Yee: A Blockchain-Powered & Cloud-based Social Ecosystem

(Draft)

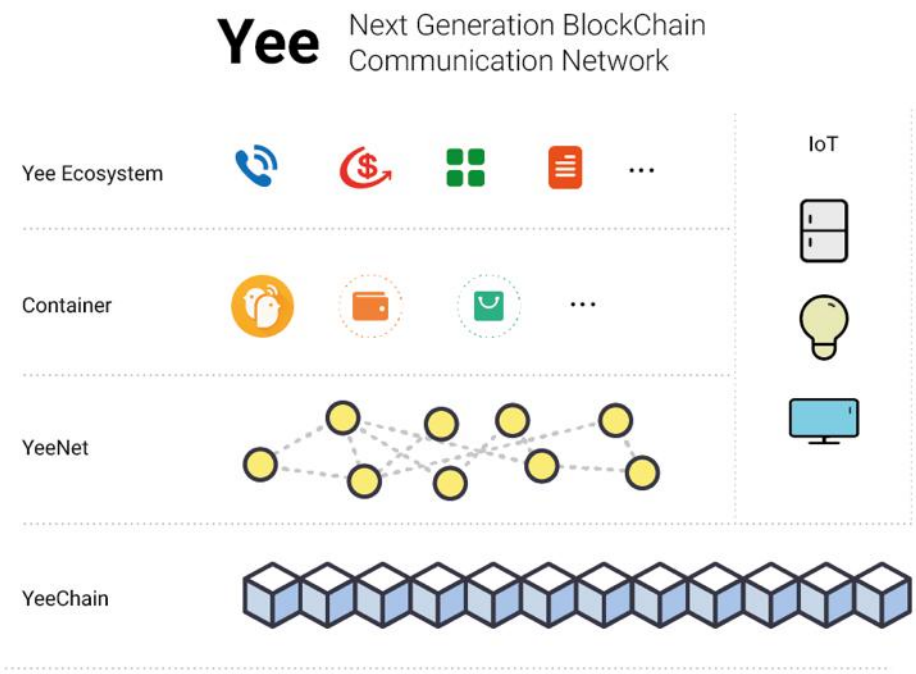
Yee Foundation English Version · January 2018

Project Overview

The continued development of digital currency, there be supported by broader application scenario. Despite the existence of numerous blockchain projects at present, those with large-scale in production applications are still scarce, and the number of user-facing services is few; Yee is expected to be the largest project affecting hundreds of millions of users and become a market leader. Yee is a blockchain-based cloud communications network and decentralized social ecosystem.

The project contains the following four parts:

(1) YeeChain: a blockchain that supports fast transaction and high-efficiency storage
(2) YeeNet: a cloud communication network based on YeeChain
(3) Example application in production: YeeCall, YeeWallet, DApp and content management platform YeeStore
(4) Yee ecosystem concept and scenario examples



Project Highlights

1. Yee has many powerful partners: Lead partner YeeCall, is an international Internet company headquartered in Singapore (YeeCall is also a global strategic partner of Facebook and Google), and has more than 10 partners that have more than 100 million users worldwide;

2. YeeCall has established a communication network covering 227 countries and over 1000 carriers. With 5 data centers and more than 400 relay nodes, 70% of traffic is efficiently delivered in P2P mode, and today this network has evolved to IoT-compatible networks;

3. YeeCall has more than 30 million registered users, these users are located in Southeast Asia, Europe, the United States, India, and the Middle East, YeeCall has formed an acquaintance-based social network.

4. The team has over 10 years of technological experience in the communication industry and over 3 years of technological reserve in the areas of artificial intelligence and blockchain. They have operated over 3 products with over one hundred million users globally each.

Token Allocation Plan

Yee project will issue encrypted digital currency Yee Token, abbreviated to YEE in the rest of this document. Yee plans to issue 10 billion YEE, the distribution plan is as follows:

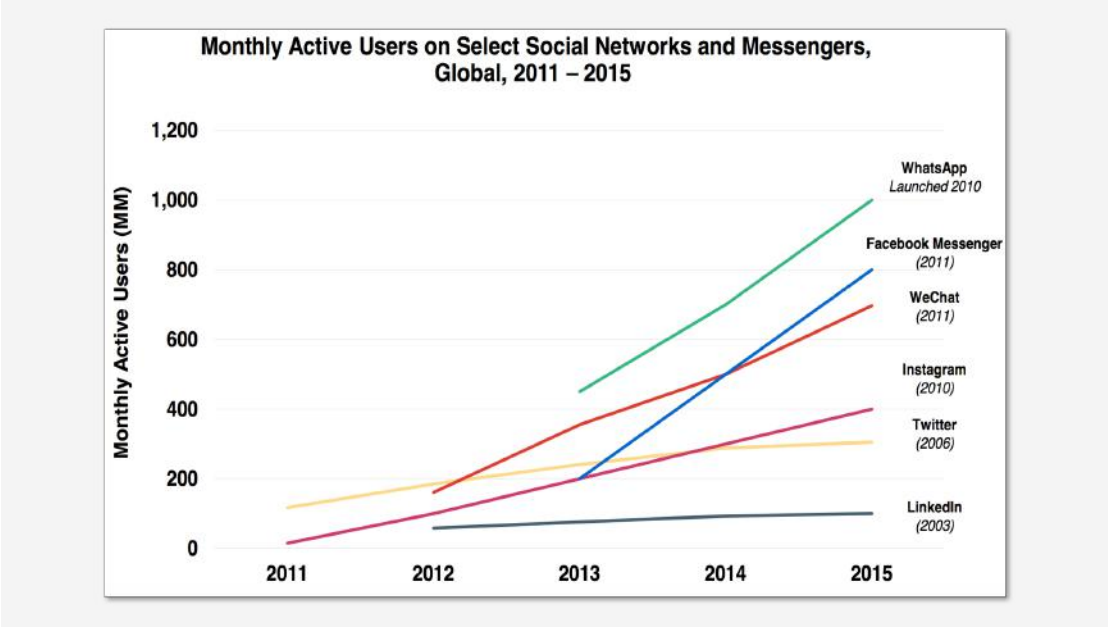
Proportion	Distribution plan	Detail
20%	Pre-Sale	For Yee project future development, talent recruitment, market promotion. The use of this part of the funds needs regular publicity.
30%	Ecology Incentive	Users can be rewarded by for certain behaviors on Yee ecology platform (such as YeeCall) or WhatsApp, Line, WeChat. This portion accounts for 30%, will unlock in eight years, and will never have an additional offering. It will unlock 5% annually over the first four years,

		and 2.5% annually over the next four years.
25%	Foundation	This portion will be the development reserve fund of Yee, for YeeChain and YeeNet projects research, development and ecology construction. The use of this portion of fund requires the resolution of the Foundation and advance publicity.
10%	Partner Agencies	This portion of fund is used to repay existing partner agencies and set up business cooperation with relevant enterprises. When tokens are issued they are locked by the smart contract. Starting the first quarter of trading, the tokens are unlocked 5%(out of this portion) quarterly, and the unlock completes in 20 quarters.
15%	Founding Team	This portion of fund is to reward the founding team for exploration and development in the field of digital currency, as well as the future expense in maintaining the product technology and operation development of YeeNet, YeeCall, and etc. When tokens are issued they are locked by the smart contract. After one month, the tokens are unlocked 1/30(out of this portion) monthly, and the unlock completes in 30 months.

Contents

1 General Information

In the mobile Internet era, instant messaging has become a super portal of users and data traffic, WhatsApp, Facebook Messenger, Line and WeChat and etc. all have a great number of customers, high usage frequency, and extensive session time.



Source by: Mary Meeker: 2016 Internet Trends Report

In China, WeChat became an ecosystem leading the new mobile economy era, assimilating economic value into the communication system. Chatting, social media, online payment and other digital services have begun to play an important role in people's daily life. Instant messaging system hosts people's network of relationships, daily communication and access to information. The rapid development of mobile payment has made service and merchandise acquisition and transaction as convenient as chatting. WeChat and other communication systems have integrated financial services such as merchandise trade, offline services and even wealth management and insurance, and have increasingly become an important infrastructure in modern society.

Yee team believes that there are three factors that make WeChat and other communication systems a social infrastructure: enormous users base, acquaintances based credible relationship network, and universal friction-free online payment solution. Yee team is keeping a close eye on the momentum of decentralized,

convenient and universal technologies such as Bitcoin and Ethereum. These blockchain based networks provide an open source model, and prosperously build new digital ecosystems. Large-scale communities can encourage digital economic development on the basis of this kind of networks. In an ecosystem like this, consumers can communicate with their friends and families, and conveniently pay for content creators and merchandise or service provided by developers, so that the creators and developers can provide more outstanding products with these economic rewards. Meanwhile, this system is a decentralized one, both economic value and governance is distributed among network stakeholders instead of a single and centralized institution. This will somewhat alleviate people's concern about stability and privacy protection in large networks.

Based on up to 10 years of communication technology experience and understanding on the development and operation of YeeCall in the past three years, and insight of blockchain technology's potential influence on current mobile Internet technology and breakthrough product innovation, we are striving to construct a YeeChain system supporting fast transaction and high-efficiency storage on the basis of current blockchain technology. And on top of YeeChain, we are updating YeeNet to be a decentralized distributed cloud communication network supporting peer-to-peer, groups, live broadcasting and Internet of Things(IoT). And we will:

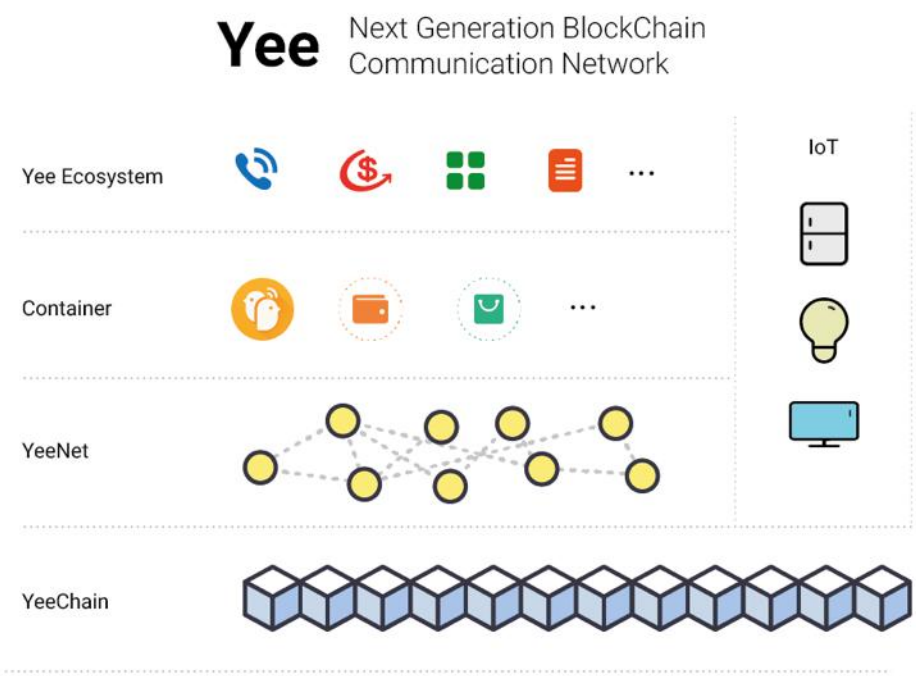
- Update YeeCall, which has 30 million users, to a large-scale application supporting YeeChain and YeeNet; And integrate digital wallet YeeWallet to support smart contract;

- Support and refine specific website development kits, so that developers can post contents on or develop DApp to conveniently connect to YeeNet、YeeCall and YeeWallet, and create a rich DApp Store——YeeStore;

- Put efforts in building a decentralized social prosperous ecosystem;

We will define the whole set of frameworks including YeeChain、YeeNet、YeeCall/YeeWallet/YeeStore and the ecosystems built on it as Yee. Yee will be a blockchain-based cloud communications infrastructure and decentralized social ecosystem. YeeChain and YeeNet will be our long-term goals and will be gradually open sourced so that the developers can participate, contribute and improve, and to

make the blockchain community thrive.



Yee and mobile internet system of IM ecosystem

YeeChain、YeeNet、Yee ecosystem and typical applications including YeeCall、YeeWallet and YeeStore will be introduced below respectively.

2 YeeChain

In the beginning stage, Yee will be operated on a public Ethereum network. But it must be recognized that the current Ethereum network has certain flaws to support the efficient and stable operation of a distributed communication network:

a) A great deal of computing is wasted due to consensus mechanism, and this will cause certain obstacles on mobile phones.
b) Network partitioning leads mobile phones to frequently switch status between online and offline, therefore the stability of the communication mechanism is undermined.
c) Slow trade speed: the average confirmation time (or block time) is about 30 seconds (December 2017). This processing speed can hardly be applied in daily

life scenarios.

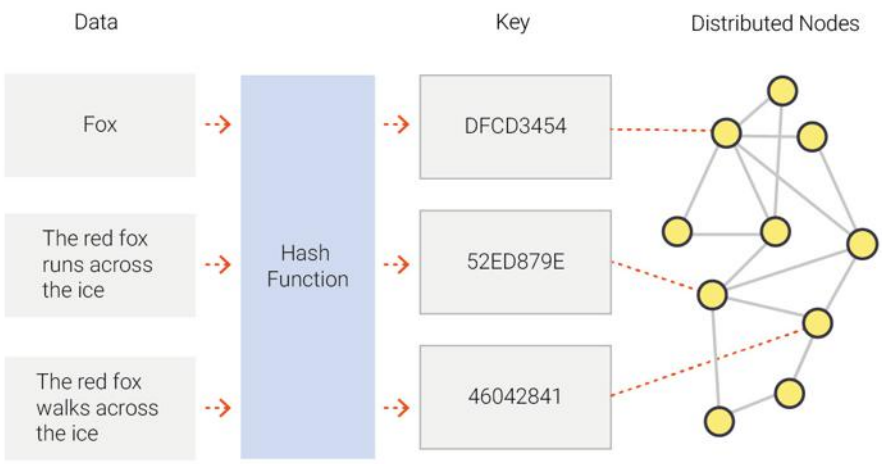
d) Excessive amount of data on the chain, this would overly consume phone storage if fully stored.

e) Ethereum blockchain needs to pay for every transaction, which creates barriers for typical users to pay with Ethereum encrypted currency.

In order to solve these problems, we are committed to building YeeChain, which can be operated on current blockchain technology, but also provide a solution for high-efficiency storage and fast transaction.

- **High-efficiency storage (local storage can be reduced by 99.99%)**

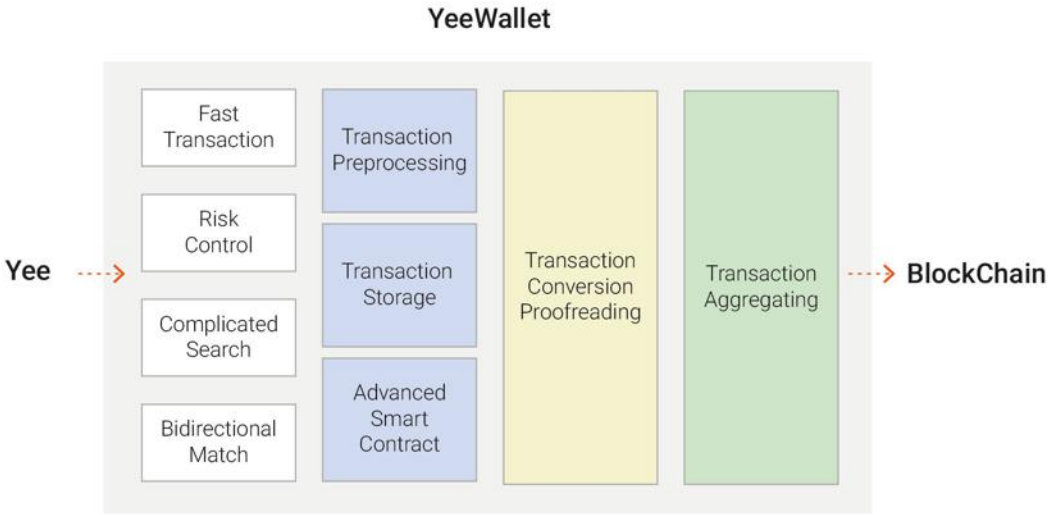
All the nodes within a blockchain are shared on the entire network. Under the guarantee of the secured verification method, every node can save only a small portion, and at the same time save other certain blocks it concerns about and calls. Other blocks can be downloaded from other nodes when needed. Two factor authentication using hash's(SHA512) results and contextual result can ensure that the blocks acquired from the distributed network has not been tampered.



Underlying storage is modified to ensure transparency to the upper layer. For the upper layer blockchain code, the local still has all the blocks, exactly the same as the previous logic. For a blockchain network with frequent transactions, local storage cost can be reduced by 99.99%.

- **Fast Transaction**

Introducing the credible third party, YeeWallet: on the public blockchain, transaction fees and speed are two comparatively difficult problems. However, a credible third party can organically combine the advantages of public blockchain and private blockchain, and allow users to choose which one to use. YeeWallet significantly enhances the user experience while ensuring user rights and Yee's security and tamper-proofness. The credible third party YeeWallet can aggregate a large number of small transactions and submit to the blockchain at once. And as an intermediary, YeeWallet can protect and facilitate transactions as long as both parties trust YeeWallet. (For example, Alipay and PayPal create essential value to their own communities). As a community platform in possession of a great number of users, YeeCall itself is a credible platform to its users. After introducing YeeWallet, users can use Yee conveniently.



3 YeeNet

An efficient, real-time communication network is inherently complicated, YeeCall has been evolving in production in the past three years:

- **At the beginning:**

YeeCall supported messaging and other asynchronous communication and used centralized networking mode, and YeeCall completed its communication deployment in different countries around the world.

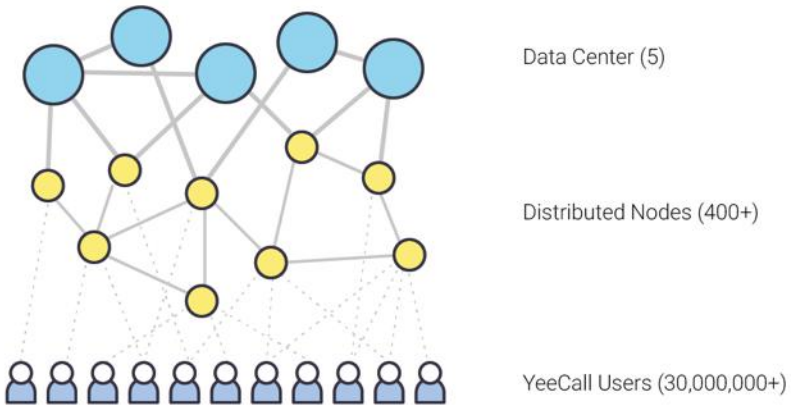
- **Later:**

On the basis of asynchronous communication, YeeCall enhanced its peer-to-peer, groups and other synchronous communication models. Additionally, YeeCall supported live broadcasting mode on the underlying layer. Meanwhile, YeeCall established a communication network covering 227 countries and over 1000 carriers, with 5 data centers and more than 400 relay nodes. YeeCall had become a perfect high-efficiency communication network which supports synchronous and asynchronous communication.

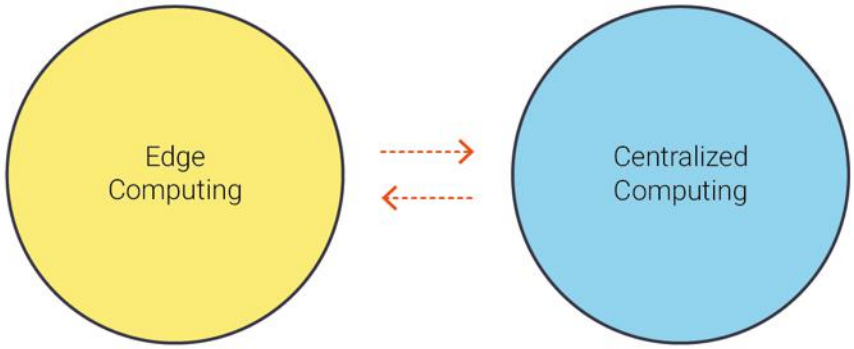
- **Today:**

YeeCall has evolved to a “distributed + centralized” hybrid cloud communication

network. Now, 70% data traffic is efficiently completed through P2P communication. and YeeCall is leaping into the IoT area.



Note: Current YeeCall network structure

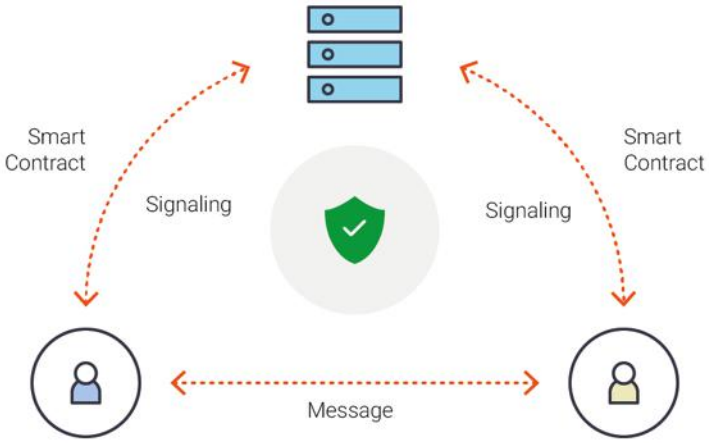


Note: Current YeeCall computing structure

As a global communications network, the next generation will center around the consensus mechanism, providing a more secure architecture, product design with more concern for user privacy, and etc.

The advent of blockchain technology provides us with some new ideas such as:

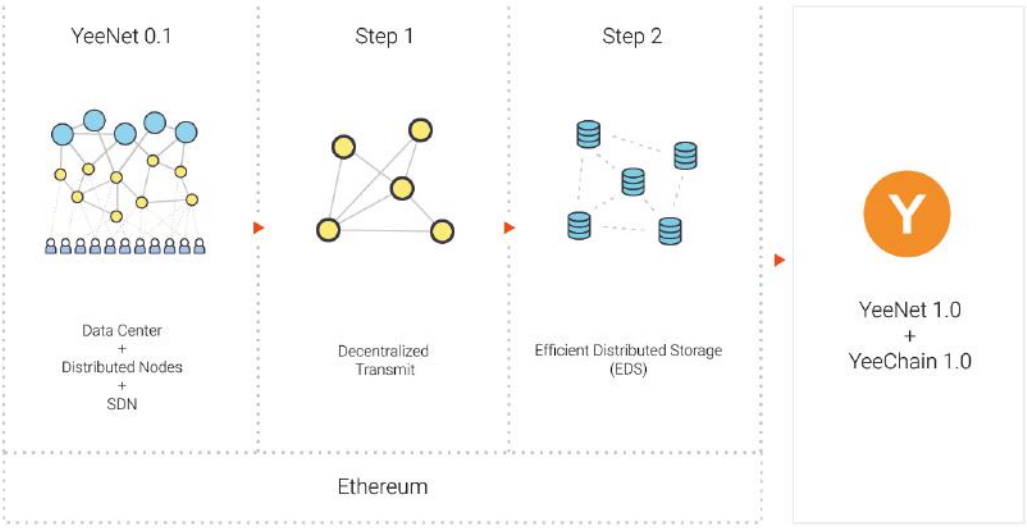
Encrypted communication: The traditional method of encrypted communication is end-to-end transmission channel encryption, but end nodes may still be compromised. Meanwhile, signals of communications will still pass through the server and this is not as convincing as blockchain consensus mechanisms. We intend to use blockchain smart contracts to achieve encrypted communications, a message is sent at the same time of the formation of smart contracts, and once the message is read, it will be destroyed from the server. As a result, the mechanism of transport channel encryption + destruction based on smart contracts, make it possible to truly solve the problem of encrypted communications.



Encrypted communication based on YeeNet

Therefore, on the basis of current YeeCall communication network, combing blockchain technology, we will gradually improve and update this network, and eventually make YeeNet a decentralized autonomous communication network.

The expected process to evolve:



YeeNet 1.0 will support peer-to-peer communication, groups, live broadcasting and IoT communication, and to combined with YeeChain 1.0, which has solved core problems like large storage space and slow transaction speed of existing blockchain. YeeNet 1.0 will eventually become a distributed, open, efficient and stable communication network.

The combination of IoT and blockchain is a major research topic worldwide. YeeNet already has the basic capacity in terms of edge computing and IoT network architecture, Yee foundation will continue to research in this area to find a more suitable fusion scheme.

In the future, YeeNet will be applied in many communication scenarios, for example, the encrypted communication based on consensus, paid service of burn after reading (One message is sent, the recipients must pay to read and the message will be automatically destroyed after being read), and tracing to the objects sources in the IoT applications and etc.

4 Yee Ecosystem Construction and Examples of Application Scenarios

We will issue encrypted digital currency YEE as the currency circulating in the Yee

ecosystem. Based on the ecosystem incentives of this currency and the capability of YeeChain and YeeNet. We anticipate to building a thriving ecosystem.

4.1 Ecosystem Incentive Plan

In order to promote growth and prosperity of Yee ecosystem, users can accomplish certain tasks for rewards on Yee ecosystem's platform (for example, YeeCall) or on WhatsApp, Line, WeChat and even other IoT equipment. We call this "Yee Ecosystem Incentive Plan". The allocation amount of YEE for "Yee Ecology Incentive Plan" is 3 billion (30% of total YEE amount). It will be allocated according to an 8-year plan without any additional offering. 5% of the total YEE amount will be released annually in the first four years and 2.5% will be released annually in the next four years.

The basic principle of the user rewarding plan is: Let the users who have higher usage frequency, more interactions with friends, and longer usage time get more YEE token incentives. After the launch of "Yee Ecosystem Incentive Plan", profits from the day before will be released by 10 a.m. (Pacific time) everyday. Besides, with more users joining Yee and frequent features updates, we will support ecosystem incentive plan measures based on group social communication model and content consumption model. All these measures will inherit the core ideas of the basic incentive plan.

- The core algorithm of this basic incentive plan is:

Define the user's valid behaviors according to actions and relationship intimacy. Therefore, the token granted to the user is

Y1=（valid behaviors M1/（M1+M2+M3+...+Mn））*YEE rewarded on that day

$$\mathrm{Mp} = \mathcal{F}_1(A, F, I, H)$$

In the formula:

A (activity) refers to the number of people the user interacts with on that day;

F (frequency) refers to the frequency of valid interactions, which include messaging, calls, social actions, content creation, consumption and so on;

I (Personal Impact) refers to personal impact, which can be calculated with the number of people the user recently contacted using the PageRank algorithm (core algorithm where a search engine evaluates the importance of a website). It can be simplified that more high-quality friends yields a higher the score. Please refer to https://en.wikipedia.org/wiki/PageRank for a detailed definition.

H（Historic activity）refers to historic activity, the more active days in user's history, the higher this index will be.

The detailed definition of F_1 is：

$$\mathcal{F}_1(A,F,I,H) = w_A G_1(A) * (w_F G_1(F) + w_I G_1(I) + w_H G_1(H))$$

In this formula, w_a ,w_f ,w_i and w_h are weight coefficients; G_1 is capped normalized function. All the parameter values will go through spam examination. If malicious deceptive behavior in the numbers is found out, the corresponding value will be judged as invalid.

4.2 Examples of Application Scenarios

Yee will introduce a variety of partners, users will consume YEE on the eco-partners applications, eventually making YEE a widely accepted currency. The scenarios described below are just part of example scenarios. As the development of the ecosystem, more scenarios will be created.

4.2.1 Consensus Based Encrypted Communication

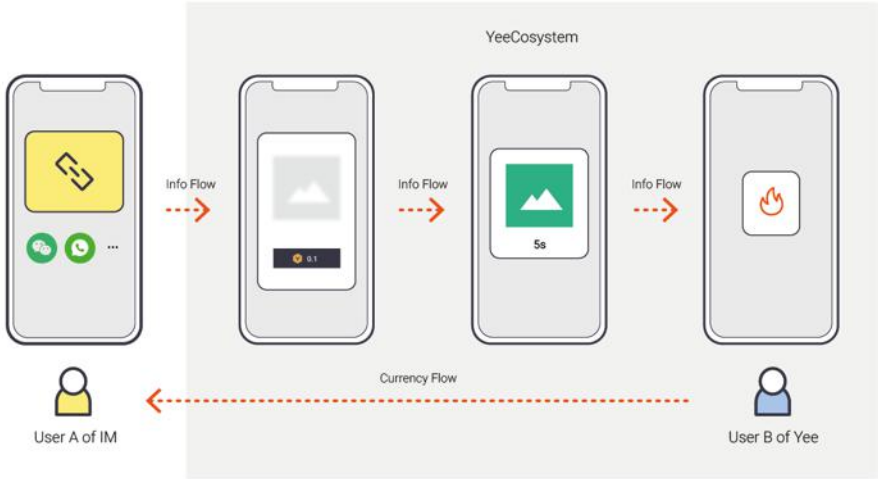
Through smart contract, YeeNet is expected to achieve encrypted communication based on consensus. The message will be fully encrypted from end to end in the transport process. After the server relays information and the opposite end receives, based on the smart contract, the signal and content of the message will be destroyed from the server, and no records will be retained.

Because each smart contract will consume power and storage space, this high-strength encrypted communication method will consume the user's YEE token to ensure the execution of the smart contract.

4.2.2 Paid Call and Messaging

In the real world, the majority of communication needs to be paid by the recipient or the initiator, for example, paid call, paid messaging and so on. Traditional IM is a peer model. On the one hand, this kind of demand needs full intervention of the server. On the other hand, the charging rules, etc. are difficult to be completely transparent and recognized by all the participants. With smart contract, we can easily satisfy users'

demand for paid call, paid message and so on, and we can expand the use cases. For example, when the other end receives a paid message, he or she must pay before reading it, and the message will be destroyed once read. And this whole mechanism can be defined into a set of smart contracts.



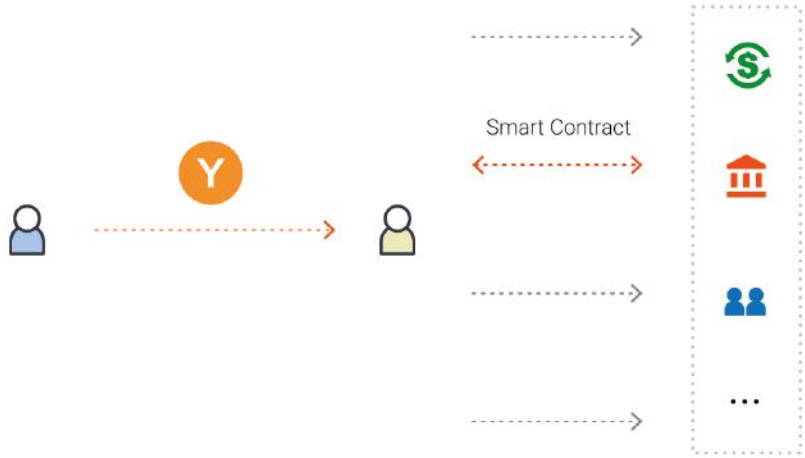
4.2.3 International Transfer

Immigrants need frequent international transfers. However, such transfers come with high exchange rates, long cycles, and complications when the family withdraw. YEE provides low-cost and fast transfers between immigrants and their families. After receiving YEE, the immigrants' families can submit a request to find individuals or institutions that can exchange YEE into local currency. Then qualified individuals or institutions will bid for the request. Once the bid succeeds, the exchange rate will be set, and the two parties are required to place an equal amount of YEE as guarantees to form the smart contract.

When the request initiator receives the local currency and both two parties confirm that the transaction is completed, the individual or institution who won the request can draw back the deposit and take the YEE payment. According to the completion time and comments of the initiator, the service provider will get a review, which cannot be altered. These reviews will accumulate as service quantity and quality, and eventually becomes a part of a ranking of money exchange service providers in the Yee ecosystem. In order to promote balanced transactions, the system will reward YEE after the transactions, sometimes to the initiators, and sometimes to the service

providers.

The procedure is as follows:



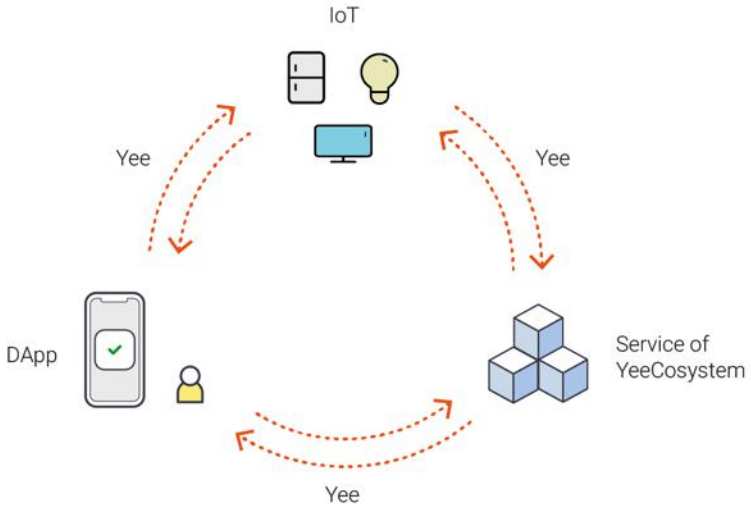
4.2.4 Cross-platform Tipping

Content creators can create on the basis of Yee's browser framework, and users can pay for the content or tip as a reward. In this way, quality content creators will be incented and continue to produce top contents. These contents are accessible for users of YeeCall and other Yee ecosystems. Meanwhile, the contents can be posted on third-party platforms such as WeChat and Facebook. Original Yee ecosystem content will be posted with creator's ecosystem wallet address when posted on the platforms yet to join the Yee ecosystem. Thus, users of the third-party platforms can still tip the creators. Meanwhile, thanks to source tracing technology in blockchain, the copyright of the contents will be protected from the beginning.

4.2.5 The Smart IoT

In the era of IoT, devices can communicate with each other, and simple interactions can be performed between devices or between humans and devices. However, this kind of interaction is authoritative, there is a lack of user positive experience and security. With YeeChain and YeeNet, devices can become intelligent and easily engage in conversational interactions with humans or other participants in the ecosystem, and ultimately completing the services. For example, Amazon's hardware

device Dash Button allows convenient one-click purchase of daily necessities, but only when you open the refrigerator do you know what needs to be replenished, at that point Dash Button would be the distant water to quench a fire nearby. Let's imagine a scenario: You are coming back home from a business trip. On the road, you ask your refrigerator to send a picture to your refrigerator application and you find no beers left. Now you just need to send a message or press a button for the beer. And when you arrive home, the beers may be waiting at the door. This series of message interaction based on pictures and instructions, and the convenient communication without barriers, is the smart IoT ecosystem Yee would like to support.



5 The First Launched Large-scale Application – YeeCall

5.1 YeeCall - A Communication Network Community of 30 Million Users

Since the launch of the first version in 2015, YeeCall already has 30 million registered users, among which 90% are in Southeast Asia, Europe, America, India, Middle East and North Africa and etc. The users are composed of immigrants and their friends and families. and gradually formed an acquaintance network as the core of the social platform.

YeeCall provides the users with high-quality video and voice call functions and a rich messaging system. With YeeCall's capability with groups, these users also spontaneously formed active self-governing groups on YeeCall's platform. Meanwhile,

with the introduction of some thoughtful features, for example, one can know the recipient's local time when sending a message (solution to time difference); or know the recipient's local weather when placing a call; or being able to form groups of as many as 500 users. The users' affection and trust of the platform keeps growing. As of now, the average daily usage on the platform is over 40 minutes; the average call duration is as long as 30 minutes; and the average quantity of messages sent out exceeds 30. On Saudi Arabia's ranking of social media applications, YeeCall is among the Top 10:

Source: Ranking of iOS social media applications in Saudi Arabia, August 2017, from AppAnnie

User base size, demographics, and usage scenarios make YeeCall a unique community dominated by both acquaintances and semi-acquaintances, with very solid links. Meanwhile, products designed for immigrants are scarce. Major social networking platforms and messaging applications are designed for the so-called majority. Within the YeeCall user community, international transfers, local life information exchange, secondhand merchandise transactions and regular large-scale international mobility scenarios urgently require an infrastructure that combines identities, high frequency messaging systems, digital currency and secure relational chains to make these

scenarios more convenient and efficient. YeeWallet encryption digital currency wallet design is based on this.

YeeCall will leverage its users base of 30 million to launch YeeWallet based on ERC20 and issue digital currency YEE in YeeWallet. With YeeCall's user group, YeeWallet and YEE, YeeCall will build a decentralized mobile infrastructure to facilitate users' work and life, and promote the development of a digital economy.

Most of the above scenarios in the Yee ecosystem can be implemented in YeeCall. Meanwhile, YeeCall can be used for consumption in social scenarios.

5.1.1 VIP Group

YeeCall allows users to create public groups. With YEE, users with decent influence and/or knowledge can create paid groups, which can only be joined by paying users for specific purposes. Knowledge workers and celebrities can influence their followers with this function, and benefit from the spent time and shared knowledge.

5.1.2 Emoji and Sticker

Emoji and sticker are popular expression methods in the messaging systems. Capable partners or individuals can upload their emoji and/or sticker through the platform, which can be purchased with token by users.

5.2 YeeWallet——Building A Digital Economy in Yee Ecosystem

In China, the rapid development of mobile payment brings OMO (Online-Merge-Offline) era for the Internet. The rapid raising of new platform or application largely depends on the convenient payment facilitation. In the other countries, universal and friction-free payment facilities or monetary means are yet to be found. The birth of digital currency makes it possible to build a digital economy in the message system. With this digital economy, message systems can serve users in more diverse scenarios, and produce essential differentiated competitive advantages over ordinary IM or social applications.

5.2.1 Creating New Digital Currency

Create encrypted digital wallet, YeeWallet as a start, and issue a new encrypted currency YEE. In order to make cryptocurrencies valuable and ecologically viable, YeeCall will first integrate YeeWallet and help establish the basic value of YeeWallet.

5.2.2 Setting Base Value

Many immigrants from India, Pakistan and Southeast Asia came to Gulf countries in Middle East such as Saudi Arabia, United Arab Emirates and Qatar. They live and work there and send income home to support their families' life and study. Currently, YeeCall is a Top 10 communication and social product of Saudi Arabia, and has a large number of users in the United Arab Emirates, Qatar and India. Every month, 5 million users connect with their family and friends via YeeCall. By integrating YeeWallet into YeeCall, YeeCall will create a base value for YeeWallet. In the future, users can obtain and consume the encrypted currency YEE in YeeCall by generating content, trading items, and performing specific actions.

5.3 YeeStore

On the basis of YeeNet, we will develop a set of web framework for developers to use. This framework will support content publishing and browsing, DApp generation, and can seamlessly integrate with YeeCall and YeeWallet.

5.3.1 Content creating and sharing

Content creators can create contents based on this set of framework and publish to YeeCall users or other users in Yee ecosystem. Users can pay for or tip toward the content, so quality content creators can get incentives and continues to produce top contents. Meanwhile, thanks to source tracing technology in blockchain, the copyright of the contents will be protected from the beginning.

5.3.2 Mini - programs

Developers can also develop mini-programs based on web technology, to provide Yee ecosystem users with plug-in services. Quality mini-programs will greatly enrich the user experience of Yee ecosystem; meanwhile, the convenient payment system will encourage the mini-programs' developers to develop better applications.

6 YEE Digital Currency Allocation Plan and Token-Generation Rules

To promote the development of Yee ecosystem, the Yee team will launch digital

currency YEE based on ERC20 (The Ethereum token standard used for Ethereum smart contracts) via YeeWallet. Based on cloud communication and blockchain technology, YEE will ensure that our users could share computing power resources through smart contract and obtain YEE token through executing specific behaviors; Meanwhile YEE can be used to consume third party service and content, where the transaction cannot be denied.

The Yee token issue will be mainly divided into the following aspects: Yee token allocation(ICO), ecosystem incentive, Yee foundation will hold some and others will be used to support the team and so on.

The distribution plan of YEE is as follows:

Proportion	Distribution plan	Detail
20%	Pre-Sale	For Yee project future development, talent recruitment, market promotion. The use of this part of the funds needs regular publicity.
30%	Ecology Incentive	Users can be rewarded by for certain behaviors on Yee ecology platform (such as YeeCall) or WhatsApp, Line, WeChat. This portion accounts for 30%, will unlock in eight years, and will never have an additional offering. It will unlock 5% annually over the first four years, and 2.5% annually over the next four years.
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7 Technical Consideration

This section introduces the general technical considerations of the creation of Yee ecosystem in public Ethereum network and the technological innovation of YeeChain and YeeWallet.

7.1 Platform limitations and solutions to chain breaks

Although the future versions of Ethereum will focus on improving throughput and extensibility, when the Ethereum network runs on the blockchain by “Proof of Work” and is applied to the Yee ecosystem, it will face the following problems:

1) A great deal of computing is wasted due to consensus mechanism, and this will cause certain obstacles on mobile phones.
2) Network partitioning leads mobile phones to frequently switch status between online and offline, therefore the stability of the communication mechanism is

undermined.

3) Slow trade speed: the average confirmation time (or block time) is about 30 seconds (December 2017). This processing speed can hardly be applied in daily life scenarios.
4) Excessive amount of data on the chain, this would overly consume phone storage if fully stored.
5) Ethereum blockchain needs to pay for every transaction, which creates barriers for typical users to pay with Ethereum encrypted currency.

Given these obstacles, YeeWallet will first implement a semi-centralized, hybrid on-chain and off-chain transaction service, to enable scalable interaction with YEE encrypted currency. In the future, we will work hard to achieve YeeChain that supports efficient storage and fast transactions. Specifically, our technological innovation will focus on:

1) YeeChain will adopt the "Proof-of-Stake" method to build consensus based on the new blockchain agreement of Ethereum. It will be similar to the partition solution of Cosmos Internet of block chains, and also support smart contracts.
2) At the same time, transform the underlying storage in a safe and transparent method to enable the distributed and not non-full storage of block chain. For the high-level programs, it seems as if the whole blockchain has been stored locally.
3) Transform the transactions, introducing YeeWallet as the trusted third party, users can choose to conduct advanced transactions through this third party, such as revocable transactions, etc. Users also can choose direct transaction on blockchain at normal speed.

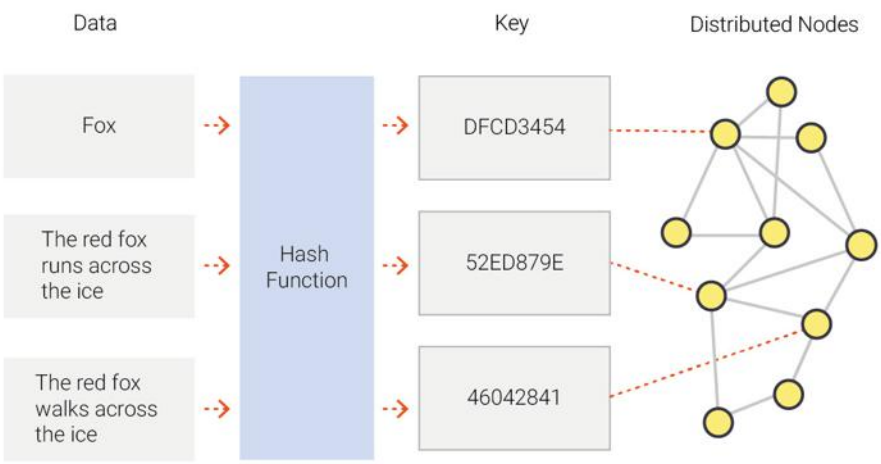
7.2 Technological Innovation

Given the large number of developers who have already contributed "Proof-of-Stake" and partition solution for Cosmos Internet of block chains, we will not go through the details here. Here we are mainly explaining the underlying storage transformation and transaction optimization.

7.2.1 Underlying Storage

Main concept:

Blockchain is shared by the entire network at all its nodes. Under the guarantee of a verification method, only a portion needs to be saved under each node, only saving the individual block that is of one's concern and is currently being used. When someone needs other blocks, they can be downloaded from other peers. Use the double validation of hash (SHA512) result and the result hash of context relations, we can ensure that blocks acquired from the distributed network have not been tampered.



Underlying storage is modified to ensure transparency to the upper layer. For the upper layer blockchain code, the local still has all the blocks, exactly the same as the previous logic. For a blockchain network with frequent transactions, local storage cost can be reduced by 99.99%.

Core Algorithm:

Node distance: The distance between any two nodes or the keys of two data, d

is defined as:

d = SHA512 (node-id 1) XOR SHA512 (node-id 2)

Routing table rule:

The distance d has 512 bits total, from high to low, every 4 bits is one group, and can be divided into 128 groups. Nodes of different distance, from high to low, can be uniquely assigned to certain group according to the value of d. In this way, the high groups have many nodes, but because of its distance, there are less interaction with

this node. The low groups have fewer nodes, but because of the close distance, there are closer connections with this node.

Define a constant k, in each group, save the position of k other nodes (IP: PORT) as a chain table and access node list for subsequent access. Then when accessing nodes in each group, there are cached hot nodes that can be directly accessed. If the nodes to be accessed is not in the list, initiate the node query request mentioned below to any node of the k nodes in this group to find the actual location of the node. This dynamic node list can be updated at any time, and can effectively prevent node failure or problems caused by attacks.

Node query

Node query should be designed to be executed asynchronously.

The steps can be expressed as follows by pseudo code:

```
find_node(dest_node_id){

d = distance(my, dest_node_id)
//According to the grouping algorithm mentioned above, find a non-empty group with the smallest difference from d.
group = find_min_distance_and_not_empty_group(d)
query_nodes=nodes in group
//The algorithm will be over when have found the target, or when the queried intermediate result does not change (it means that the target to be queried is not in the network)
while( ! find_dest && query_nodes
changed){ query_result.clear()
for(node in query_nodes){
//Each intermediate node reports the k points it knows closest to dest_node_id
  query_result.addAll( query(node, dest_node_id))
}
//From this round of results, find the k nodes that are closest to the queried node query_nodes =
```

```
    find_min_k_distance_from(query_result,dest_node_id)
} }
```

Data query

Data query and node query are highly similar, except that the node id becomes the data key Hash. The difference is, during the query process, once one node has this saved data, it will report directly that it has found this data. The query will be over and the data will be acquired from this node directly. Because it is very similar to find node, pseudocode will not be provided here.

During the storing at the actual storage node, data storage will simultaneously initiate the storage to the closest k nodes. In this way, if one of the k nodes is online, the data can be accessed.

```
//Initiate the storage
Store_data(data_key,data){ node
=find_node(data_key)
store_if_not_exists(node,data_k
ey,data)
}
//Actually storedata in this node
on_store_data_in_myself(data_ke
y,data){    d    =    distance(my,
data_key)
//According to the grouping algorithm above, find a non
empty group with the least distancefrom d
group    =    find_min_distance_and_not_empty_group(d)
nodes=nodes in group
for(node in nodes) store_if_not_exists(node,data_key,data)
}
```

For hot data that is accessed frequently, when it is accessed by an actual storage node, it can also ask to be diffused (i.e. be cached). Specifically speaking, ask for the node that initiated the query to cache this data on the node queried in the last round.

Mathematical analysis of algorithm

Supposing that there are n total nodes using this storage engine respectively marked as $x_1 \ldots x_n$ (x is numerical value with the length of d bits). Then, for any $x \in \{x_1 \ldots x_n\}$, define Di(x) as the set of numerical value with the same d-i length prefix.

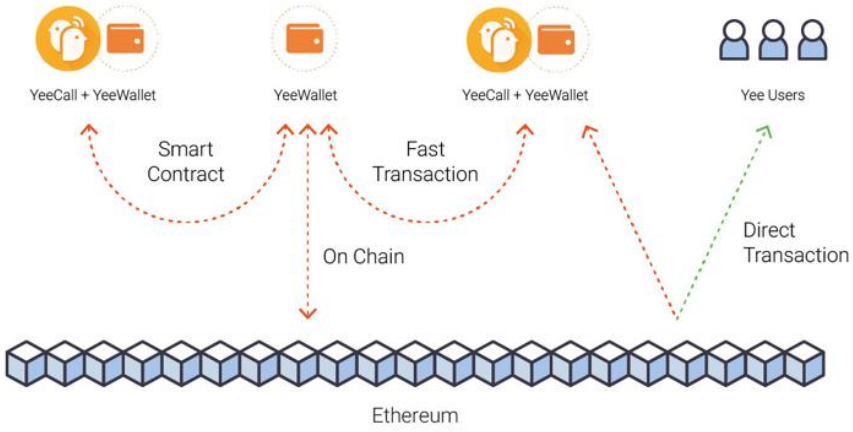
Define T_{xy} is the query time required to query from x to y, it cancan proven that (The proving is omitted):

$$\sup \mathbb{E}[T_{xy}] \leq (1 + o(1)) \frac{\log n}{H_k}$$

Where **sup** is the upper bound and H_k is the k^{th} harmonic number. When k tends to infinity, H_k / logk tends to be 1, so the expected upper bound of T_{xy} is $\log_k n$, the average algorithm complexity can be considered to be $\Theta(\log_k n)$.

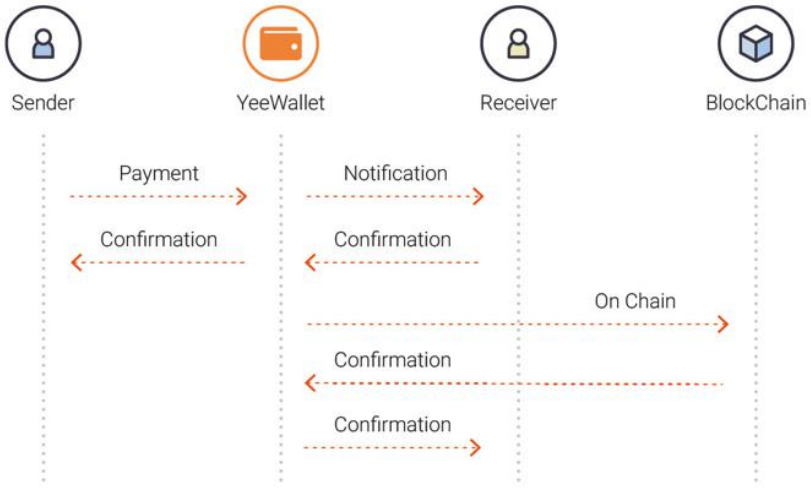
7.2.2 Transaction Method

Introducing the credible third party, YeeWallet: on the public blockchain, transaction fees and speed are two comparatively difficult problems. However, a credible third party can organically combine the advantages of public blockchain and private blockchain, and allow users to choose which one to use. YeeWallet significantly enhances the user experience while ensuring user rights and Yee's security and tamper-proofness. The credible third party YeeWallet can aggregate a large number of small transactions and submit to the blockchain at once. And as an intermediary, YeeWallet can protect and facilitate transactions as long as both parties trust YeeWallet. (For example, Alipay and PayPal create value to their own communities). As a community platform in possession of a great number of users, YeeCall itself is a credible platform to its users. After introducing YeeWallet, users can use Yee conveniently.



Core Business Logic Implementation Explanation:

1) One-way payment with no need to be reconfirmed. Example transactions: Used for tips and purchase system. YeeWallet fast payment (should have the balance in YeeWallet of the payer): YeeWallet of the payee will show received payment. Transaction can be finished instantaneously in YeeWallet. If the payee needs, YeeWallet will batch submit to the blockchain after a period of time. Status change is visible to the users.



Because transferring to blockchain is an independent operation, we will not go over the relevant processes again here.

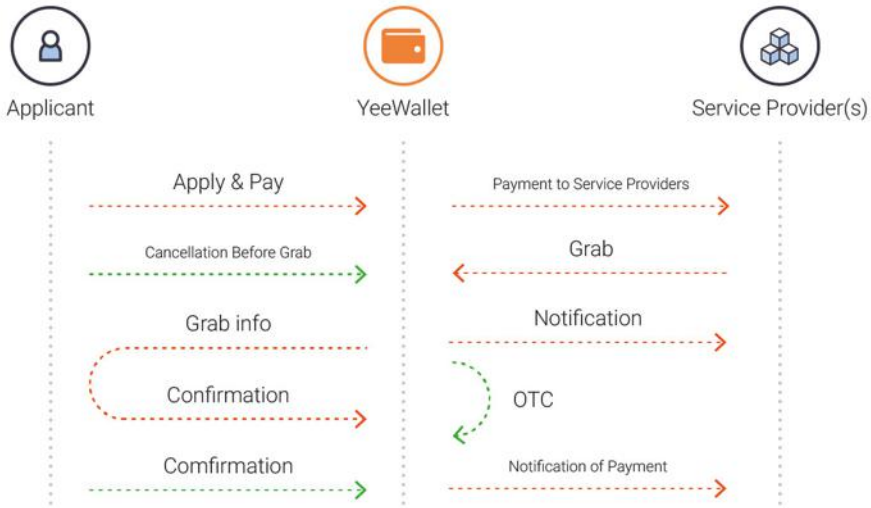
2) One-way virtual goods transaction that need to be confirmed. Example

transactions: purchase group membership right, purchase third party sticker and other virtual goods transaction.

YeeWallet revocable payment: the payer pays to YeeWallet first and the payee will receive the advanced payment reminder (but not credited yet). The payer can revoke the payment before the specified time limit. After the time limit, if not revoked, the payment will arrive in the YeeWallet account of the payee.

3) Physical transaction that need to be confirmed. Example transactions: C2C commodity transaction. Use YeeWallet to pay periodically: The payer will pay to YeeWallet first, and the payee will receive advanced payment reminder (but not credited yet). Before the payee submits the proof of delivery to YeeWallet, the payer can apply to revoke the payment, but the revocation will be delayed. If the payment is not revoked after submitting the proof of delivery, it cannot be revoked any more (but can initiate arbitration). If the transaction is successful, or if the payer does not confirm in a long period of time, the payment will arrive in the YeeWallet account of the payee. If there is a dispute in the subsequent transaction, both parties can submit an arbitration request a third-party arbitration organization, and include an arbitration fee. The arbitration fee of the losing party will belong to the third-party arbitration organization.

4) Bidirectional matching transaction. Example transactions: various real-time order-snatching transactions, such as currency exchange intermediary service. The exchanger initiates the order first and pays the corresponding Yee token to YeeWallet. After the order is initiated, the corresponding organization that can take this order or the third party will snatch the order. The exchanger needs to confirm that the order-snatchers are service providers. After confirmation, they will transact offline. After completing the transaction, the order initiator confirms or the order taker uploaded evidence to complete the transaction, Yee token will be paid to the order taker by YeeWallet.



5) Portfolio transaction: such as the exchange of personal information. Information transaction exchange is that the publisher firstly initiates a one-way payment with

no need to be reconfirmed to the system, the system will make a price according to the requirements of broadcast range and other factors. When the information is read, the reader performs a one-way virtual goods transaction with need to be confirmed to information provider. The more information that is read, the greater the benefit.

In summary, in order to solve some practical problems, Yee will launch a credible third-party payment and guarantee organization YeeWallet, and will develop and host a centralized off-chain ledger book, which will provide API that can be used by any digital service partner. This will (1) improve the user experience that is affected by the delay, (2) reduce network cost in the transaction between users, (3) avoid stress on the public network due to heavy volume of transactions, (4) adapt to the unique transaction scene of YeeCall users.

8 Yee Foundation

Yee Foundation expects to become a decentralized ecosystem partner (digital service and application) community that uses YEE encrypted currency. The primary mission of Yee Foundation is to research and realize YeeChain that supports efficient storage and rapid transaction, and the decentralized basic communication network YeeNet that is based on YeeChain while also becoming an independent, non-profit, democratic governance organization that is available to all members of this ecosystem.

The main functions of Yee Foundation will include: work with other ecosystem partners to openly manage their resources, and research and realize YeeChain, that supports efficient storage and rapid transaction and the decentralized basic communication network

The mission of Yee Foundation is to develop an open ecosystem of digital services so that users can easily meet their needs. In order to fulfill its mission, Yee Foundation will invest resources in three specific objectives related to research, development and governance.

- **Governance objective**

Yee Foundation will invest resources to establish a fair and transparent governance process that will consider the opinion and needs of all participants in the ecosystem.

This open governance model will supervise the membership process, Yee incentive plan, participation rules, legal matters, and decisions related to content and compliance guidelines.

Research objective

Research and realize YeeChain that supports efficient storage and rapid transaction, and the decentralized basic communication network YeeNet that is based on YeeChain by cooperating with partners, investing the resources, cultivating an innovative environment, and testing new ways to participate in the ecosystem to promote the creation of the value and network effects of the Yee ecosystem.

Development objective

The Foundation will guide and fund the development of tools to enable ecosystem partners to build, develop, and create value with each other. As a part of this process, Yee Foundation will hire a development team to promote the work of integrating YeeWallet and YeeStore into YeeCall, and continue to perfect the technology that supports the Yee ecosystem.

Task and long-term objective

The Foundation's long-term objective is to fund the team to research and realize YeeChain that supports efficient storage and rapid transaction, and the decentralized basic communication network YeeNet that is based on YeeChain, and maintain an open source code base of YeeChain and YeeNet that benefits the ecosystem participants. To assist the foundation in carrying out its mission, a part of the funds that Yee provides will be used as monetary reserve in accordance with the Foundation's limited discretion. Yee Foundation is responsible for guaranteeing the safety of the Yee reserve and the transparency of fund usage,

Core technology summary

The core technology initiative of Yee Foundation will focus on delivering (1) YeeChain that supports efficient storage and rapid transaction; (2) YeeNet1.0 that includes peer to peer distributed network, group chat, live broadcast, and IoT communication network; (3) Various transaction services of YeeWallet that enable a centralized digital service to make use of YEE in large scale; (4) Yee incentive implementation plan; (5) Decentralized identity service for Yee users. This set of tools

aims to reduce the obstacle of partners, users and other third parties in integrating into the Yee ecosystem.

9 Summary

Since 2015, YeeCall has focused on the next generation of communication technology and the establishment of a social platform. YeeCall has already made progress in communication technology and user scale. Now Yee Foundation cooperates with YeeCall and hopes to establish a decentralized mobile infrastructure and social ecosystem.

To promote the popularity and application of YEE encrypted currency, YeeCall will invest the resource to make YEE the main transaction currency in its application and promote a Yee ecosystem service to hundreds of millions of users.

YEE encrypted currency will focus on promoting the convenience of modern mobile applications and the experience of zero friction payment. With the user scale and daily transactions of Yee ecosystem, as well as the convenient currency pattern and ecosystem service of Yee, this becomes a possibility.

10 Disclaimer

This disclaimer does not include the risk of security prospectus or the risk of YeeCall operation and YEE.

This document does not involve any controlled products within jurisdiction of the law:

This document is a conceptual document [whitepaper], to elaborating on the project. It is not a prospectus to sale or a solicit fir bids for Yee products, shares, security, or any other controlled products of any related company. According to this document, it cannot be used as a prospectus or any other form of standardized contract documents, it is also not an attempt to persuade the reader or investment advice for any security or any other controlled product in any jurisdiction. This document can not be used to sell

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This document does not constitute any statement and/or warranty: This document is used to describe the Yee platform and Yee token we have proposed. However, Yee Foundation makes it clear that: 1) It does not give any declaration and guarantee for the accuracy or completeness of any content described in this document, or for project related content published in any other way. 2) In the absence of preconditions, it does not give any declaration and guarantee for the accomplishment or reasonableness of any forward-looking, conceptual statement. 3) No content in this document serves as a basis for any future promise or statement. 4) The Yee Foundation is not responsible for any loss or damages caused by this document. 5)Within the scope of legal liability that cannot be exempted, the maximum limit allowed is only by the applicable law.

Not everyone can participate in the project: Yee network system and platform are not open for everyone to participate. The participants may need to complete a series of steps, including providing information and documentation that can indicate identity.

Unauthorized companies have nothing to do with this project: Except Yee Foundation and YeeCall, the use of the name and trademark of any other company or organization does not imply that either party is affiliated with Yee Foundation and YeeCall or endorsed this document. This document is for the purpose of explaining the relevant contents only.

Precautions related to digital currency YEE: "Yee Token" or "YEE" is the virtual cryptography token of the Yee block chain network.

YEE is not a virtual currency: YEE cannot be used to exchange goods, service and transaction in the Exchange during the period that this document is not completed, nor be can it be used outside the Yee network.

YEE is not an investment product: no one can guarantee, or have reason to believe that the YEE you hold will appreciate. There may even be the risk of devaluation.

YEE is not evidence of ownership nor does YEE grant the right of control: holding YEE is not a matter of granting the holder ownership and the stock right to YeeCall or Yee network system, nor does it grant the holder the right to directly control or make any decision for YeeCall and Yee network system.

11 Risk Warnings Related to Digital Currency - YEE

<Risk due to user's personal error >

Risk due to loss of private key:

Before YEE is assigned to the participant, the participant will obtain the public key account associated with YEE, and the YEE public key account can be accessed by the participant's randomly assigned private key. Forgetting the private key will likely cause the loss of the YEE in the associated public key account. It is suggested that participants practice how to safely back up private key to multiple local devices, preferably in a non-network environment.

Risk due to the private key being revealed to the third party:

After obtaining the private key of the participant's public key account, any third-party individual or institution may process the YEE in their corresponding account. It is recommended that participants protect their related equipment to prevent unauthorized login and reduce their risk.

Risks that may arise due to participation in the vote:

YEE holders are most likely to lose the YEE due to malicious or irresponsible voting during the participation in the vote.

Risk associated with network security due to the use of YEE

Related risks caused by Ethereum network protocol:

YEE will initially issue ERC20 token developed on the base of the Ethereum protocol, any faults and unknown function in the Ethereum protocol are likely to lead to unknown undesirable situations to happen in YEE. Ethereum and local unit accounts of Ethereum and that are based on Ethereum protocol may lose all their value just like YEE. For more information on Ethereum protocol, please refer to: www.ethereum.org

Unofficial Yee network alternative risk:

After Yee network system is developed, it is very possible that it will be plagiarized by others or they will build a similar network system due to its open source code and protocol. The official Yee network system may need to compete with these plagiarized network systems. All users will need to bear the negative impact on the Yee network system due to this.

Risk of unlawful invasion from a malicious third party:

Malicious third parties, such as hackers, other teams or organization, may attempt to intervene in the development of Yee network system, possibly using but not limited to the following methods: DDOS, Sybil, spoofing, smurfing or attacks based on consensus mechanism and so on.

Risk due to infrastructure software security vulnerability in the Yee network system:

This network system is an open source system. Yee employees or other third parties may intentionally or unintentionally introduce bug to the network core system, which will lead to the risk of a loss of YEE.

Risk that major technological breakthrough in the area of cryptography may cause hidden weakness to be discovered and exploited:

Cryptography is an important part of block chain technology, and the advance in cryptography or the development of other high-tech technologies may bring risk to Yee Network System and YEE being stolen or lost.

Risk of Yee network system failure:

As a relatively high-tech system, unacceptable or unexpected network failure may happen in Yee network. This may cause risk of YEE disappearing or market fluctuation.

Risk of being mined and attacked due to the appearance of its high value:

For many decentralized cryptography tokens and virtual currencies, YEE generated by the block chain technology of Yee network system is likely to be mined and attacked, including but not limited to double attacks, large pool attack, "selfish digging mine" attack and competitive condition attack, etc., there may also be unknown newer mining attack that bring a significant risk to the operation of Yee network system.

<Risk due to market uncertainty>

Risk due to small number of users in Yee system:

Yee system will generate corresponding value over time, and if Yee network system is not used by more businesses, individuals or other organization, or cannot generate more public awareness, it will impact its development and lead to smaller number of users, which may restrict or reduce the use and value of YEE.

Risk of insufficient liquidity of YEE caused by Exchange:

At present, YEE has not yet traded on the Exchange. After it is open to trade on the Exchange, it is likely because the exchange is relatively new and has far less understand of various laws and regulations compared to those Exchange that have been established for a long time and have other mature virtual token trading in it, the new Exchange is prone to fraud and failure. Exchange problems may cause a significant portion of YEE transactions to fall into fraud or other operational risk problems, which could reduce the value and liquidity of YEE.

Risks that the development of Yee network system does not keep up with the expectation of YEE holders:

Yee network system is currently still in the development stage, and there may be a lot of changes before official release to the outside world. The expectation of participants

on Yee network system may be different from that in the actual release, meanwhile the change of the actual situation in the design and implementation may also cause that it cannot be released as the schedule.

Risk that participants cannot get insurance at loss:

Unlike YEE token public key accounts, bank accounts, other financial institution accounts or other social service accounts, Yee Foundation usually will not buy insurance on their network system. When YEE is lost or the network system loses its value, there will not be any insurance agencies that can provide claims service to YEE holders.

Risk of Yee project dissolution:

Yee project will have a variety of factors, such as value crash of Bitcoin and Ethereum, the failure of commercial operation or intellectual property claims, etc. Yee project may not be able to continue operating so that leads to the failure of release or team dissolution.

Risk of regulatory policies in the judicial or administrative departments of relevant regions and countries:

Block chain technology is now supported or endorsed worldwide, but it has also been closely scrutinized by regulatory departments. The function of Yee network and YEE may be affected by some regulatory policies that include but are not limited to restrictions on the use or ownership of YEE digital currency, which may hinder or limit the development of Yee network system.

Other unknown risks:

Block chain technology and the corresponding digital currency technology are relatively new and not fully validated technology. More unpredictable risks may arise in many ways.

This document may be changed or replaced at any time, however we have no obligation to update this edition of the white paper, or provide readers with additional information or additional information channel.