Self-Media Block chain

Building the most robust decentralized ecosystem

for all social media users

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Abstract

Since the internet era has come, social media has led to much greater globalization, the user generated content such as text posts or comments, digital photos or videos, and data generated through all online interactions, is the lifeblood of social media. The most representative platforms such as YouTube, Instagram, and Facebook, anyone can create their personalized contents, making independent opinions, sharing different thoughts or becoming market influencer among social community. With more than 100 million individual content providers around the world every day, they have created the conditions for online social media to flourish.

However, all the creation of texts, pictures and videos are inevitably affected by copyright issues during the process of creation, publication and dissemination of content, including the ownership of copyright, the transaction of copyright and the return on investment. All those problems obstruct the further development of social media.

SELF is a decentralized social media influencer platform powered by blockchain technology. SELF builds the underlying agreement on copyright confirmation and payment transactions. Based on millions of UGC providers and short video creators worldwide, SELF’ s mission is to make creativity the world’ s most valuable assets and a ecosystems to benefit from shared data and the bootstrapping of social networks (non-fungible value exchange) for billions of internet users.

SELF's first targeted market is India’ s social networking sites such as Veblr.com and Rozbuzz, Hansimazaak.com, Snap, Sevenarticle.com. Indakatalent.com, Meanwhile, Rozbuzz and Veblr.com will be the first strategic alliances among other social media sites, both platforms have served millions of users in India, and daily unique visitors surpassed 10 million worldwide.

Project Background

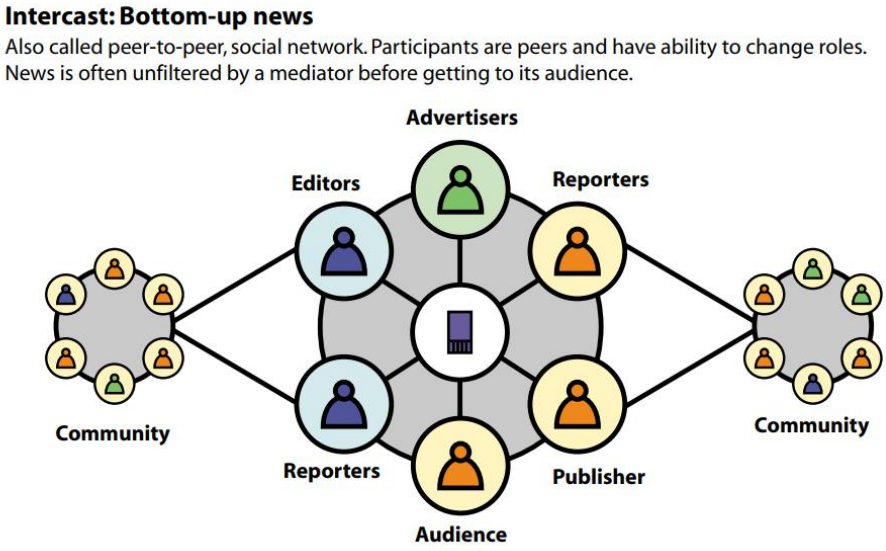
1、The Age Of Individual Media Ubiquity Has Arrived.

"You" were chosen in 2006 as Time magazine's Person of the Year. The magazine set out to recognize the millions of people who anonymously contribute user-generated content to wikis such as Wikipedia, YouTube, MySpace, Facebook, and the multitudes of other websites featuring user contribution

From an onlooker to the participant, every digital citizen of internet can create their own “newspaper” or blog, which is an online shared diary of a person's personal life combining individual thoughts and opinions, text, digital video, or digital pictures. And they become the king or queen of their own social media empire, everyone can express their point of view through the Internet technology, at the same time convey their life message through their own social networks.

We Media, also known as "individual media" or "citizen media", refers to the communicators of privatization, common people, generalization and autonomy. Using digitalized social media tools such Facebook, Twitter, Instagram and millions of other social applications, any individual media can deliver normative and

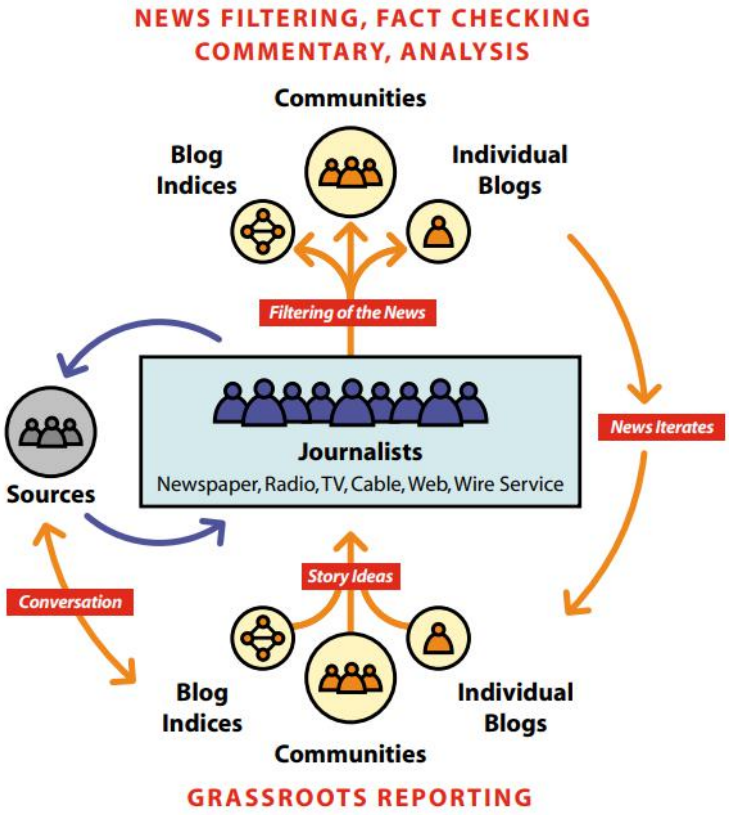
non-normative information to unspecified majority or specific individuals with just few clicks.



In July 2003, the Journalism Media Center of the United States published a study on We Media jointly sponsored by Sheinporman and Chris Weiss, in which a very rigorous definition was given from their research: We Media as a way to begin to understand how ordinary citizens, empowered by digital technologies that connect knowledge throughout the globe, are contributing to and participating in their own truths, their own kind of news through social media platforms like Twitter, WordPress blog, Facebook, Pinterest etc.

Nowadays, there are millions of active UGC creators and KOLs every day in the world, and ten times as many followers of them. Thus, a new media ecosystem is

emerged, where online communities discuss and extend the stories created by main-stream media. These communities also produce participatory journalism, grassroots reporting annotative reporting, commentary and fact-checking, which the mainstream media feed upon, developing them as a pool of tips and opinions, sourced and story ideas.



2、Digital Media Landscape in India

In the media era, all sorts of different voices come from all directions. The voices of the "mainstream media" are weakened. People no longer accept being told right or wrong by a "centralized voice." Everyone can give their own opinions and make individual judgement based on their preferences.

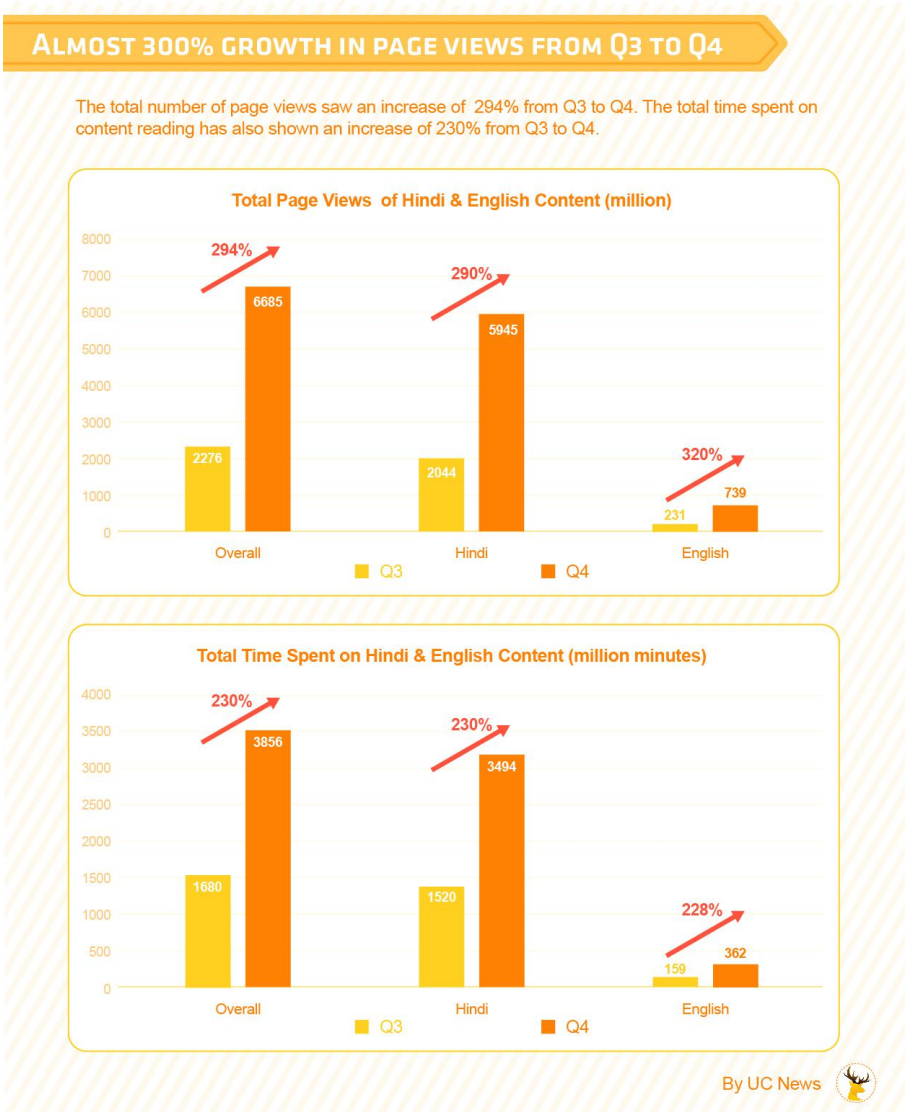
Since individual media is different from traditional main-stream media, it is an information dissemination activity dominated by the general public. It transforms from the traditional "one-for-all" communication into a P2P (peer-to-peer) communication concept. At the same time, it also refers to the individual to provide information production, accumulation, sharing, dissemination of both content of privacy and transparency of information dissemination.

According to the 《Year End Mobile Content Consumption Trends 2016》 Report from Alibaba Mobile Group UC News , both India and China have 1.3 billion people. With the development of mobile Internet in India, there is great potential for online content creation for Indian market.

In terms of media consumption, an average mobile web user in India consumes about 6.2 hours of media daily which includes 102 minutes of mobile media and 79 minutes of online (desktop) media consumption. Social media and entertainment (Music & Video) are the two activities on which the Indian mobile internet users spend their time the most followed by games, general search, and emails.

The Indian digital media segment is set for disruption with growth expected to reach INR 200 billion (INR 20000 crores) by 2020 with digital ad spend expected to grow at 23-28%. India has a large and growing millennial population – young, tech-savvy consumers with rising earnings potential and disposable income. This demographic has historically been and will continue to be, an early adopter of new technology and new models of media consumption. India, therefore is a market which is ripe for digital media investments. The demographics are all stacked in India’ s favor for digital consumption. By 2017, India will have more than 350 million smartphones.

Inexpensive smartphones and the rollout of 3G and 4G broadband infrastructure are rapidly coming together to leapfrog traditional distribution and democratize online access. Together, these factors are the foundations for accelerated digital media consumption.



3、Current situation of social media

Social media has transformed our means of communication by providing instant information to publish and publicize almost anything. The most common issue of social media is unauthorized use of content by reposting or repining other people' s work, internet users as well as businesses often turn a blind eye to the potential copyright infringement ramifications that may arise from unlawful use and distribution of content on social media platforms and lack of copyright awareness due to the existence of usage habits of free online content.

At the same time, social networks are currently the opposite of decentralized, they are centralized in every way, literally decide what you will see and not see through their computer algorithms on your feed, and completely lack transparency. Content creators who took social media seriously and produced quality content

discovered that all their hard work was consumed and controlled from the top down by large companies and their CEOs, leaving creators with no financial gain, and just a few million likes and a moment of fame as compensation. Content on social media became the stepping stone to massive financial gain for the platform rather than the creator.

Other barriers that limit copyright protection is online piracy, the traditional view of internet piracy is when someone knowingly and deliberately carries out an act of copying and distributing something over the internet for others to view, without the express permission of the original owner of the material, this happened a lot in online music and movie industry. And for content creators, to get digital content copyright protection is not easy for most of people, in fact only few succeed but mostly failure or people even don’ t bother to do so because of the following reasons:

i. The legal procedure of getting copyright protection is a time consuming process and expensive. Therefore, most content creators chose to remain silent, allowing their works to be infringed.

ii. Copyright has a limited duration, after which copyright material enters the public domain and may be freely used by anyone for any purpose.

iii. A copyright owner’s capacity to control the use of his or her work is limited to the suite of rights, which is specifically granted by the copyright regime.

iv. Facts can be copyrighted in a particular expression such as news stories or textbooks but factual statements, and generally facts cannot be copyrighted.

v. Difficult to prove and define copyright infringement

Today's technology has provided unprecedented access to news, data and kinds of information 24/7. And the internet made plagiarism more of a shortcut. It’ s simply faster and easier to copy someone else’ s work or digital content and present them as your own than it is to create something original. It also raised the rate of accidental plagiarism. With copying and pasting becoming so common and confusion over attribution standards, accidental plagiarism is more common than ever both online and on social media websites.

Moreover, it is very difficult to define and prove the copyright and intellectual property infringement over the internet because of its nature, even though, content

creator may manage to make a claim on copyright infringement, but the legal action can be very expensive and also a time-consuming process.

What’ s more, information on those platforms that had been intended to be private has been made public to governments, advertising companies, and more, making users far less willing to share intimate details of life. Potential violations of privacy abound, with Facebook, Instagram, Snapchat, and the rest being willing to change the order of feed, link users with advertisers, and make information more transparent than users might like.

Last but not least, copyright is an essential part of our social media networks, yet no one has built an effective way to make copyright useful on the internet. As the job landscape changes with the rise of automation, this problem will only continue to grow.

Creativity is one of the few things that cannot be replaced by technology and in the future it will be even more important that people can make a living using their creativity. Today it's incredibly difficult to identify the copyright owner of a file on the web. Only one thing may change that…

The blochchain technology!

4、Using of Blockchain Technology for Content Protection

The Blockchain is a natural solution to the challenges faced by social networks today, since it provides a decentralized and trusted framework. There is no need to impose any external regulation since it is inherently self-regulatory. It is a peer-to-peer distributed network in which all digital events are recorded in a public ledger through a consensus of the majority of participants.

Four important characteristics of blockchain are: provenance, immutability, distributed consensus, security. The blockchain is essentially a distributed database in which all records are cryptographically linked to each other. It is not possible to change a record without changing all subsequent records. Additionally, all entries are digitally signed and thus the source of each digital event is public.

Provenance: timestamp record protection

Based on the principle of provenance "first create and release, first entitled to its copyright", provenance information including original content creation time, name of creator, release time and platform of its origin, can all be recorded on the blockchain simultaneously. A decentralized database, or decentralized ledger, blockchain technology creates new ‘blocks’ for those information that is being stored or processed. For a new block of information to be stored, it must be approved by the entire chain, meaning that the chain is completely ‘decentralized’ and therefore secure and transparent.

Immutability: No one falsify data entries

Once copyright data has been written to a blockchain no one, not even the system developer, can manipulate it. This provides benefits for documented evidence of provenance in digital format, also traceable. As a copyright issuer, content creator can prove that their original work hasn’t been altered, and as a recipient of copyright you can be sure that the all the records hasn’t been altered and trustworthy. These benefits are useful for databases of copyright ownership transactions.

Thus the content cannot be sold twice as its hash is registered to the original creator. Even if a person finds a way to trick the system somehow and upload the content in the marketplace again, any revenue will go to the original author, as it is his/her address recorded in the blockchain.

Blockchains are essentially databases with some inbuilt pre-agreed technical and business logic criteria, kept in sync via peer-to-peer mechanisms and pre-agreed rules about what new data can be added. With respect to immutability, there are two key ideas that help to make tampering easy to detect: hashes and blocks.

Hashes

A hash function is like a formula or algorithm which takes the input data and turns it into an output of a fixed length, which represents the fingerprint of the data. The two advantages of using this function are: It’s hard to back-calculate the original data from the hash and If the input data changes in the slightest, the hash changes

in an unpredictable way. Therefore, Hashes are the basis of the security and immutability of blockchain.

Block

An important idea in blockchain is that copyright ownership are bundled into blocks before being added to the blockchain database. Blocks contain those information and also some other data including the previous block’ s hash. As each block includes the previous block’ s hash as part of its data, a chain of blocks is formed.

Distributed Consensus

A distributed consensus algorithm, normally does two things: it ensures that the next block in a blockchain is the one and only version of the truth, and it keeps powerful adversaries from derailing the system and successfully forking the chain. There are four main methods of finding consensus in a blockchain (and all distributed systems, for that matter): the practical byzantine fault tolerance algorithm (PBFT), the proof-of-work algorithm (PoW) ,the proof-of-stake algorithm (PoS), and the delegated proof-of-stake algorithm (DPoS).

Security: The transaction process is fully protected

In the life cycle of literary work or any forms of valued content, the commercial transaction is an important part of the market for the exchange of vitality and vitality. Through the distributed ledger management of blockchain technology, each process information of the transaction can be recorded and saved on the block, a distributed database cannot be hacked, manipulated, or otherwise disrupted the way a database build on one single operator can be, as a result theoretically avoiding the fraudulent transaction.

Blockchain copyright transaction registration is benefits from decentralized system architecture and distributed across peer-to-peer networks that are continually updated and kept in sync, thus greater reduced the possibility of human intervention. And because servers aren’ t contained in a central location, blockchains don’ t have a single point of failure and cannot be changed from a single computer. It would require massive amounts of computing power to access every instance (or at least a 51 % majority) of a certain blockchain and alter them all at the same time. There has been some debate about whether this means smaller

blockchain networks could be vulnerable to attack, but a verdict hasn’ t been reached. In any case, the bigger the network is, the more tamper-resistant blockchain will be.

Healthy Ecosystem: Getting What You Deserve

Social networks are a goldmine of user information, and the likes of Facebook, Twitter, Instagram, and more, are exchanging our aggregated information to provide their clients better targeting for their advertising and marketing campaigns. A blockchain based social network, removed central server, there is no single entity that can enforce such monitoring and controls over user-generated content, and ensures privacy and security through a distributed consensus mechanism. Because cryptocurrencies are blockchain-based, then users can easily exchange digital tokens through any social networking sites. In addition, smart contracts can make social networks function more like a trusted network, wherein users can make actual deals or exchange of value through cryptographically-signed and executed contracts. There is potential for all kinds of industries integrating social with all sorts of transactions.

Blockchain technology allowing users to control how their content and shared information is distributed, creators and curators get paid for making successful distribution of UGC [user generated content] and sharing them over the decentralized social networks, rather than the centralized platform leveraging content for profit. This way, a new fair ecosystem is created powered by blockchain technology!

Through the cycle of ecosystem, SELF’ s mission is to build a reliable, transparent and fair economic environment for individual media and KOLs and their huge fan based communities and to promote a healthy growth of the entire ecosystem.

The Transformed Role of Social Media in the Blockchain Era

The change blockchain represents to our social media world is tectonic. Blockchain is broad and coming to the fore on such a massive scale that explaining it often falls back on the abstract, rather than grounding it in the kind of foundational change the technology will have on the culture of how we interact online.

One of the futures envisioned in Blockchain Revolution is a "second era of democracy": one in which blockchain technology can create the conditions for fair, secure, and convenient content management that galvanizes the individual media and KOLs by removing so many mediator roadblocks plaguing our current social media networks. Breaking down platform monopolies and giving back autonomy to its creators.

1、Introducing the New Age of Social Media: S-E-L-F

Blockchain is taking root within a wide swath of internet. As a game changer, SELF (Self MeDia) is a revolutionized project aiming to create a decentralized platform that used by millions of individual media, KOLs and their fan based communities. Now, to give better idea of how the SELF system is designed and architected. We have framed FIVE key features of SELF can serve as an unprecedented new form of social media network!

Enabling copyright ‘smart contracts’

SELF can store “smart contracts” to help content creators manage their copyrights and allocate income shares to contributors to the creative process. Such digital contracts have the potential to replace conventional paper contracts, which can be ambiguous and leave some creators with little or no power over the terms for the content they create.

Royalties could be designed to be more inclusive, offering fairer terms for music composers, book authors, video bloggers and KOLs —all stakeholders involved in the creative process. SELF is an idea platform for content generators to seek immediate royalty payments and copyright ownership of their content. The service

works by attaching a smart contract to every unique content a creator uploads and dividing the revenue according to the terms the contract stipulates.

Providing transparent & traceable P2P transactions

One of the biggest appeals of SELF is its nature of public blockchain. All of the transactions for a creative content could be seen and validated, including all the information about the content, who has the authority to get access to the content and how much profit the content is generating at any time. This will allow stakeholders to have a better idea of the overall value of the creative work that is being produced, all in the form of a distributed ledger recorded in SELF' s public blockchain.

Moreover, SELF will make its blockchain transparent by identifying who the owner of the creative material is. SELF is also offering attribute ownership of creative works securely. The service works by providing each creative work with a unique cryptographic identification, proved by blockchain. This means the ownership of creative material is traceable and content can be securely shared through SELF' s blockchain networks.

Promoting fair, dynamic pricing for creativity

Innovative content can be underpriced. By tracking the market demand for such content, setting the right price could be more in line with the market supply and demand, at the same time more dynamic. With SELF, any video producers and photographer could control prices and have the ability to set prices themselves without having to go through a centralized social media intermediaries like Youtube or Instagram.

As SELF provides the records of who has been granted access rights to creative works, this could then be harnessed to price creative works dynamically. More important, because of content produers is getting closer to their own creative work than before, they will have a stronger voice in the pricing scheme and therefore, make discounts or increase price on their works any time when they need to.

Allowing 'micromonetizing'

Digital music stores and video on demend platforms such as Amazon, Spotify, Netflix allow consumers to purchase individual song tracks or a single movie. Using

blockchain, snippets of creative works could be made available for a price, for example, a few seconds of song track for use in a online market campaign. This kind of micrometering creative content by having the blockchain record the precise components of the work that were used, maximizing the utilization of the smallest consumable unit of digital content. This could have huge impact on people who consume digital contents over internet, allowing them to purchase what they really want to see or listen, SELF is disrupting the traditional method of content creators being remunerated through 3rd party by offering micrometering payment services. This allows users to support content creators of their choice and reduce unwanted ads.

Establishing a trusted reputation mechanism based on blockchain

SELF can help link reputations to specific account on its decentralized platform, thus allowing both creators and consumers of creative work to prove one another. This could encourage stronger synergism and better trust mechanism, by promoting cooperative terms for content producers and consumers alike. On the other hand, if some one violate the rules of the credit facility, any bad behavior will be recorded on SELF's blockchain, thus downgrading violator’ s credit rating and thus directly affecting their future reputation on any social media platforms that using SELF blockchain service. This reputation mechanism significantly increased the cost of non-compliance, thereby reducing the possibility of violation.

In the following whitepaper, a detailed system architectural flow chat will be given, as well as the benefits for platform stakeholders.

2、About SELF (Self-MeDia)

SELF standards for Self-Media Platform, an intelligent copyright identification and incentive platform based on distributed ledger and smart contract. SELF’ s robust blockchain network guarantees all the copyright data will be recorded under consensus mechanism and almost impossible to be tampered with.

As a supporter of open source, SELF focused on the public blockchain, an incorruptible record keeping system, transparent by being public and un-hackable due to its distributed nature provide a way to protect the content creators from the intermediators such as traditional social media sites like YouTube or Facebook. Public blockchains are open, and therefore are likely to be used by many entities

and gain network effects. Any social media platform, mobile apps, individual media, content creators, KOLs or organization can be the user or node (hosting server) on SELF’ s network without additional costs. At the same time, their valued creative content will be protected and the transaction process will be handled smoothly, with smart contract, SELF can cut costs to near-zero.

Through the blockchain network, all the copyright registration data can be encrypted and uploaded to SELF, so that the copyright data has generate a unique and hack proof block ID, that secured by cryptoeconomics – the combination of economic incentives and cryptographic verification using mechanisms. The following code are how copyright confirmation and ID creation:

```
writerID: string

sourceID: string

timestmp: uint

uniId: string

function generateUniId(sourceID):

    writerID = platform_interface.getWriterID(sourceID)

    timestmp = time.time()

    uniId = hash(writerID, sourceID, timestmp)

    return uniId
```

The decentralized ledger can be used for smart contract, and converted to computer code, stored and shared on the system and monitored by the network of computers that run the blockchain. According to 23-year-old blockchain genius Vitalik Buterin, the smart contracts contain rules and penalties around an agreement, an asset or currency is transferred into a program “and the program runs this code and at some point it automatically validates a condition and it automatically determines whether the asset should go to one person or back to the other person, or whether it should be immediately refunded to the person who sent it or some combination thereof.” In the meantime, the decentralized ledger

also stores and replicates the document which gives it a certain security and immutability. (DC Blockchain Summit 2016)

All transaction on SELF is regulated executed by smart contract, it generates a record of all transactions that is highly resistant to forgery, and ability to create entire trading environments and schemes to exchange valued creative works.

3、The SELF Platform

SELF token is the only cryptocurrency circulate throughout the ecosystem and SELF tokens serve as representative ownership in copyright or the value of creativity, it ensures liquidity and extends access to capital. After the crowdfunding is completed, SELF will launch cryptocurrency wallet, issue and distribute SELF tokens to every community member.

Because SELF is a global decentralized platform, targeting global market and billions of social media users and content creators, therefore, SELF DOES NOT ACCEPT FIAT CURRENCY CROWDFUNDING.

SELF will launch relevant App applications, as well as decentralized platform SDKs for Web and Mobile developers, in order to provide powerful and reliable blockchain service to all stakeholders.

Operating Mechanism of SELF

1、Content Distribution and Matching Algorithm

The Definition of Content Quality

SELF will connect we-media platforms by releasing API and functional interfaces to media platform and we media operators with development ability. If content writers develop and create contents for media on the platform which is supported by SELF interfaces, the published works will obtain the quality definition from the media platform. Work quality is related to recommendation rates and results, and it enables to increase or decrease the credit agreement of the content writer, thus impacting the mining value.

Since SELF platform is a mining system based on concentration, which considers the concentration between authors and readers as key concerns. Thus, the work quality depends on the degree of attraction to users' concentration. The meaning of work quality coefficient includes, but not limited to, views, clicks, readings, average reading time, likes, shares, and recommendations. Each indicator related to work quality has the complete and appropriate definition.

Click Rate refers to the number of times of being visited by platform users. It is passive that works are browsed by user, which depends on recommendation algorithms and various time and scenarios. When a work is viewed by a large or small number of users, clicks of the work is a key indicator which reflects how much the work is attracted by users. Click rate is the ratio of the number of clicks to the number of views. It is important to reflect the degree of attraction to users' concentration.

Click Rate (C) = Clicks (A) / Views (B)

However, click rate is not a perfect indicator. The reliability of click rate depends on the sample size. If the size is too small, click rate is not reliable enough. Edwin Bidwell Wilson, an American mathematician, proposed an improved formula called "Wilson score interval" to deal with the issue for a small number of samples. "The proportion of affirmative vote" of samples. 'N' is denoted as sample size,

representing a statistic variable corresponding to a confidence level z, which is a constant. When the value of n is large enough, the value will reach the upper limit. If the value of n is too small (i.e., too few people vote), the value will be greater than the lower limit, causing smaller scores and lower rankings.

Push: int - The number of people who got the source

Click: int - The number of people who has clicked the source

function getValue(sourceID):

Push = platform_interface.getpush(sourceID)

Click = platform_interface.getClick(sourceID)

v = [click / push, push]

return v

Click rate represents the degree of users' interest in major idea or title of the content. Feature labels from major idea of the work provide feedbacks to different users through click rate. After the confidence operation, the ranking of work click rate assigned with a weighted coefficient becomes one of the parameters for work quality, which is recorded in SELF system. The number of clicks is denoted as 'C', and click rate is denoted as 'C'.

Content reading is dependent on how long one user stays in the work. A meaningful threshold can be set up. Thus, if the duration of staying is greater than the predefined threshold, the user is believed to read the work. Again, reading rate is also a ratio of the number of readings to the number of clicks. The number of readings is denoted as 'S', and reading rate is denoted as 'S'.

Reading Rate s = Readings S / Clicks C

Similar to click rate, Wilson score interval also exists in reading rate. Therefore, SELF can utilize the same code to address the value of reading rate. On the other hand, different to click rate, reading rate focuses more on users' interest in the work. In addition, reading rate, as one of the key indicators in content quality, also reflects whether the major idea and title of the content are expressed appropriately. If the content is against to the major idea, reading rate will drop. In contrast, if the

content is highly consistent with the major idea, even in a full and rich manner, the reading rate will stay at a high level. Reading rate is also assigned with a weighted coefficient and becomes a part of the whole content quality.

Like rate, share rate and recommendation rate are similar to readings and reading rate, representing the degree of the further acceptance of the user. In the system of work quality, these indicators are extended to reading rate. Based on reading, user intends to like the work. Based on likes, user intends to share and recommend the work to others. However, there is no relationship or progressive relationship between like rate and share rate.

The value of likes and like rating are denoted as 'L' and 'l'; The number of shares and share rate are denoted as 'S' and 's'; The number of recommendation and recommendation rate are denoted as 'I' and 'I', respectively.

Another key indicator for work is average reading time 'T'. It reflects the depth of the content and the degree of users' concentration. The content with long average reading time usually attract user's attention, so that users are willing to spend more time thinking. On the other hand, longer average reading time is not always good. When the indicator value reaches a threshold, the results of work distribution becomes worse, because the work costs too much concentration. As a result, light users are not possible to accept the deep experience. Therefore, we propose to use attenuation algorithm to deal with the values which are greater than the threshold. This means that if the value is greater than the threshold, the increasing speed of T slows down dramatically, even goes to the opposite direction. The processed T is denoted as t to represent the average reading time of the work.

The algorithm of work quality is defined as:

Content Quality $P = \sum_{i=a}^{z} K_i * k_i * U_{weight\ coefficient} / \sum K_{total}$

Content Matching Algorithm

Content are distributed on platform, generating two series of feature labels. On one hand, every piece of content is attached with labels, for example, author, theme, time, content, and expression, etc. These labels are distributed to users with the transfer process of content. When the content is engaged, the user is assigned with theme label, time label, content label or expression label and so on. For example, a user A could be assigned with labels of modern, sport, and video.

Meanwhile, the user could also be assigned with more labels and these labels do not conflict with each other. Thus, a user can be assigned with sport label as well as technology label.

In the process of content distribution, the ability or weight to assign labels to users is different. When the labels of the content are very evident, the labels it conveys are very clear. When some labels are not clear enough for the content, the labels it conveys are ambiguous. SELF differentiate labels' weight when assigning labels to the content, and then transfer the weight to corresponding users.

Similarly, different users' activities bring themselves different label weight. For example, a user has activities of "like", "share", or "recommend" when reading technology work, so the weight of technology label for this user increases. If a user only clicks the content and does not reach the reading threshold, this user will be assigned a lower weight, showing that the user is interested in this type of work but the degree is not large.

Furthermore, when a user is continuously interested in certain content with the same labels, users' label weight will increase. The user can reinforce his label weight continuously.

However, when a user with labels is reading a textual content, the user's label can be transferred to the content itself. The work will gradually obtain sub-level labels, most of which are not related to the content. In fact, these labels are for the user. For example, a piece of content will be assigned with male label or white-collar label when it is read by a large number of users. In this way, in addition to the feature labels of the work, non-related extra user labels will be generated as well.

With the repeat transfer between content and users, labels continuously move and reinforce in the system, finally forming a complete feature matrix for content and users. Suppose there are 'n' types of labels, then push matching of content is undertaken by keyword labels.

The label for content is represented as a multi-dimensional vector: P= $(1,0,1.....0)_n$

The label for users is represented as a multi-dimensional vector: U= $(0,0,0.....1)_n$

Labels matching results $(0,0,0.....0)_n$ for content and users can be obtained by transposing the vector product PxU.

Sample code is shown below:

```
SELFf: array - look like -> [1, 0, 1, 0, 0, 1, ...]

rmdf: array - look like -> [0, 0, 1, 0, 1, 1, ...]

function getMatchedFeature(sourceID):

    SELFf = platform_interface.getSELFF(sourceID)

    rmdf = platform_interface.getRMDF(sourceID)

    cmdf = SELFf * rmdf - The result is look like this -> [0, 0, 1, 0, 0, 1, ...]

    return cmdf
```

The results represent the matching degree between content and users. The results are then sorted based on their degrees according to weight algorithm of the system. At last, the top ranked content are to be pushed to users.

Cluster Intelligent Algorithm

The articles are recommended to users by content matching distribution algorithm. Inevitably, the feature labels tend to narrow down. In other words, if a user is continuously attached with the certain heavy label, more content with this label are recommended to him, but the number of contents with the other labels are gradually decreasing. Someday when the recommended content are all attached with these heavy labels, it would be very difficult for the user to change these labels from his side. Typically, what users really need is extra general content in addition to the heavy reading rate.

SELF provides interfaces to users to obtain the general and related content through the cluster intelligent algorithm,

Suppose after a user engage content A, usually s/he will have the similar reading activities. For example, s/he engage content B with another label. Thus, it is assumed that there is a relationship between content A and content B. In order to further discover the relationship across content, the users who have engaged

content B are selected from all users who have engaged content A. Then the number of associated users of content A and content B can be obtained: $R_{(A-B)}$.

The association indicator of content A and B is finally achieved via:

$$r = R_{(A-B)} / \sqrt{A^2 + B^2}$$

Sample code is shown below:

```
sourceAReaders: array - readers of source

sourceBReaders: array - readers of source

function getCPValue(sourceA,sourceB):

    sourceAReaders = platform_interface.getReaders(sourceA)

    sourceBReaders = platform_interface.getReaders(sourceB)

    cp = (sourceAReaders & sourceBReaders).count /
sqr(pow(sourceAReaders.count, 2) + pow(sourceBReaders.count, 2))

    return cp
```

We perform the association indicators analysis for all content over the network via clustering system. For a certain content A, the associated content are sorted by their association indicators. The top ranked related content whose metric values are greater than the threshold will be pushed to the users of content A.

Cluster intelligent algorithm is adopted to solve the issue of reading labels' narrowing down for users. Based on this, SELF provides deep learning based on cluster intelligent.

Similar to the cluster intelligent algorithm related to content, the analysis of algorithm related to labels can be performed. SELF can have a large number of content feature labels and user feature labels from we-media platform and users' activities. When a new content appears on the SELF platform, the system will estimate a model, and then the system will adopt the linear regression model based on logistic regression and tree-based GBDT algorithm to perform deep

learning on the content. At last, the feature matching model of the content and users can be found.

Similar to the relationship of content, the relationship of feature labels can be discovered by deep operation and matching. This will provide a possibility to push satisfying and interesting works to users in order to meet their needs.

Different to the relationship of content, the relationship of feature labels is based on more complex and larger data. Specifically, each content is a unique sample, while each feature is abstract, and the features are on top of a large number of content. Therefore, it is necessary to split the feature data from the large number of content in order to perform the feature analysis. On SELF platform, one feature could be related to tens of thousands of content. The correlation analysis of features requires to match tens of billions of content of one feature with tens of billions of content of another feature one by one. This is a matrix with the correlation structure. Compared to correlation of works, more complicated recursive logics and powerful algorithms are needed to support the correlation analysis of features.

Deep Learning-based SELF Future Blockchain Structure

Deep learning algorithms cost large amount of network computing resources, and the sharing mode of the network computing resources will be the main purpose for SELF in the next stage. SELF will build a lower-level blockchain system to provide computing resources for deep learning algorithms. This system consists of two parts: a ledger system (tasks distribution and reward exchange) and a computing resource supporting system (mining system). The ledger system of SELF deep learning structure will provide a distributed task to all the applications which require deep learning, and then distribute the reward based on the performances of tasks. On the other hand, the resource supporting system splits lots of redundant operations of blockchain from the ledger system, so that the powerful operation ability of the mining machine can be contributed to the applications which require high computational costs.

The structure in the second stage of future SELF will be based on a democracy voting scheme to select a trusted ledger recorder. The ledger recording agency will become a logically separated network. The overall network structure logically becomes a two-layer structure. The upper layer is responsible of tasks distribution,

verification of computing results, continuous updating and ledger recording. The lower layer is responsible of completing the tasks from the upper layer, and obtains the reward based on the performance of tasks. These two layers are not separated networks. The computing power of the upper layer is from the voting of the whole network. The computing power of selected agent node or trusted node becomes the upper layer structure and is responsible of tasks distribution. The other computing power becomes the lower-layer network, which is responsible to provide computation resources.

The upper-layer utilizes distribution scheme similar to route. The upper-layer takes a part of computing power from the whole computing network, and makes it served for the scheduling layer of the lower-layer computing power. The whole network selects several agent nodes via voting, and constructs scheduling layer. If any of the selected nodes fail, the voting will rerun again. The voting happens again from time to time, so any nodes could be selected as agent nodes. These agent nodes are responsible of ledger recording, and perform distributed ledger process based on the blockchain. Agent ledger recording nodes are responsible tasks distribution and tasks results recording. In the operation process of the whole network, voting happens from time to time. The results are distributed across the whole network, and the voting results are not recorded after the next voting. Nodes themselves do not know whether they are in agent (trusted) state, in case to interrupt the network schedule. Additionally, all nodes have the right to apply to obtain the ledger of the whole network from any agent nodes at any time to make sure the ledger system is public and transparent.

All the lower-layer computing power of the network is only responsible of providing big data analysis and operation service for deep learning, and solving operational issues for customers. The requirement for the upper-layer computing power will distribute to the whole network in a rewarding manner. As long as any nodes are available, they can apply to receive the tasks. The nodes which complete the tasks sooner will receive the reward. When the computing power of the network is at busy state, the tasks will be pushed to a queue. Based on the FiFo (first in, first out) principle, the tasks in the queue will be completed one by one. The agent (trusted) nodes in the upper layer will also receive 5% reward of the task.

Next-generation structure based SELF system will completely solve the problem of redundancy of computing power for blockchain, so that the strong computing ability will be applied in applications which require these, instead of only applying the unlimited computing power in trusted ledger mode. In this way, the strong

computing power from blockchain system will be very valuable, and provide reliable service to the society. Blockchain techniques help the real world to quickly obtain the computing resources, and ensure the resources distribution and rewarding scheme open, fair, and transparent.

The main blockchain structure system of future SELF is currently under development. Please stay tuned to the release of SELF project.

2、The Copyright of SELF and Credit Agreement System

Credit Agreement Receiving and Accumulation

All the value basics of we-media platform is from the agreement between copyright and users' credit. SELF works on building a complete user credit system based on copyright confirmation. In the system, all the confirmed copyright information will be published to the whole network, and obtain the confirmation of 51% computing power of the network, so that the tampering of copyright becomes a risk which the whole network computing power is against.

The previous part has introduced how SELF creates copyright for works, and based on this, credit agreement provides an objective channel for the copyright transfer, articles repost and distribution. All the participants on we-media platform, including authors, readers, reposters, purchasers, Ads payers, and distribution platform, will be assigned values in the credit system, and their credits will be proved by the computing power of the whole network.

The assignment of credit system is from the activities like confirmation, distribution, repost, reading and following of copyright. The credit agreement itself can also provide higher weight to the assignments of these activities. Credit agreement reflects the stability of users' activities, such as consistently efficient production and consistently stable concentration delivery. These activities would receive higher credit, and the increasing credit can provide more added values to users' productions.

Users' credit comes from two aspects: one is where users act as authors. Users publish their content on media platform, and the content would become one of the

stable credit sources for users. Each work receives credit coefficient based on quality according to aforementioned content quality. With the coefficient, all users' activities such as click, read, comment, and share, bring users the corresponding credit. The credit value of users from each work is calculated by the formula shown below:

$$R(credibility) = \begin{matrix} P(work\ quality) * (C(click\ rate) * c(click\ credit\ coefficient) \\ +S(readings) * s(reading\ coefficient) + \cdots) \end{matrix} \Big/ \sum P(any\ work\ quality)$$

The credibility from content decreases with time. The credibility produced within the first 24 hours when a piece of content is published is all responded to content creator. 40% of the credibility produced from 24 hours to 48 hours is responded to creator. 50% of the credibility produced from 48 hours to 72 hours is responded to creator, and no credibility is responded to creator after 72 hours.

SELF registers via blockchain protocol, confirm, and follow the process of transfer, repose and distribution. Meanwhile, it ensures the benefit of the original creators, on distributed platform. These benefits are to be represented in the form of users' credit. With respect to content being reposted and shared, the original creator will receive one-time credit reward based on the repost outcomes.

The other source of users' credit is where users act as content engager. When users are visiting social media platforms, it is typical that the activities including "like", "comment", and "repost" appear, which can also be considered as expression of personal opinions. These opinions are to be included into the content, and received a certain percentage of reward from the content credit. For example, if a user likes a particular content, the reward will be distributed evenly to each user who have liked that particular content. If a user reposts a work, a certain amount of reward will be given to the original creator in the procedure of reposting, and later the user will be given 20% of the reward of the content on a new platform while sharing. The detailed calculation approaches are different on various platforms.

The key factor of credit rating of all users is the content quality. Users could receive more credits in many ways including creating, complimenting, commenting and reposting excellent content. SELF expects to encourage users to create, engage, rate and recommend more high-quality content by this credit rating system.

Within SELF's blockchain system, the credit received by users will be recorded, distributed and confirmed in the form of transactions. The blockchain-based

intelligent agreement mechanism will be discussed in the technical structure of the system.

The credit cannot be traded or directly obtained through purchase.

Credit Agreement-based Recommendation and Ranking Factors

For we-media content creators, the important application of a credit agreement is credit agreement-based recommendation and ranking system. In the SELF work distribution and matching algorithm which have been introduced in early section, content can be recommended to the related users. The creator with a higher credit rating would receive more opportunities to be recommended on social media platforms, as a result their creative work will get better marketing exposure, more online traffic and more revenue.

Specifically, SELF is able to obtain the matched target users of each work according to the matching algorithm. In practice, the number of matched content for each user is very large, and daily concentration of each user is limited, so users' attention should be focused on more valuable content. In SELF system, the value of concentration is represented by the effectiveness of content mining. In other words, in the same period of time, more outcomes of mining being received by users show the users' higher effectiveness and higher value of users' concentration. SELF will sort the content from the recommended list by the content creator's credibility. The ranking scores dependent on the product of work quality and users' credibility. If a user has high credibility, his works have more opportunities to be recommended to other users.

The Decay of Credit Agreement

Users' credit could decay in SELF system. The decay is due to the decrease of users' attention input into the media platform. When the weighted sum of quality of content published by creator is less than the average value of previous daily sum, creator's credibility will be decreased. This is also applied for daily readings, likes, and comment rating mechanism.

Credit decay brings down the ranking weight of users who do not pay much attention on the media platform. This is in accordance with the principle that the users with more attention have priority to be provided with excellent resources

If users are not active on the media platform for a long time, their credit would decay to zero, but their copyright information would not be lost at all and be recorded on SELF’ s blockchain network forever.

3、The Value System of Concentration-based Mining

The rules of Concentration-based Mining

SELF system considers the concentration as the most valuable assets on its network. Content creators provide concentration via the development process of their concentrated works. The social media users use their concentration engaging quality content. All the objects who provide concentration service in the POS system that can be awarded.

The content creators, who publish content on the platform supported by SELF API, will receive SELF token as reward via weighted calculation. The amount of reward is dependent on the quality of creators’ work. The daily total amount of SELF token on one platform depends on the percentage of weighted scores of the platform to the number of platforms on the day before. The platform then distributes the award to creator by weighted average method using weighted coefficients.

For instance, The SELF system is connected to three social media applications, A, B, and C. Currently the daily total amount of SELF token released by SELF for users is denoted as D. On the previous day, for platforms A, B, and C, the weighted score sums of all content quality are ‘a’, ‘b’, and ‘c’, respectively. Accordingly, the amount of assignable SELF token received today is ‘DA’;

$$D_A = D * a / \sum_{i=a}^{c} i$$

For an individual content creator, the SELF token s/he might receive is depending on the ratio of the content quality ‘Q’ to the weighted sum of all the content quality on the day it uploaded onto the SELF’ s network. So now, s/he will receive award Ds from the work S, see the algorithm illustrated down below:

$$D_S = D_A * Q_S / \sum_{i=1}^{n} Q_i$$

Take D_A into the equation, D_S can be expressed as:

$$D_S = D * a * Q_S / \left(\sum_{i=a}^{c} i * \sum_{i=1}^{n} Q_i \right)$$

Content consumers spend their time and effect on social platforms which are supported by SELF API. This activity can be considered as content mining, and can be rewarded by receiving SELF token. The mining activity of content consumers on SELF platform is mainly represented by: "click", "read", "like", "comment", "recommend", and "repost". Different users' activities will trigger SELF token value accumulation mechanism, then the system will automatic evaluate the quality of each content. In the meantime, various users' activities will impact the work quality, so this is a two-way correlation system. It is assumed that the weight coefficients of users' click, reading, likes, and comment are 'c', 'r', 'p', and 'e'. The coefficient of recommendation and repost is 'i', and the quality coefficient of the work is 'Q'. Thus, the obtained concentration value 'V_u' of the user on the work is calculated by:

$$V_u = Q * [c + r + p + e + i]$$

In the same period of time, the amount of SELF token distributed by SELF network to content consumers is 'U'. The number of connected users across platforms is 'i'. The number of SELF tokeb received by the connected platform A is $U_A = U * i_A / \sum i$. Thus the number of received SELF-Coin of a work on platform A is:

$$C_u = U * i_A * V_u / \left(\sum i * \sum V_i \right)$$

For both content creators and content consumers, the received SELF token is based on content mining, and will be distributed to their personal or company's accounts.

Value Accumulation and Consumption

SELF token can be traded on cryptocurrency exchange. Content consumers can also make a purchase of SELF token from listed exchanges, or reward their favorite content creators. Such rewards can also boost content quality on SELF's network.

Creative work are released via SELF system, and after copyright confirmation, it will be displayed on the media platform which connected to SELF network. These works

will finally be shown to content consumers through SELF’ s blockchain, recommendation and interactive distribution among partner networks. Then, creators can obtain quality information via the design of SELF system. Based on this factor, the user activity such as click, reading, likes and recommendation will accumulate credit (credit is agreed among the distribution of the SELF system) for content creators and accumulate SELF token values (SELF token will go to the author’ s personal SELF Wallet). Additionally, content creator can receive their own credit and SELF token through engaging content with different quality coefficients. Content consumers can use these SELF token to pay for the PTE (paid to engage) content, and support their favorite creators.

In generally, content creator can also be the content consumer on SELF’ s network. There is no boundary between two entities. Both of them using SELF token for content exchange and transactions.

The SELF system is not only design credit-based value accumulation for creators and content consumers, but also provides a new solution for copyright exchange powered by blockchain technology. In the later part of SELF ecosphere, more details about eco-cycle of SELF will be giving. SELF aims to build an eco-cycle for all social media users which is able to accumulate and value creativity through concentration.

As an ongoing project, SELF will reserve certain portion of SELF tokens for further contributors, and offer great rewards for good quality contain along with advanced credit rating system.

4、Credit and Value-based Recommendation Algorithm

The section of matching and distribution of content in SELF system has introduced feature labels of creative content and consumers, which are the basis of Ads recommendation algorithms. With users’ credit agreement system, this section will introduce in detail how SELF credit-based Ads recommendation algorithm works for different social media platforms to create their own values.

The more time and effect users spent on decentralized social media platforms, the more credit and values they will gain. Here, credit depends on the level (a continued value) of users’ participation in the social media networks. On the other hand, value depends on the level (an accumulated value) of users’ accumulation

on such platforms. With respect to advertisers, users' accumulated values on the platform represents the past, which are less impact on existing and future behavior. Instead, users' credit on the platform shows the level of participation. The higher level of participation means more effect inputs on the platform, this create monetized opportunities for content creators.

SELF system also includes value estimation mechanism based on credit rating system for smart Ads recommendation algorithm, this can help content creators maximize their profits, and ability to run super-efficient marketing campaigns through the SELF networks at very low cost.

For a content attached with feature labels, SELF system will summarize the accumulated values for content producers. More accumulated value for producer means his/her work quality 'Q' is also weighed more value. The feature label of the content is denoted as a multi-dimensional vector: P= $(1,0,1.....0)_n$. The feature label of Ads targeted users is represented as a multi-dimensional vector, denoted as: U= $(0,0,0.....1)_n$. Based on users' value V_i, the labels matching result of content and Ads targeted audience can be achieved by transposing the product of vectors:

$$P * U = V_i * (0,0,0.....0)_n .$$

This result shows the matching probability between smart Ads and target audience. The matching probability value of articles and Ads can be calculated based on the length of vectors from previous result. The matching probability is then sorted, so that the most appropriate content can be selected for Ads display. The Ads along with the content can be added to the loop queue in content consuming process.

For a content consumer attached with labels, the SELF system summarizes his/her credit value. Higher credit (strength) value for a consumer shows the user is more active on the social media platform. As long as s/he remains high level of active, the consumer can achieve higher credit (strength), in opposite, the credit values start to decay. Accordingly, we propose to denote feature labels of the user as a multi-dimensional vector P= $(1,0,1.....0)_n$, and to denote feature labels of Ads targeted users as another multi-dimensional vector U= $(0,0,0.....1)_n$. Based on users credit value 'Ri', feature matching result of users and Ads can be obtained calculating the transposed product of vectors: $P * U = R_i * (1,0,1....0)_n$. Then the length of the vector is calculated to represent the matching value of users and Ads.

According to the rankings mechanism of matching results, Ads can be accurately displayed to the appropriate users.

5、The Eco-Cycle of SELF

Every social media network consists of a number of stakeholders, including platforms, content creators, content consumers and advertisers. In the end, a benign ecosystem has been created.

Create Value For All Stakeholders

Content creators need the environment where a fair system supported by copyright confirmation protocol that record and protect copyright. Based on this principle, creators can build their own ecology and they are expecting to obtain more credits for good quality work, in order to attract large number of content consumers. The more user engagement, the more financial benefits in return, thus motivate them to put more effects on quality works.

Secondly, the SELF system provides the marketing opportunities for content creators who are willing to target large audience around the globe. The SELF system can eliminate online ad fraud (bots instead of humans seeing or 'clicking' on ads) and issues with how the effectiveness of campaigns. SELF will use blockchain's smart contract technology to underpin its media buying and planning platforms so creators will be able to see where their marketing expense goes. Moreover, SELF will build a cleaner value supply chain with 100 percent transparency for its users.

SELF wants to change the way people socializing on the internet by empowering users to get rewarded from great content engagement on decentralized social networks. SELF offers cryptocurrency rewards (SELF token) to users and publishers, enabling the community to decide which posts have merit and which are “voted down” for being fake news.

By connecting to the SELF’s open source API, any websites, mobile apps, individual media, marketing agencies, and social media platforms will become a brand new decentralized entity, helping them to achieve their own targets, providing more efficient services and content to its clients and consumers, increasing return on investment, and because of the characteristics of blockchain, SELF will greater

reduce the cost of any transactions and provide a robust hack-proof network to protect copyrights and creative contents.

Technical Framework

1、Open Source and Stability

SELF will release all underlying code on public platforms such as Github, SourceForge, CodePlex etc, and all materials and processes will be made available for public use.

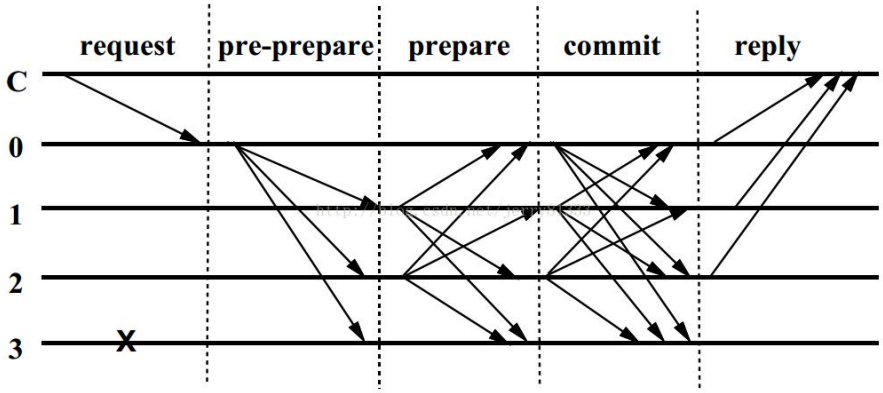
Every update of SELF will announced on SELF’ s official website, include details of each updates, version code, debugging etc.

The design of SELF-Wallet takes full consideration of security. The assets of digital cryptocurrencies will be stored in an encrypted form. Any transaction that reaches the threshold cannot be completed until the private key is confirmed. The user’ s private key supports trading and transferring digital currencies over the whole network. SELF-Wallet will adopt multiple security mechanisms to protect user’ s assets.

SELF adopts HTTPS protocols and security agreements to perform secure encrypted transmission for users’ all operational information. This includes authentication, encryption and integrity verification, which effectively prevents information eavesdropping, tampering and hijacking.

Agreement algorithm is the most important in blockchain. Bitcoin uses POW (Proof of Work), while Ethereum uses POS (Proof of Stake). This makes the computing power less important, and DPOS (Delegated Proof of Stake), another form of POS, further reduces the computing power and improves security for blockchain. Traditional agreement algorithm is the first option for SELF’ s blockchain

According to Byzantine Generals Problem, there are three stages for consistency guarantee: Pre-Prepare, Prepare, and Commit:



In the figure, 'C' is a sending requester, and '0' '1' '2' '3' are servers in which 3 is down. The steps are illustrated below:

1. Request: The requester 'C' sends request to any server nodes, e.g., '0'

2. Pre-Prepare: Server '0' receives the request from 'C', and then broadcasts to '1', '2', '3'

3. Prepare: Servers '1', '2', and '3' receive the request and make records, and then perform another broadcast: '1'->'023', '2'->'013', '3' cannot broadcast because it is down

4. Commit: Nodes '0', '1', '2', and 3 are at Prepare stage. If they receive the same request which is more than a threshold, they move to Commit stage and broadcast the request of Commit

5. Reply: Nodes '0', '1', '2', '3' are at Commit stage. If they receive the same request which is more than a threshold, they will respond 'C'.

In conclusion, the consistency problem could be addressed if $N \geq 3F + 1$ where 'N' is the total number of computers, and 'F' is the number of computers with problems. According to this, byzantine is able to accept that around 1/3 of nodes have errors, so SELF will utilize PBFT (Byzantine fault tolerance) method to solve the agreement problem.

SELF supports smart contract, and have features of decentralization, low latency and progressive security, which dramatically improves extensibility and transaction speed.

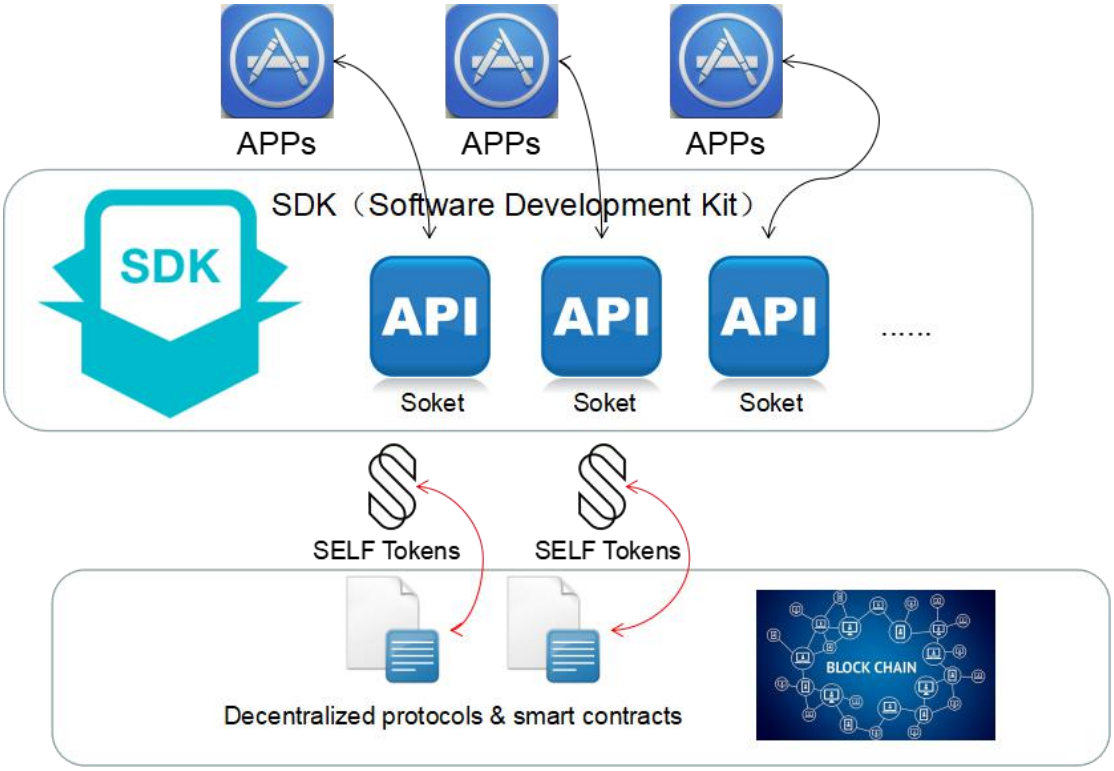
SELF's blockchain will provide the following key functions in 2018:

Authentication of author, ID recognition, unique ID and work recognition, work release time confirmation and decentralization-based encrypted storage in the whole network.

Work information of whole life cycle, copyright information, and encrypted storage of time information in the whole network; encrypted and decentralized storage of ID information

SELF-Wallet for users, SELF-token trading, payment and storage.

2、System Framework



In the near future, SELF will gradually release all APIs and SDKs according to our project roadmap, SELF will provide an all-in-one blockchain solution for strategic partners which is guaranteed by smart contracts, and the ability to easily connect to different platforms as well as individual media. SELF offers SELF-Wallet and SELF platform on application layer, in which the platform includes various universal interfaces and SDK.

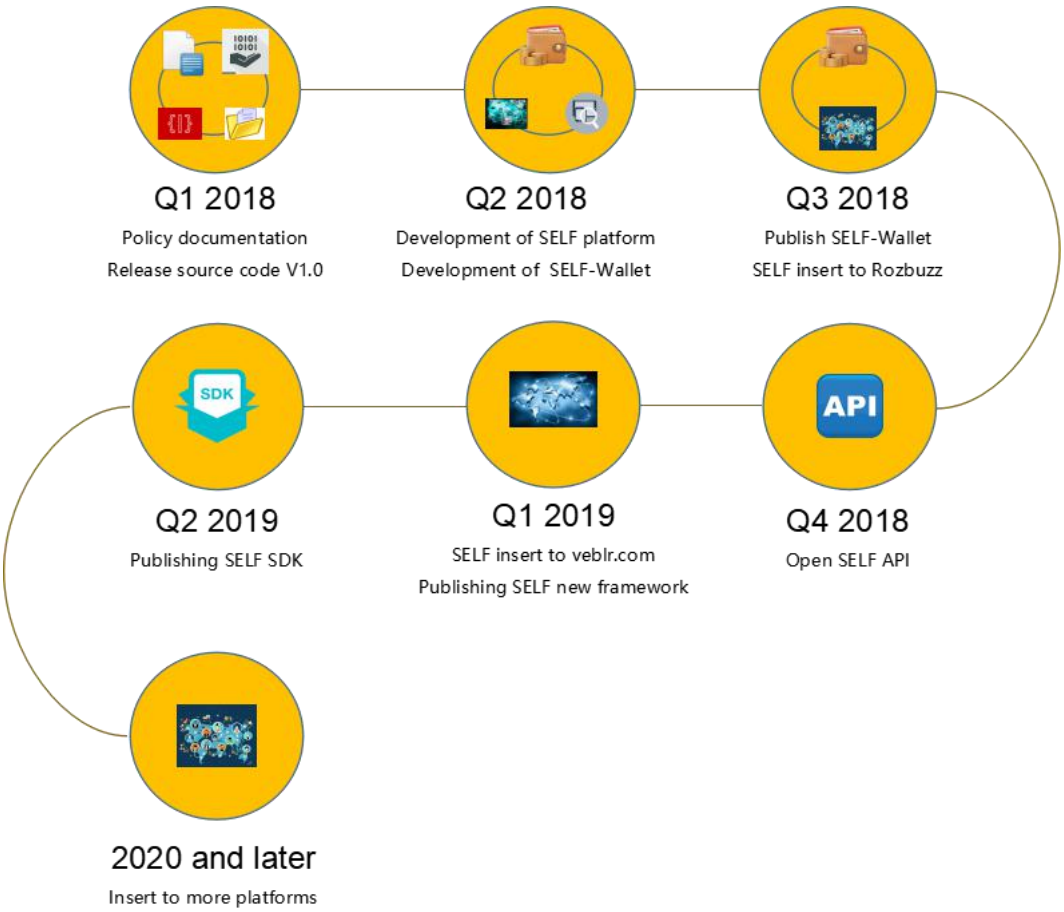
3、Smart Contract Framework

Smart contracts are computer programs that facilitate, verify, or enforce the negotiation or execution of an agreement. Smart contracts often emulate the logic of regular contractual clauses. Therefore, many kinds of contractual clauses can be made partially or fully self-executing, self-enforcing, or both.

The smart contract framework of SELF provides consistent APIs across several programming languages that programmers can use to manipulate state on the blockchain. SELF currently supports .NET Framework, Java framework, C/C++and its respective compiler will be released within a few months. In the future, SELF will also support Python, and Go.

Project Roadmap

The planning and development of SELF project will involve various aspects such as formulating mechanism, coding, features and products releasing and marketing activities. SELF is aiming to create a fair, distributed, and robust blockchain ecosystem. To give a better and clear lustration on how the project is being built, SELF team outlined the following project road map, the specific date may be adjusted.



Development milestone

SELF’ s goal is to create a complete ecosystem that will serve the global social media users, provide intelligent copyright management system powered by

blockchain technology, a fair transaction environment for content trading, value acquisition and quality content consumption by 2020.

Milestone #1：System Architecture and release of the first

smart contract of SELF (version 1.0.0)

Time frame: March 2018

1. System Development Strategy Documents: including academic research, algorithm and logic for mechanism design
2. The underlying architecture documents: including smart contract agreement, data package transmission and data exchange algorithm.
3. Technical guidance: including the coding standard, logic design standard and system architecture specifications.
4. SELF platform development documents: including interface specifications and system compatibility
5. SELF smart contract open source code released on GitHub and maintain updates

Milestone #2: Commercialization of SELF - Wallet

Time Frame: Q3 2018

i. Completion of the SELF platform, all interfaces are ready for testing
ii. Completion of the SELF-wallet, ready for testing
iii. SELF - Wallet integration with aggregate news app: RozBuzz
iv. Marketing promotion for SELF - Wallet

Time Frame: Q4 2018

i. SELF - Wallet integration with video sharing platform: veblr.com
ii. Releasing SELF’s latest blockchain architecture and specifications

Milestone #3：Launch On The SELF New Blockchain Backbone

Time Frame: Q1 2019

i. Release SELF system API interface, enabling all social media platforms can be integrated with SELF’s blockchain.

ii. SELF-wallet integration with India's top UGC short video platform SNAP, to achieve the full coverage of India's mainstream video and news social media platforms.

Time Frame: Q2 2019

i. Release SELF blockchain SDK, ensuring all mobile platform can be quickly integrated with SELF system.

ii. New blockchain migration for SELF-Wallet

iii. Release new system interface based on the new blockchain

Milestone #4：Ongoing marketing promotion for SELF platform

By 2020：

The users of SELF will surplus 100 million and expand its market into developed countries. Becoming the essential platform for all social media users and content creators.

Founding & Consultant team

FoundingTeam

SELF’ s founding team is a geek genius from India's top universities. Rooted in the Indian market, they are based on a passion for blockchain technology and a paranoid technological philosophy. It's the first block chain project based on India's mainstream self-media platform.

Graduate from Symbiosis institute of technology
Experienced in block chain market analysis, trading and operations in India
Member of the Indian Association of Block chain organizations

CEO: Umang Shah

graduated from Indian Institute of Technology Bombay (IITB)
From India's top University, IITB
Expert in market analysis based on program and artificial intelligence
Lucubrate in behavioral statistics,
Expert in coding to construct social behavior analysis data structure
Good at applying algorithms to market and applications

COO: Bhanu Prasad

graduate from Indian Institute of Technology Bombay (IITB)
From India's top University, IITB
Organizer of the IITB Science and Technology Competition
Won the gold medal of national competition as captain of the college competition team
Block chain technical expert, good at block chain bottom architecture, design and development

CTO: Sanjeet Gupta

Master's degree in business
Head of customer and market analysis department of Indian media platform
Experienced in domain management and hacking

CMO：Roswell Hembrom

Years of media communication background
Editor-in-Chief of Holga Company
Global infocloud Content writer
Expert in writing and business development

BD：Suraksha katiyar

Senior analyst
Block chain development and analysis expert
India block chain market analysis expert

SA：Rupika Pradhan

Consultant Team

Amazon Senior Financial analyst
Mitsubishi India Regional Marketing DirectorIndia's top virtual economic market analyst
Graduated from Duke University Foku School of Business

lyanna lim

Experienced in financial analyst
Legal expert in India about the legitimacy of bitcoin and block chains market
Expert of Public and intellectual property Law

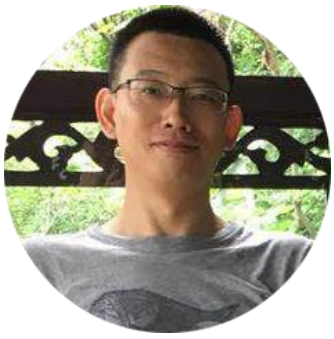
Shreya Mazumdar

warun kumbhar

Legal expert on copyright and intellectual property
IP property rights management expert
Drafting of several drafts of copyright and intellectual property mana

Jyoti Nathani

Provides content for the Media Gonsalves
Provides content for the Education World
Working as an honorary P.R consultant for NGO based in Pune for their publicity department
Freelance Writer Union News of India
Senior Editor of Living Media Group



Book Jia

Senior technical expert on block chain
Ex Rozbuzz CDO

Rahul Bahukhandi

Founder of veblr.com

Founder of hansimazaak.com

SELF Token Distribution

Crowdfunding Plan

To facilitate the growth of SELF-Media’ s ecosystem, the project team will issue digital currency named SELF token, which serve as fuel for all the transactions within the SELF ecosystem, including distributed copyright verification, copyright ownership transactions, value evaluation, rewarding contribution and content consumption on SELF network.

The Initial Token Allocation Summary:

Percentage	Allocation:	Description:
40%	Crowdfunding	1ETH = 170000 SELF
30%	SELF Core Dev team	Locked in a smart contract with a 15 month, 2% can be redeemed each month.
20%	Strategic Partners & Platform Contributors	Locked in a smart contract with a 20 month, 1% can be redeemed each month.
10%	Reserve for Future Stakeholders	The reserve will be periodically offered to new contributors at a later date, but only used if deemed necessary for the growth of the ecosystem, or burned if proven otherwise.

A total of 10 billion SELF (10,000,000,000) tokens will be created at the genesis. The SELF token will be ERC20 compliant which means that a stakeholders addresses can be linked to a name or tag, or fetched by an identity security holder.

A 10% initial amount of SELF tokens will be saved from the cap of 10,000,000,000 SELF, which is 1,000,000,000 SELF that will be used for Development Reserve Fund;

40% of SELF tokens which is 4,000,000,000 SELF are for crowdfunding; 30% of SELF tokens will be reserved for initial team members include co-founders, employees, project advisors, attracting top talent to the project, and performance-based

bonuses for stakeholders, and this operational pool will be locked up for 15 months, 2% can be redeemed everything month; Leaving 20% of tokens, which is 2,000,000,000 SELF for strategic partners in order to promote and market SELF as a global decentralized platform for social media, this portion of SELF may not be drawn from by pool for up to 20 months from the completion of the crowdfunding, and only 1% can be redeemed for each month.

As the number of platform users are surging over time, SELF will issue additional 500,000,000 SELF tokens each year over the next 20 years to motivate and support community growth and the development of SELF ecosystem, bringing the eventual circulation to 20,000,000,000 SELF in total, and then the entire ecosystem stops issuing new tokens.

SELF Operating Budget

The use of crowdfunding will be divided into three areas: 60% will be used for project research and development as well as security protection; 20% for marketing purposes and community operations; 20% for legal advisory and project management.

Funds raised during the crowdfunding period will be used solely for the development and benefit of the SELF ecosystem. The level of funding received dictates the distribution of funds, however, SELF reserve structure allows project to reduce the volatility along the way towards achieving SELF' s long term objectives.

Percentage	Description:
60%	Core development of SELF, security auditing & implementation, end - user experience optimization
20%	Marketing budget
20%	Legal advisory and day to day project operations

Disclaimer and Risks

IMPORTANT NOTICE

PLEASE READ THIS ENTIRE SECTION AND DO NOT TAKE ANY ACTIONS UNTIL YOU FULLY UNDERSTAND IT. THIS WHITEPAPER IS A SUMMARY OF SELF MEDIA PROJECT, SELF FUNDRAISER IS CONSIDERED TO BE A REWARD BASED CROWDFUNDING CAMPAIGN. DETAILED TERMS AND CONDITIONS OF THE FUNDRAISER WILL BE RELEASED ON SELF'S OFFICIAL WEBSITE.

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Due to legal and regulatory uncertainty in the United States of America and People's Republic of China, the citizens and green card holders of and persons residing in the United States of America and People's Republic of China are not allowed to provide contributions and obtain SELF tokens. Citizens and green card holders of and persons residing in the United States of America and People's Republic of China that participate in the fundraiser by providing false information about their citizenship, residency place and nationality will breach fundraiser’ s terms and conditions and would entitle SELF to request such persons to compensate any damages and/or losses suffered due to this violation.

The whitepaper, information provided on SELF web page and any crowd funder’ s terms and conditions published by SELF any part thereof and any copy thereof must not be taken or transmitted to any country where distribution or dissemination of these documents/information is prohibited or restricted. No regulatory authority has examined or approved of any of the information set out in the whitepaper.

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All statements contained in this whitepaper and SELF webpage, statements made in press releases or in any place accessible by the public and oral statements that may be made by SELF its founders, team members and any third party involved in SELF project and acting on behalf of SELF that are not statements of historical fact, constitute “forward-looking statements”. All statements regarding SELF financial position, business strategies, plans and prospects and the future prospects of the industry which SELF is in are forward-looking statements. Neither SELF, its founders, team members, any third party involved in SELF project nor any other person represents, warrants and/or undertakes that the actual future results, performance or achievements of SELF will be as discussed in these forward-looking statements.

This whitepaper includes market and industry information and forecasts that have been obtained from internal surveys, reports and studies, where appropriate, as well as market research, publicly available information and industry publications. Such surveys, reports, studies, market research, publicly available information and publications generally state that the information that they contain has the from sources believed to be reliable, but there can be no assurance as to the accuracy or completeness of such included information.

No information in this whitepaper should be considered to be business, legal, financial or tax advice regarding contribution to the development of SELF. You

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SELF hereby disclaims the following responsibilities:

- Anyone who violates anti-money laundering, anti-terrorist financing or any illegal activity when obtaining SELF Token;
- The platform failures due to technical issues such as system loopholes, errors, crashes, rollbacks or hard-forking in Ethereum or related system failures;
- The listing or delisting from any crypto exchanges;
- Any losses due to private key lost or damage (especially SELF Wallet's private key);
- Any losses due to war or civil strife, including rebellion and revolution;
- Any project delays due to irresistible circumstances;
- SELF fails to achieve any particular function or is unsuitable for any particular purpose;
- SELF is being treated as a currency, vouchers, intangible assets, or any forms of commodities that are subject to be prohibited, regulated or legally restricted, by any government, quasi-government agency, authority or public agency
- Any losses due to hacking or other unbreakable attacks;

- Because SELF is built from entirely new cryptographic techniques, any losses due to any combinations of the above unexpected circumstances;

- Any individual or organization who violates SELF’ s whitepaper statement when obtaining SELF tokens.

- As the result of above circumstances, any individual or organization that cannot be obtained or redeemed SELF tokens;