced than systems currently available.

On NewChat, users may trade their assets in stable currencies, such as Euro, USD and Renminbi, as well as other digital assets, such as BTC, Ether and Litecoin, etc. for other currencies, assets, stocks, bonds and ICO tokens, making NewChat a perfect global platform for these transactions.

Contribution valuation and reward system in the fields of content production:

In the past, active users and high-quality content producers and spreaders have created mass traffic and profits of millions of dollars for famous social media and network, such as Facebook, Twitter, Reddit, Weibo, and Zhihu, as well as other UGC (User Generated Content) platforms. However, these content producers have incomplete control over the content they have produced, and therefore cannot benefit fully from the content they have produced.

On the other side, some articles with marketing purposes, such as some paid marketing articles

become highly rewarding as they easily convert potential users to buyers, but these articles have badly narrowed the space for high-quality articles in various online communities. All these situations have put high-quality content creators in a poor position to stay active and creative. High-quality user generated content (UGC) is the core value of Zhihu, a popular QA platform in China. However, UGC does not create values directly and therefore can barely be valued, as the UGC is highly fragmented, so that the beneficiaries of UGC - the platform and readers - cannot reward the content producers effectively and reasonably. The entire UGC industry is in lack of a reasonable incentive mechanism to encourage high-quality content producers.

By using the blockchain technology, NewChat provides a perfect solution to these problems. NewChat provides a user contribution valuation and reward system that is developed under the ERC20 standard of Ethereum and based on blockchain technologies by using the decentralized consensus mechanism, so that content producers, investors, screeners and ecosystem builders can all receive reasonable incentives and rewards.

I. NewChat Vision and Solution to Existing Challenges

1.1 International payment

Country-specific currencies cannot flow efficiently across different countries, hindering international communication of users. In addition to conventional messaging features, NewChat also provides a solution for fund transfers that are challenging various banks.

Fund transfer may be realized seamlessly on the blockchain and in the form of cryptocurrency. NewChat users don't have to remember the addresses of their cryptocurrencies or any specific data, and they may send their funds to any user with known user ID or via a QR code. Users, on the other hand, don't need to endure the censorship and may have their transactions encrypted and enjoy the convenience and security of decentralized financial settlement systems.

1.2 Well protected user information and privacy

Most people are not very sensitive to security, privacy and decentralized features. In the physical world, all our transaction records, dialogs, interpersonal interactions, attitudes and opinions are recorded by centralized servers. This is very dangerous, because any system breakdown or willful manipulation may result in information leaks.

Try to imagine the incomparable convenience when we send funds, assets and incentives simply on the messages window of most popular messaging applications.

With NewChat, users can share their most private ideas with their most intimate family member or friends in an absolutely safe manner.

Our vision is to integrate the safest social media with digital fund transfer features into one single application and to present it free of charge to all users with Internet access.

1.3 International copyright protection

In recent years, a global consensus has been reached on the great importance of copyrights. Content producers in various fields are doing all their best to bring forth high-quality content, however the copyright protection measures are limited to specific countries and full of defects.

In the NewChat ecosystem, blockchain technology will be used to package user content (including user information, content details and time information) into a block, so that it can be broadcasted across the network and validated by some nodes. In this sense, all users across the blockchain have clear knowledge of the ownership of the copyright to the content in the block, making it an ideal copyright protection mechanism applicable globally.

1.4 A fundamental solution to incentive mechanism

Despite that content producers have brought huge traffic and profits to many social media platforms, they don't seriously have full control over the content they have produced and can barely benefit from such content.

Take Zhihu, a QA platform in China, as an example, Zhihu has currently 65 million registered users who generated over 6 million questions with 23 million answers and 1,510 thousand articles in the year 2016. After series D funding, Zhihu is worth US\$ 1 billion today.

However, the value creators on zhihu - high-quality content producers, receive barely anything other than respects in return, and their contribution to the platform can hardly be converted to physical rewards. On the other hand, some articles with marketing purposes, such as some paid marketing articles become highly rewarding as they easily convert potential users to buyers, but these articles have badly narrowed the space for high-quality articles in various online communities. All these situations have put high-quality content creators in a poor position to stay active and creative. Based on these facts, both the platform and readers are in lack of suitable channels to reward the high-quality content producers and to encourage more high-quality content from them. The entire UGC industry has no reasonable incentive mechanism to reward and encourage the high-quality content producers.

This problem may be solved from the root when blockchain is employed. Producers of high-quality content can receive reasonable rewards and positive incentives, so that they are more willing to post high-quality content on the website. However, low-quality content producers cannot receive such rewards and are knocked out as they lose the dynamics for content creation.

NewChat hopes to build a next-generation international instant messaging system using the blockchain technologies, to contribute to the globalization of digital assets, to the blockchain industry and to the entire human world, by providing every user participating in the content generation, spreading and screening with a positive reward.

NewChat is devoted to the borderless communication of users in the worlds of blockchain, enabling users to manage and access their own digital assets easily.

II. NewChat Features

2.1 Features in NewChat v1.0

2.1.1 Instant messaging

2.1.2 NewChat breaks the geographical limits of the communication industry.

In the NewChat ecosystem, users are set free from restrictions from countries and regions and communicate their ideas freely on NewChat. Users can communicate with their contacts on the mobile phone, existing users and friends in various forms including texts, images, emotions, voice and video and may transfer and receive files to and from their contacts. Besides, voice and video calls are totally free for international users. Users are also allowed to create their private online chat room, realizing instant and easy communication with other users.

2.1.3 Burn after reading

A user may set the selected texts, images or videos as burn-after-reading, in which case the message will survive only a preset period of time. After the message is sent to a friend, it will be destroyed automatically after the expiry of a preset period of time. This feature is especially valued by users who are sending secret or sensitive messages, and works well to protect the message from unauthorized leak.

2.1.4 Digital asset red envelope

In the NewChat ecosystem, users from different countries can buy the NewChat digital assets using the legal currency in the local host country and the international users may send the digital assets in red envelopes to other users, and the receiver can receive the assets free from any restriction.

2.15 Cryptocurrency

NewChat allows users to launch an ICO for his cryptocurrency, and holders of such cryptocurrency are able to trade such them for legal currencies via the platform. Users get credit rewards when they use the system, and when their credits accumulate and reach a certain number, they may be converted into the cryptocurrency supported in the NewChat ecosystem.

2.1.6 Square

All NewChat users are free to post their content in the Square, and such content may include texts, images/photos, videos, articles, and links etc. The system will have the user content (including user and content details and time information) packed by using the blockchain technology, and these elements form a block which may be broadcast in the network, so that other nodes are able to receive

and validate these blocks. In the NewChat ecosystem, all users will be able to know the ownership of the content, so that the copyrights are well protected globally.

2.1.7 Instant translation of dialogs, articles and comments

NewChat provides international users with language barrier-free communication. After the translation function is activated, when a user sends a message to a foreign user, the translation of such message in the local language of the receiver will be displayed right under the message.

In scenarios with the Moments and Square, the translation features still work well. A user may choose to translate his Moments and Square posts into the desired language, to facilitate the spreading of such content and gets feedbacks from other users who have viewed such message, thus enhancing cross-cultural communication between international users.

2.1.8 QA system

The QA system is able to link up users from different countries and industries, so that they may share their knowledge, experience and insights, providing the ecosystem with continuous information in diverse forms. Although the Wikipedia and other similar platforms are providing answers in relation to almost all concepts, the QA model still works effectively to integrate divergent ideas.

2.1.9 Wallet

Most prevailing IM applications don't provide any wallet of digital assets or other tokens and don't allow transactions of some popular digital assets. But on NewChat that is developed on blockchain as its core technology, it allows and ensures the offering of digital assets on its APP.

2.2 Features in NewChat v2.0

2.2.1 All-in-one wallet

- Support various types of wallets, easy to import or export;
- Support various types of cryptocurrency, including Ether and BTC; more cryptocurrencies to be supported in future updates;
- One-button to add digital assets, to track transactions in real time, so that users stay focused on the balances;
- Real-time presentation of exchange information on all major exchanges across the world;
- Early warning of price changes, missing no investment opportunities;
- Built-in transaction and conversion service, easy to use.

2.2.2 Transnational tipping for article, image and video

In the NewChat ecosystem, users have access to fresh news across the world together with personal insights and comments, and may tip the author by using their cryptocurrency for the articles, images and/or video posted, so that the content creator gets rewards for their contribution and is encouraged to produce more valuable and higher-quality content in the open community.

2.2.3 Global advertising market

The advertising system helps to increase the liquidity of cryptocurrencies, to increase the revenue of platform operators and users. NewChat may introduce the pricing system based on “time length and/or ads positions” .

BuySellAds.com is a global leader online advertising market, and its primary business is to sell time priced advertising spaces to website operators. NewChat adopts similar pricing models by providing an ads market in its wallet, displaying the ads spaces and costs provided on various platforms together with the performance and history data (such as income, content and quantity, etc.) of such platforms on the blockchain platform as a reference for users, while users on the other hand may bid and benefit from the ads.

The time lengths of advertisement display is determined by smart contracts.

2.2.4 Global paid user group

In the NewChat ecosystem, users are allowed to create their private communities and set a number of tokens to be paid for other users to join his/her community.

2.2.5 Paid access to articles, audio, video, streaming media and courses

Content producers including without limitation to the creators of articles, audio and video program, online live shows and courses, may price their content all by themselves, solving the troubles of monetizing their content.

2.2.6 Paid answer

The QA system is able to link up users from different countries and industries, so that they may share their knowledge, experience and insights, providing the ecosystem with continuous information in diverse forms. Also, a user may pay to senior practitioners for answers to their questions, while others have to pay to view the answers. In this way, it can significantly improve the quality of answers, so that the questioner gets professional answers while the answer provider gets rewarded and is encouraged to provide more high-quality answers.

2.3 Features in NewChat v3.0

NewChat v3.0 will enhance the privacy protection in user interaction, and reshape the way of communication thoroughly by using the blockchain technologies. So far, IM applications such as

Wechat are implementing the real-name system, but in NewChat, the p2p communication can fully protect the privacy in user interaction.

Since no server will be involved in this process, all user terminals may be seen as a server end. Besides, node servers are to be set up in over 20 countries around the world, and all messages are transmitted in encrypted formats, so that they are secure and well protected by encryption. All records are stored only on the user's mobile phone and cannot be recovered once the message or files stored on the blockchain have been destroyed.

2.4 Features in NewChat v4.0

2.4.1 Mining

A user may mine on the NewChat platform and receive tokens, i.e. NC (NewChat tokens issued on the platform) as rewards.

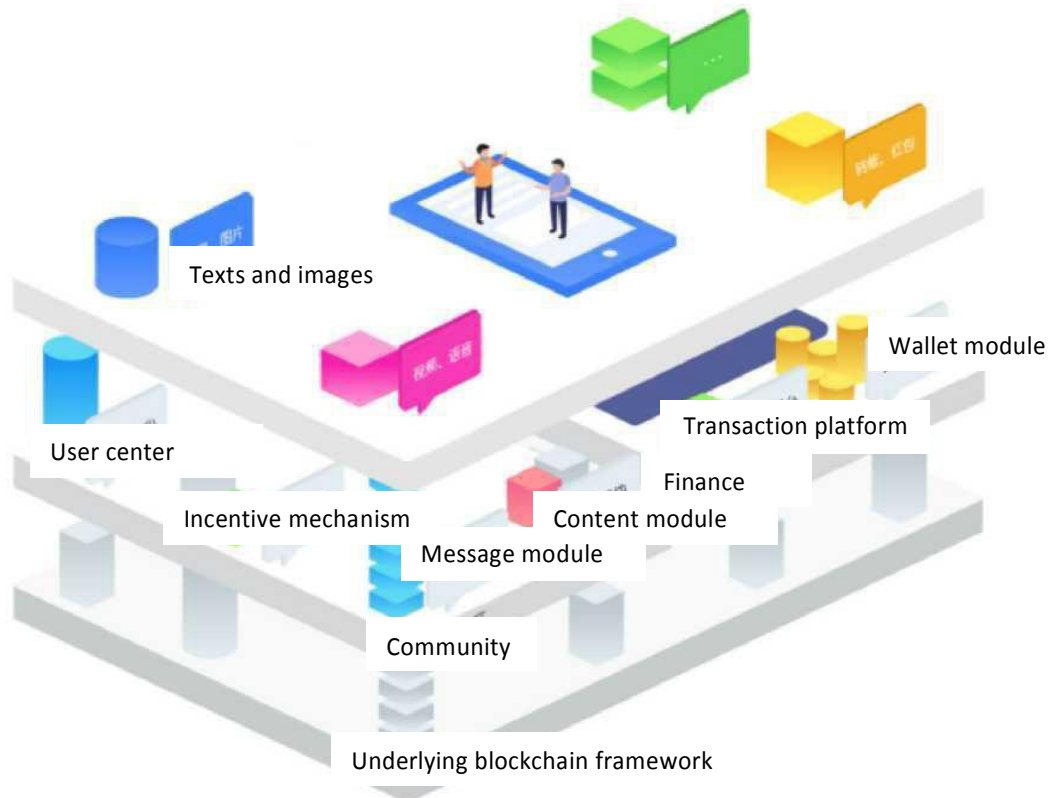
2.4.2 E-Commerce

With the E-commerce module, users may use their cryptocurrency (NC) in purchasing products such as clothes, and daily supplies of various kinds, and such purchase will be free from any regional or country restriction.

2.4.3 Gambling

Users may also bet and play gambling games by using the cryptocurrency (NC) on the platform. The games may be played in many forms, and since it is developed on the basis of blockchain technologies, all entries of operation records will be stored on the blockchain where it cannot be altered.

III. NewChat Product Architectur



3.1 Product architecture

The NewChat ecosystem takes blockchain technology as its underlying framework and builds its chat community and financial modules on the framework. The chat community includes several modules: instant messaging, community content, incentive mechanism and user center. The financial module includes a transaction platform and a wallet module.

3.2 NewChat product components

3.2.1 Account system

NewChat provides a complete account system, and users can join the NewChat ecosystem simply by registering using his mobile phone number.

NewChat provides every user with a unique digital ID and a dedicated NewChat wallet, and these data will be recorded and written into the NewChat blockchain network.

With the unique digital ID, users can access all services on NewChat without any limitation and enjoy the easy but powerful features provided on NewChat.

3.2.2 International communication

In NewChat ecosystem, users are not limited to specific regions and/or countries and are free to register and communicated on NewChat. Users can launch and complete online communication with their mobile phone contacts, existing users and friends.

Such communication may be in various forms, including texts, images, emotions, voice and video and may transfer and receive files to and from their contacts. Besides, voice and video calls are totally free for international users.

A user may set the selected texts, images or videos as burn-after-reading, in which case the message will survive only a preset period of time. After the message is sent to a friend, it will be destroyed automatically after the expiry of a preset period of time.

International users may send their cryptocurrency via red envelopes and the receiver will be able to receive them with any limitation or restriction.

NewChat provides international users with barrier-free communication. After the translation function is activated and the desired target language is set, when a user sends a message to a foreign user, the translation of such message in the preset local language of the receiver will be displayed right under the message.

3.2.3 Content release

NewChat allows users to publish contents in various types of media: texts, images, video, links and QA. In the upcoming updates, more content types will be supported, such as check-in, article transaction and streamline broadcasting, etc.

3.2.4 Interaction

The interaction module includes: Like, Comment, Tip, and Share, etc.

3.3 What is NC

NC is the cryptocurrency issued on NewChat and its holders may trade them for other cryptocurrency or the local legal currency at the digital currency exchange.

Users receives NC by:

- registering with and using NewChat;
- trading for NC at a certain exchange rate at the cryptocurrency exchange using legal currency or other cryptocurrencies.

3.4 Advertising system

NewChat wallet provides a built-in advertising market where advisers can release their ads and users may earn their NC by promoting a certain advertisement. Besides, the advertising system helps to increase the NC liquidity, thus increasing revenue of the platform operator.

At the initial stages, NewChat is planning to introduce the pricing system based on “time length and/or ads positions”, while in upcoming updates, more flexible charging models will be introduced to the ads market where the content, type and rewards of various ads will be displayed and users are able to check his history earning data. Advertisers can pay their users by NC.

3.5 Content revenue allocation system

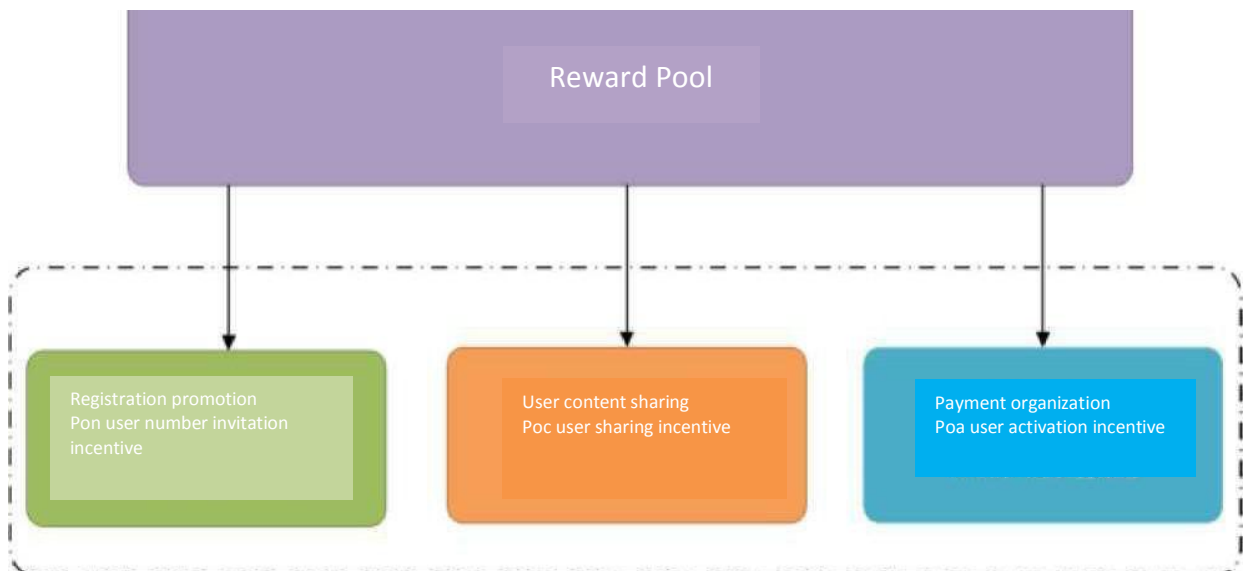
In NewChat ecosystem, users are allowed to invest in excellent content created and produced by other users and receive a part of the revenues earned by such content, while the content producer (the investee) can also earn a lump payment as well as follow-up revenue allocation out of the content.

The content producer may set his post to an Investment mode as well as the revenue allocation method and investment deadline. Within the deadline, content investors can invest in the content by shares, and the content producer can earn his/her lump-price payment, and after the lockup period, revenue from the content will be calculated by smart contracts and allocated among the content producer and investors.

IV. Incentive Mechanism

NewChat sets up a special ecological reward fund which uses NewChat cryptocurrency (NC) as the only valid reward on the platform. The platform establishes a triple reward mechanism by employing P0A (Proof of Activity) + POC (Proof of Contribution) + PON (Proof of Number) algorithm which is specifically to reward contributors to the construction and development of NewChat ecosystem.

The reward pool calculates incentive allocation every 24 hours and automatically distributes rewards (tokens) to participants' personal wallet as per calculation result.



Three incentive mechanism used on NewChat

4.1 Reward Pool

Reward pool is a reward fund pool exclusively used for rewarding contributors to construction and development of NewChat ecosystem. Ecological incentive fund carries out automatic replenishment of reward pool in light of elastic coefficient of rewards every day.

4.2 Community rewards - PROOF OF ACTIVITY

Rewards are distributed in the community by using the POA (Proof of Activity) algorithm, i.e. the cryptocurrency in the Reward Pool will be distributed to each community administrators on the basis of their activity.

According to the POA algorithm, the reward pool calculates the statistical data community by community, including the effective DAU, entries of messages, word number, effective messaging users, daily online users, effective chat duration, maximum online users, number of new users. The activity of a community A_m may be expressed as:

$$A_m = \sum_{i=1}^k a_i F_i$$

Where, k represents total number of factors, F_i represents the value after normalization algorithm of each factor proven by community activity and A_i represents the weights of different factors.

New digital currency whose daily distribution quantity is R . All built communities are included into the distribution scope for calculation and distribution. The reward (R_m) a community administrator is:

Where, N represents quantity of communities in the whole ecology at the moment of distribution.

4.3 User Rewards - PROOF OF CONTRIBUTION

In the NewChat ecosystem, users of the Moments and Square also receive certain cryptocurrency rewards every day. Rewards will be given to active users of Moments and Square on the basis of the POC (Proof of Contribution) algorithm and contribution.

NewChat calculates the User Level L_n by taking overall account of the browsing data, Likes, Comments, Tipping, Forwarding data after the content is posted, as well as the behaviors of the user at the Moments and Square, including his browsing, likes, comments on posts of other users, specifically:

$$L_n = \sum_{i=1} a_i O_i$$

Where, O_i represents the value of times of user's single behavior after normalization algorithm. This includes all user behaviors, such as Likes, Comments and Posts, whether active or passive. A_i represents the weight of each behavior. For O_i , different behaviors during the fixed time period have different threshold values. User level won't be influenced by such behaviors after the threshold is exceeded.

NewChat ecosystem will give out rewards via POC mechanism for awarding all the users making contributions to Circle of Friends and square that very day every 24 hours.

When users' contribution degree of Circle of Friends and square is C_n , by means of calculating the active behavior of single user for S number and passive behavior:

Where, S_i represents the value of times of single active behavior after normalization algorithm and α_i represents the weight of such active behavior, β_i represents the weight of a single passive behavior, and L represents the number of users of a passive behavior.

$$C_n = \sum_{i=1}^n \alpha_i S_i + \sum_{i=1}^n \beta_i \sum_{j=1}^L L_j$$

4.4 Rewards for user promotion - PROOF OF NUMBER

Users in NewChat ecosystem receive cryptocurrency (NC) rewards for their sharing and promotion behaviors. The rewards will be calculated on the basis of PON (Proof of Number) algorithm.

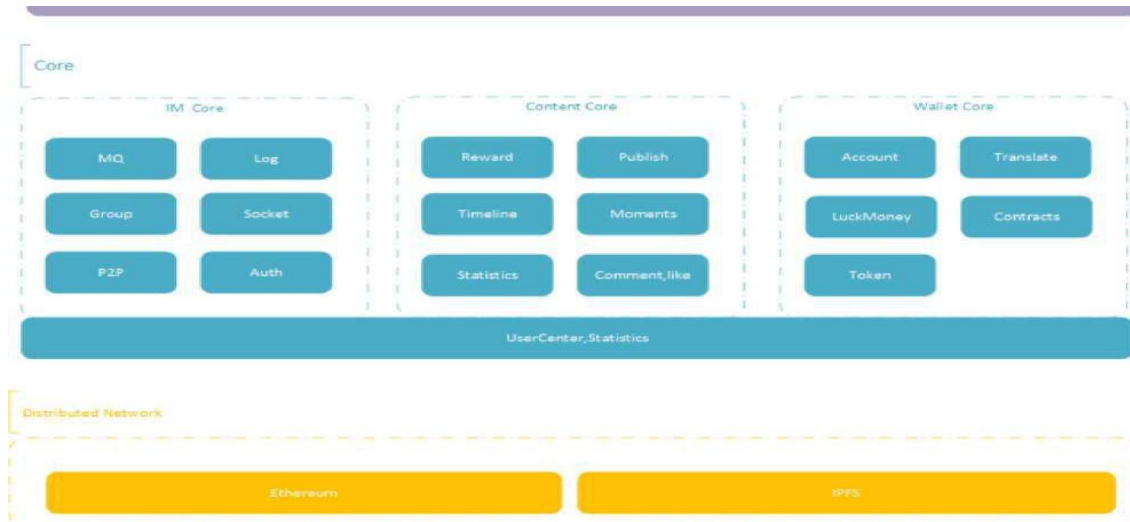
After each successful promotion, a contribution credit will be assigned to the user.

NewChat automatically distributes exclusive promotion link to each user via program. According to such data as times of the user sharing the link, times of the link browsed, number of users of the link newly registered, the reward (N_m) given to each user is calculated:

$$N_m = \sum_{i=1}^n a_i O_i$$

V. Technological Realization

The overall technical architecture of NewChat is a three-level structure:



Client, core features and underlying architecture.

5.1 Client End

A client end refers to various terminal devices provided by NewChat, including iOS, Android and H5 devices, in order to cater to user needs. NewChat also provides a set of RESTful APIs with complete functions. Developers from other companies can develop their own applications based on NewChat and also directly access core library of chat with the messaging module quickly, in order to integrate the messaging features to their products easily and quickly.

5.2 Core function upgrade module - I

A client end may access NewChat services via the RESTful APIs. NewChat provides users with RESTful APIs with high availability, high concurrence and high performance, and the NewChat platform will build a series of components such as load balance, log storage, service monitoring, message queue, authorization verification, group, wallet, smart contract, unified account, data statistics and other components.

Among such components, UserCenter provides the basic account service. The account will combine with Ethereum account based on the optimal method. Various services of NewChat will be conveniently and quickly used in the case of ensuring user capital is absolutely safe. Statistics module tracks and records various core operations in the NewChat system, for purposes of data analysis. Data analysis covers group activity calculation, calculation of user content contribution degree, user registration and calculation of invitation commission.

IM module provides various basic services regarding chat communication, including various basic services such as message queue, group, P2P messaging, push message and long link.

Wallet module provides account service based on Ethereum as well as various cryptocurrency services such as smart contract and Token. NewChat will build the developer platform at the same time and any developer can develop third-party application based on the interface provided by NewChat.

When developer platform is online, NewChat will provide perfect technical file and sample program to facilitate developer to get started quickly.

5.3 Core function upgrade module - II

Some of the core services of NewChat are based on the basis of blockchain technology. NewChat blockchain is developed on the public chain of Ethereum and plans to push out public chain more suitable for social scene in the future.

5.3.1 Account

User' s unique digital ID;

5.3.2 Token

NewChat token, known as NC, is developed under the ERC20 standards. User can check his NC balance with NewChat foundation, using any application supported by the ERC20 standards. Before the dedicated public chain of NewChat fails gets online, NewChat will launch an ICO based on Ethereum, and the tokens will be transferred back to NewChat public chain once it is ready. The transfer will not produce any influence on user's access to his digital assets.

5.3.3 Smart contract

The "Smart Contract" of Ethereum is Turing-complete. All the constraints have been included in the smart contracts that form the underlying layer of NewChat. The following sections explain how some smart contracts are executed.

At NewChat, anyone can create one group by paying certain NCs. For the purpose of marking uniqueness and ownership of the community, group information and its affiliation will be written into the smart contract.

Core operational data of the community will be stored in the intelligent contract of NewChat, such as user scale, user activity and retention, and dynamic incentive, etc. POA based group rewards allocation algorithm;

POC based content producer rewards allocation algorithm; PON based rewards for invited registration; and Other rules to be included from time to time, based on the development of NewChat.

5.3.4 IPFS

IPFS network is fine-grained, distributed and easily united content distribution network. Graph, video, document, etc. produced by the user in the dynamic of NewChat will be stored onto IPFS.

NewChat will carry out statistics for resources used by each community. When abuse of resources by the user is found, measures such as warning and banning account will be taken against such user.

VI. Technical Summary

NewChat better combines block chain technology to social communication system, solving problems which fail to be solved by the traditional internet technology and creating a brand-new ecology. It's believed that new experience will be brought to the user. Normal user is enabled to realize barrier-free docking of global block chain digital asset world and enjoy convenience incurred by blockchain technology.

The White Paper only provides an overview of the technologies of NewChat. Technology is endless with communication without borders, so This Technical White Paper of NewChat will be updated from time to time, to include more features in the NewChat ecosystem. In the meanwhile, NewChat will create an open and win-win technical ecology. Welcome global developers to participate in and advance to the progress of ecological system technology of NewChat.

NewChat Team

May 7, 2018