



CVN CVN白皮书
.NETWORK

基于区块链技术的内容价值网络
Content Value Network (CVN)

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I. Introduction

Merging blockchain technology and P2P (peer-to-peer) distributed service, CVN is the next generation content distribution platform, creating a highly autonomous community, optimizing on traditional content distribution, transfer, filter and review processes, a platform where good content can be immediately and widely shared while spam is held at bay.

Comparing to traditional content distribution network, CVN' s original blockchain is equipped with unique self-motivated content value, higher operational efficiency and safety, encouraging better engagement from content creators, consumers and distributors, as well as utilizing idle storage and bandwidth from users, creating a multi-win scenario.

CVN will make its rulebook, SDK and API open to third-party developer, creating a fully functional ecosystem with multiple industrial partners. CVN also looks to building use cases involving digital resources such as video, software, music, pictures and games, as well creating decentralized apps pivoting on CVN tokens. With 15 million registered users, YYeTs will also initiate distribution and development on CVN public blockchain. Creating the first DAPP on CVN network, YYeTs will make available functions such as decentralized content distribution, storage and transfer, as well as CVN' s content motivation system.

CVN tokens will serve as an encouragement to content creators in YYeTs community towards more quality content, rewarding them with more earnings and recognition, creating a global film & television community with higher content quality, economic value and daily activities.

CVN will also bring together traditional content distribution platforms and communities from all over the world, forming a content value network ecosystem with higher purity, efficiency, autonomy and economic value.

II. Analysis on Current Content Distribution Systems

2.1 A lack of motivation for content creators

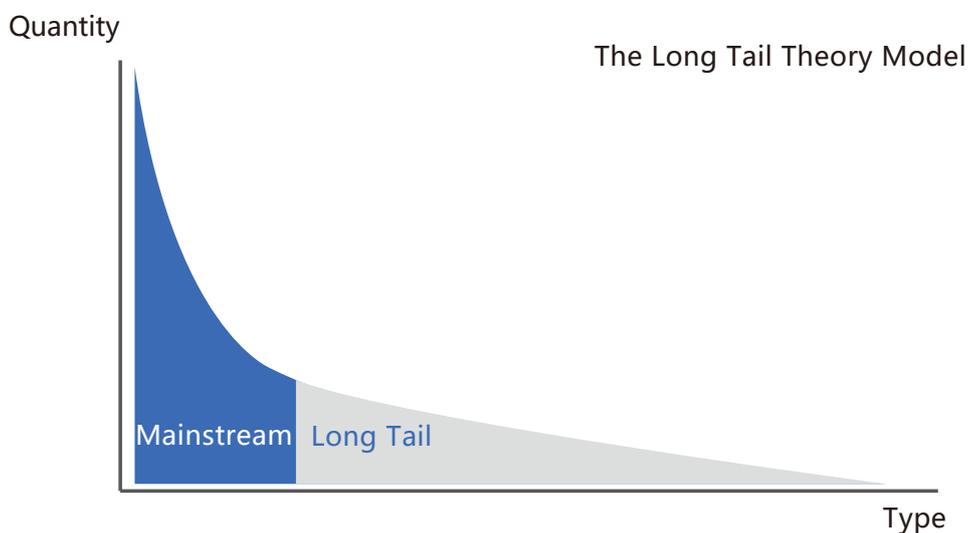
P2P downloading holds multiple edges over traditional centralized downloading: content creators don't have to be distributors, freeing them from investing in servers and bandwidth for content consumers, making content service less costly as well as more efficient.

Although from a content creator's point of view, they are less motivated to contribute their own resources without an effective motivation system, thus more likely to be takers more than givers, resulting in a "downloading without seeding" situation throughout the community. Also, centralized content distribution platforms require creators conform to their rules and regulations, further restraining their enthusiasm to create.

2.2 A lack of precise matching system between content and consumers

Content is growing exponentially in mass as Internet is developing with the speed of light, providing consumers with more differentiation and personalization in content. The Long Tail Theory denotes that consumers' need for minority content will form a long tail on the demand curve, accumulating towards a market even larger than the majority.

What current system lacks is a sound mechanism that matches consumers' personalized need with corresponding content. Content consumers do not possess a valid filter system against bidding ranks and clickbaits. They have to invest plenty of time, energy and even money for get exactly what they want.



III. Introduction to CVN platform

Blockchain technology offers a possible solution to abovementioned problems. Decentralized blockchain technology frees content creators as well as consumers from being dependent on a centralized platform, building a trustworthy peer-to-peer value distribution network. Smart-contract-based motivation system inspires users mining for more quality content while holding spam at bay. This system improves value interaction efficiency, lowers its cost, unravels what' s going to be a revolution in the industry. CVN is a platform built precisely upon this vision.

3.1 Platform Introduction

Third-Party DAPP
CVN Open Platform
CVN Original Blockchain
P2P File Transfer Network

CVN consists of P2P file transfer network, CVN original blockchain, CVN open platform and third-party DAPP.

P2P file transfer network offers massive distributed storage, high quality of service (QoS), encrypted data transfer protocol, while being completely decentralized using distributed hash table (DHT). Anyone with access to computer, smartphone or TV box can experience our premium service. Any content creator on CVN' s P2P network can upload his or her content via CVN DAPP. Users can browse, search content within P2P network using CVN DAPP. Content will be stored in devices when browsed. These devices will seed said content, just like seeding a torrent, thus preserving content through millions of devices. For better user experience, CVN adopts two different node/user types for content storage, one being distributor, which provides guarantee for storage with their high QoS, while gaining profit with proof of space and time (PoST) based on IPFS protocol, the other being average communicator, which backs up only his/her favourite content, acting as a supplement solution to distributor. When users access DAPP service, distributed DHT technology allows user to download from P2P network their desired data, which will later be assembled and restored by client program. Users can pay with their upload or seeding behaviour (proof of work). With PoST and PoW, CVN is the network that is highly available, and never goes down.

In addition to PoST and PoW, CVN also introduces delegated proof of stake (DPoS) system, giving users the right to vote and predict for content, distinguishing between quality and spam content, supporting while ensuring a healthy, orderly development within the CVN content ecosystem.

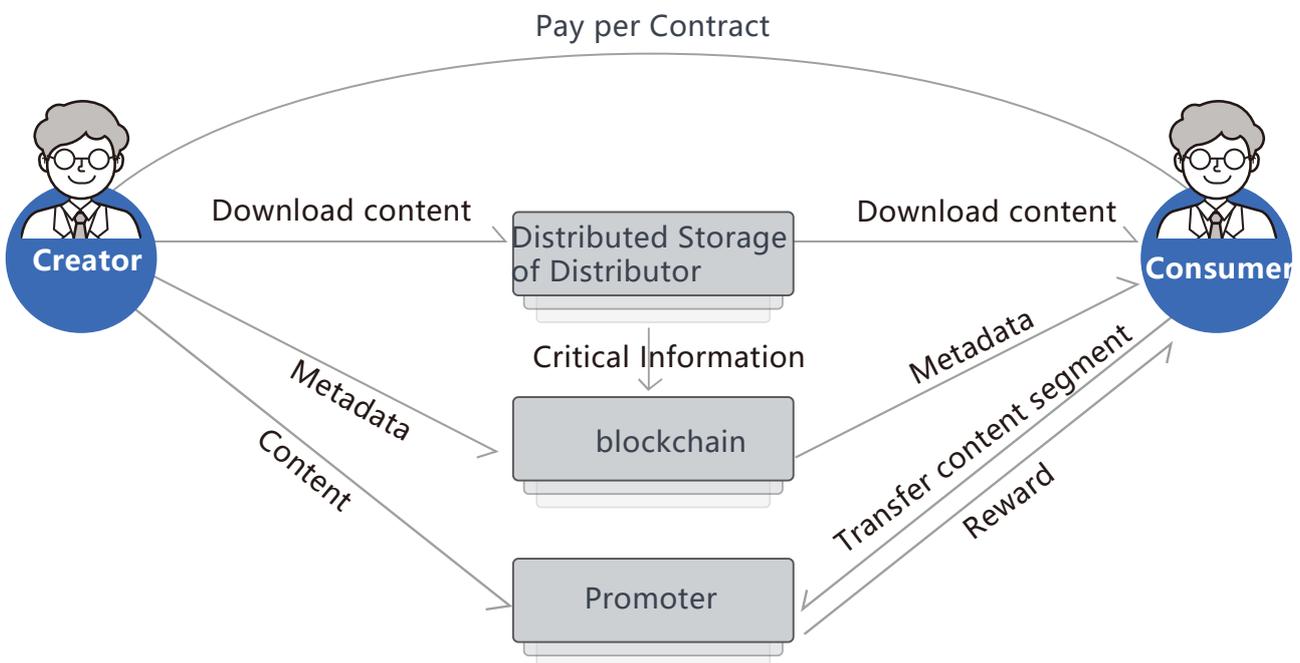
CVN open platform is equipped with secondary development SDK, API and samples for PC, iOS and Android, providing a one-stop solution for content transfer and motivation. Traditional download sites and content distribution platform can tailor their own site and DAPP within minutes.

CVN is an open ecosystem where any third-party content, including video, software, music, image and game, can tap in with ease, making it fast and easy to promote and/or profit off digital content.

3.2 Content Distribution

There are three roles within the CVN platform, content creator, consumer (who watches videos, reads files, listens to music, comments and shares content) and distributor (miner).

Content creator publishes and makes price for his/her content before uploading it to the network for distributors to download and promote. When content is matched with consumer of similar interest, he/she is required to pay for the content per its price tag with CVN tokens. Creator is rewarded with tokens for creating, while distributor is also rewarded with tokens from creator and the platform for storing content. Consumers can be promoters, too, as he/she can download part of the data before sharing it through DHT network to other consumers and getting reward from the platform.



Distribution denotes the action when certain content is stored in network and promoted within the community. This process breaks down as follows:

- 1.The platform calculates file' s hash upon creator' s request, creating a unique AES key.
- 2.The platform chooses a minimum of 2 distributors with high and stable QoS, holding more 200,000 CVN tokens, and at the same time rocking with over 100M upload bandwidth and 20TB storage.
- 3.The platform informs selected distributor' s nodes to initiate downloading through P2P network on distributor' s device before breaking data down to blocks for AES encryption.
- 4.The platform generates a submission order including all meta data of said content such as title, summary, tags, hash, valid date, price tag and distributor list. Then the order is packed and broadcasted on the blockchain.
- 5.If the content requires payment, a certain amount of token from creator' s account will be frozen as collateral for distribution fee.

Consumption denotes the action when certain consumer decides to purchase and download distributed content. Purchase is conducted in the form of a contract that starts when consumer commits to purchase, and ends when distribution is completed by distributor and payments have been made from consumers to creator. This process breaks down as follows:

- 1.Consumer applies for purchase, such purchase is then generated on the platform. A certain amount (0 for free content) of token in his/her account will be frozen.
 - 2.Consumer chooses desired content, then downloads the file through P2P network according to hash provided by the platform.
 - 3.Distributor node discovers the purchase application, encrypts AES private key using consumer' s public key.
 - 4.Distributor node generates a distributed encrypted key order, including key encrypted by consumer' s public key and certificate of delivery.
 - 5.Distributor pays creator with tokens frozen in consumer' s account.
 - 6.Consumer initiates a PoST verification on storage provided by distributor, after which, if verified, a portion of tokens frozen in consumer' s account will be transferred to distributor' s account as a reward for storing content.
 - 7.Consumer decrypts encrypted key with his own private key, then decrypts the content with decrypted key.
 - 8.Distributor and any user engaged in sharing and uploading will receive a certain amount of token from the platform as a reward.
- If the content is free as per creator' s request, distributor will only receive reward for storing and mining, no order will be generated by the system between consumer and creator.

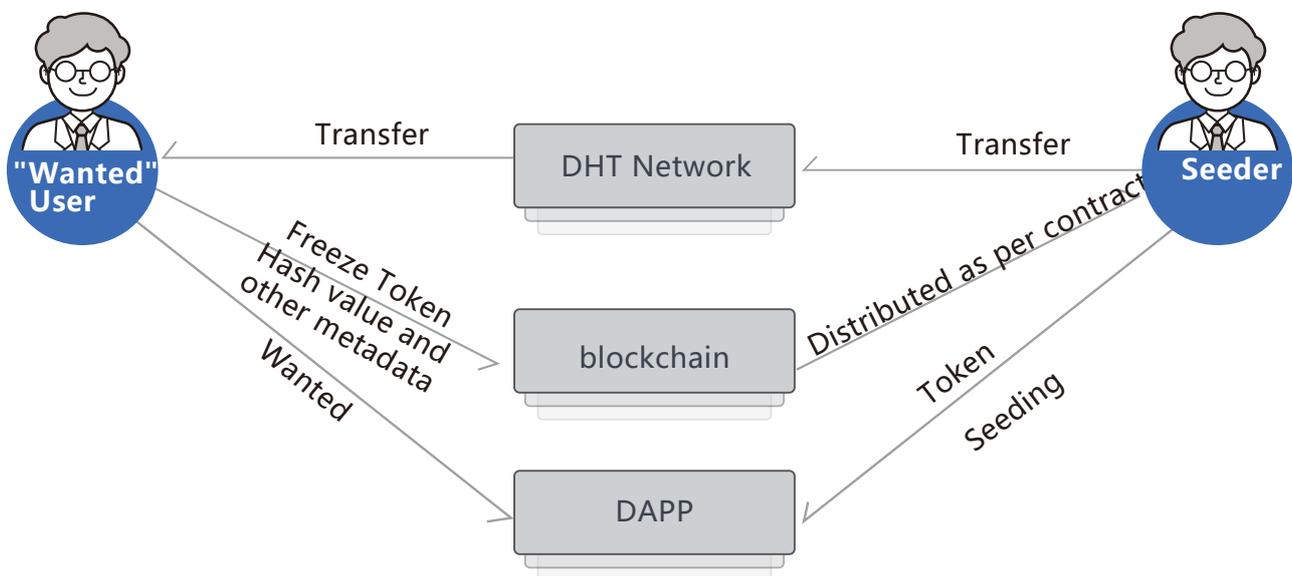
3.3 Wanted Content

“No seed” happens when downloading via P2P network. Consumer can now list any content as “wanted” , leveraging on the decentralized, immutable blockchain technology. Quality content will never be seen on your device with a “no seed” label.

Wanted denotes the action when a user gives token in exchange for seeding for rare content. This process breaks down as follows:

1.Consumer lists his/her “wanted” information. Other consumers in need of the same content can follow this list.

2.A wanted order is generated when time or following consumers reaches its limit. Consumer pays a certain amount of tokens, sets an expiry date. Tokens are paid divided evenly between all consumer in need of this content, then frozen by the platform upon confirmation.



Seeder can choose to enlist in seeding action if he/she is in possession of “wanted” content, getting corresponding reward in the form of tokens. This process breaks down as follows:

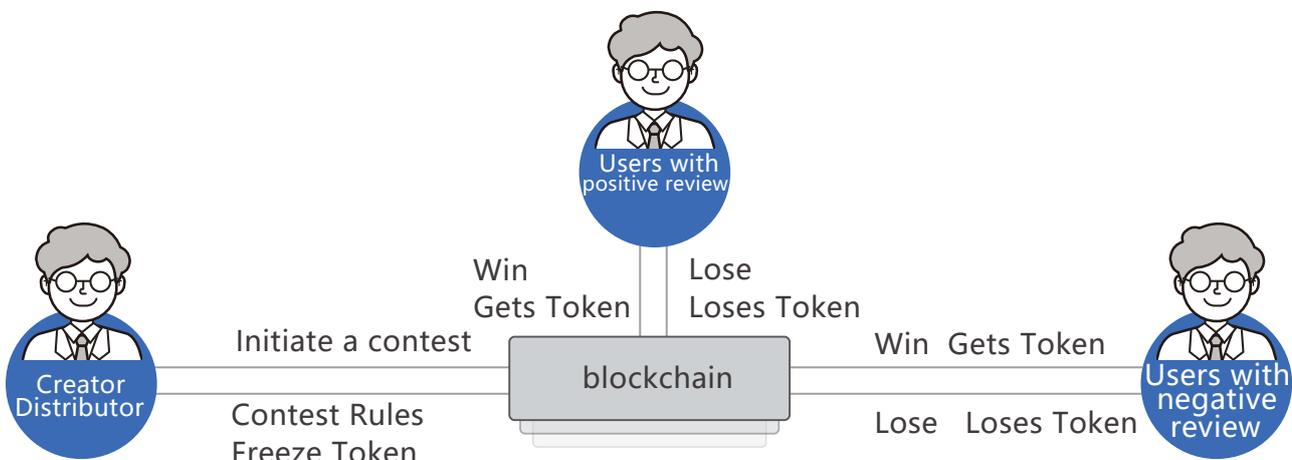
- 1.Any user in possession of “wanted” content can choose to enlist in seeding action.
- 2.Seeding initiation order is generated upon time limit or user’ s manual initiation. Random AES password is also generated for every seeder, calculating encrypted private key using seeders’ public key. Said initiation order includes a list of wanted users, seeders, encrypted private keys and P2P node ID for all seeders.
- 3.When seeder is notified upon seeding initiation, he/she retrieves his/her own private key from blockchain, decrypting with his/her private key for AES password, launching app to share and transfer AES encrypted content via P2P network to wanted users.
- 4.Wanted users keep record of all P2P nodes seeding for said content, then request for a seeding completion order upon download completion.
- 5.Seeder nodes decrypts password with private key for AES password upon seeding completion is generated on the blockchain, re-encrypts for a private key with wanted user’ s public key.
- 6.Seeder node generates a private key distribution order with wanted user’ s private key and delivery certification. Wanted user pays all seeders evenly with tokens previously frozen, then decrypts content with AES password decrypted from encrypted key with his/her private key.

3.4 Content Rating

Promoting and rating content on a traditional platform is only viable by a limited number of means such as advertisement. Being autonomous, blockchain community makes promotion for quality content much easier.

Quality content creator (distributor) 【creator/distributor】 can host a bet order regarding his/her content, freezing a portion of his/her tokens, setting his/her own time limit and rules, such as whether said content' s liked rating count and/or percentate could reach a certain threshold.

The system picks random user for anonymous betting, after which a bet order is generated, and tokens from both sides will be frozen. Tokens from the losing side as well as distributor is split evenly between all on the winning side. Betters will promote said content to win tokens, content rating is maintained at a reasonable level with collective wisdom.



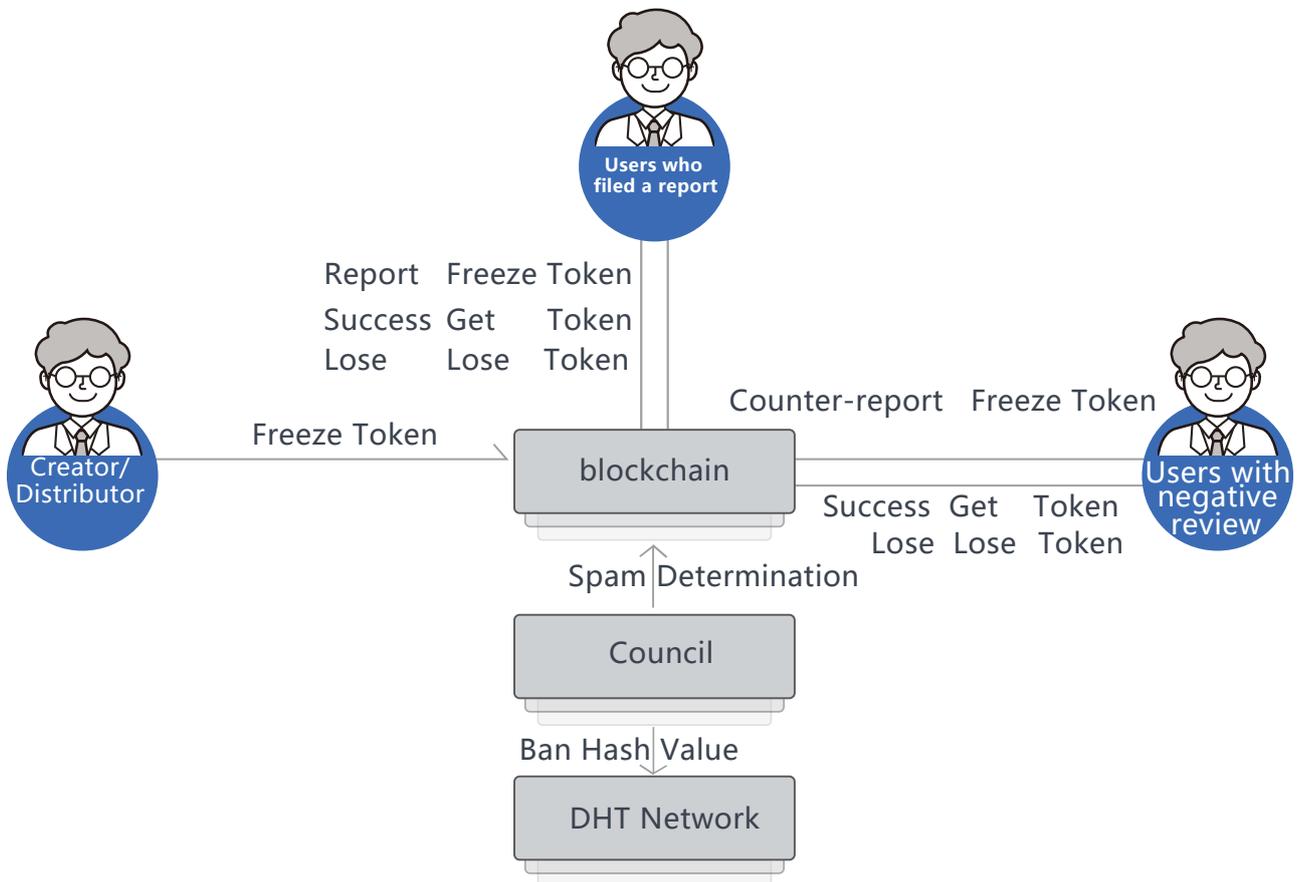
3.5 Content Filter

CVN introduces security deposit, prewarning and delegated council to hold content involving pornography, violence and spam at bay.

A minimum amount of tokens in creator's account is required as potential security deposit prior to release. Consumer can report content should he/she find this content involving pornography or violence. When report count reaches a prewarning limit set by the platform, a portion of token in creator's account is held as security deposit by the platform. The content is then pending judgement by the council. Content deemed as spam is banned across P2P network, preventing users from downloading. Creator's security deposit is then evenly split between users who reported said content. The amount of tokens required for said creator is then doubled. If creator fails to meet said requirement, previous fine must be paid before further releasing content.

Distributor and supporter of content can file for a counter-report against ill-intentioned reports. Both reports and counter-reports can request for a payment, with both party depositing tokens. If said content is deemed as spam by the council, deposit from counter-report side is split between report side, and vice versa. The council will also be rewarded with a portion of tokens from the deposit.

Council members is voted by all token holders. Weight is calculated according to the percentage his/her holding takes up in all tokens.



IV. Use Case

4.1 Promoting Content with Tailored Rewarding System by Distributor and Distribution Nodes

Content and information are more available than ever as Internet becomes more and more easily accessed. People develop their own opinion on the way content is displayed. A huge amount of effort and money is required for research on potential feedback on given content by the crowd. With CVN's prediction system, distributors 【creators? 】 is now able to keep producing content while effectively collecting feedback, which is then used as reference for further content creation.

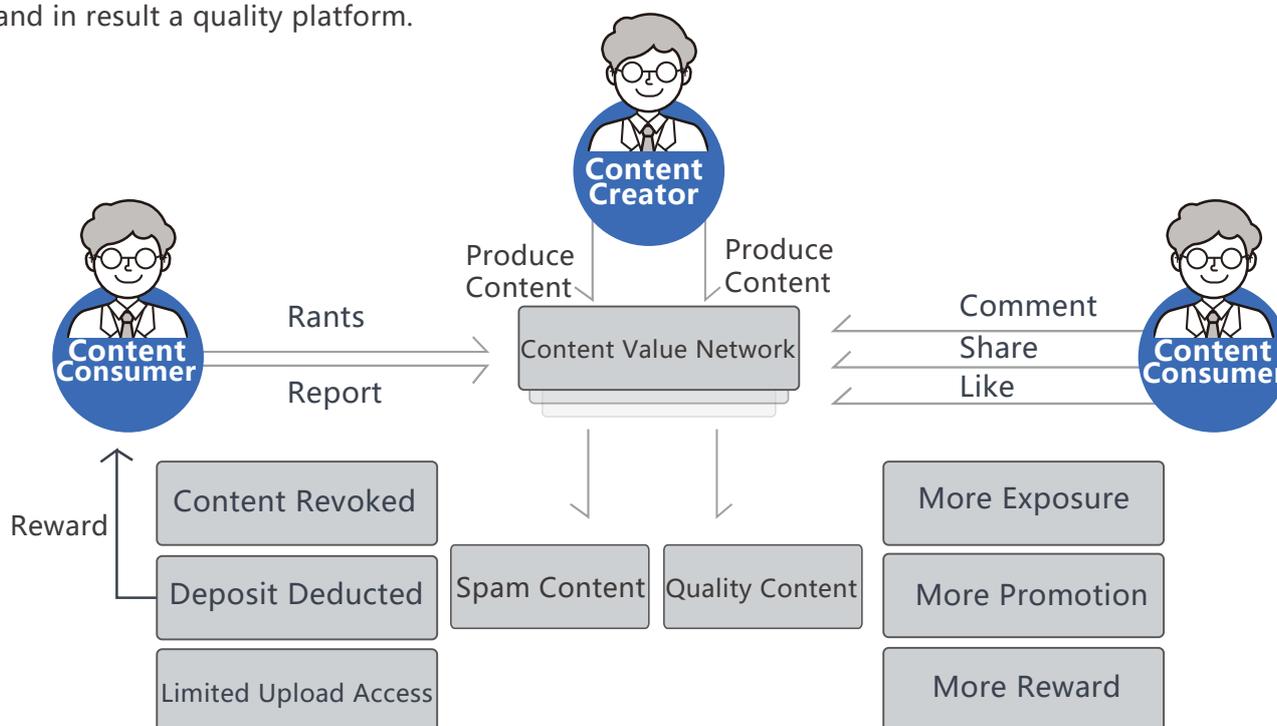
With CVN's feedback prediction system, anyone launch a prediction. Distributor, his/her fans or anyone who recognizes his/her content, can host a bet regarding said distributor's content, then promote this bet in his/her way. With more engagement in the bet, quality content can now spread quickly as well as spontaneously with this prediction system.

Example: Distributor (YYeTs) is launching a hot TV show via CVN network. YYeTs can choose to launch a bet on whether said TV show could hit 500,000 likes or a liked percentage above 93% within 2 months, while freezing 4,000 CVN tokens for this bet. Fans of this show as well as its distributor can engage in this bet, tilting the scale towards his/her desired side using his/her influence, promoting said TV show as well as its distributor in the process.

4.2 Self-cleansing System for Content Distribution Platform

Cleansing content ecosystem has always been an expensive issue for content distribution platform, suffering from a lack of potent algorithm, centralized content management and costly audit and operational teams. With CVN' s spam filter system, reward-for-report system and penalty for counter-report system, all users can engage in this cleansing process, significantly lowering operational cost for website and community.

Example: YYeTs is an organization with a history of 14 years, millions of users and thousands of translators. Their content is of significant quantity, but inevitably homogenized and diverse in quality. Traditional algorithm or human based audit system can be both costly and inaccurate. With CVN' s spam filter system, users get to choose their own quality content and distributor, and in result a quality platform.



4.3 Decentralized “Wanted” Platform

With CVN' s “wanted” system, any user can issue their own “wanted” request, to which any user from all over the world can respond, then transfer “wanted” content via well-encrypted P2P network and get tokens as a reward. This way content from all over the world can be found, mobilized and shared.

Any user can add more bonus in the form of CVN tokens to his/her “wanted” request, inviting more users into seeding and/or downloading, and in the process accelerating this content. The platform can also list rare content as “wanted” , calling for accelerating and seeding for this content.

4.4 Quality Content Searching System

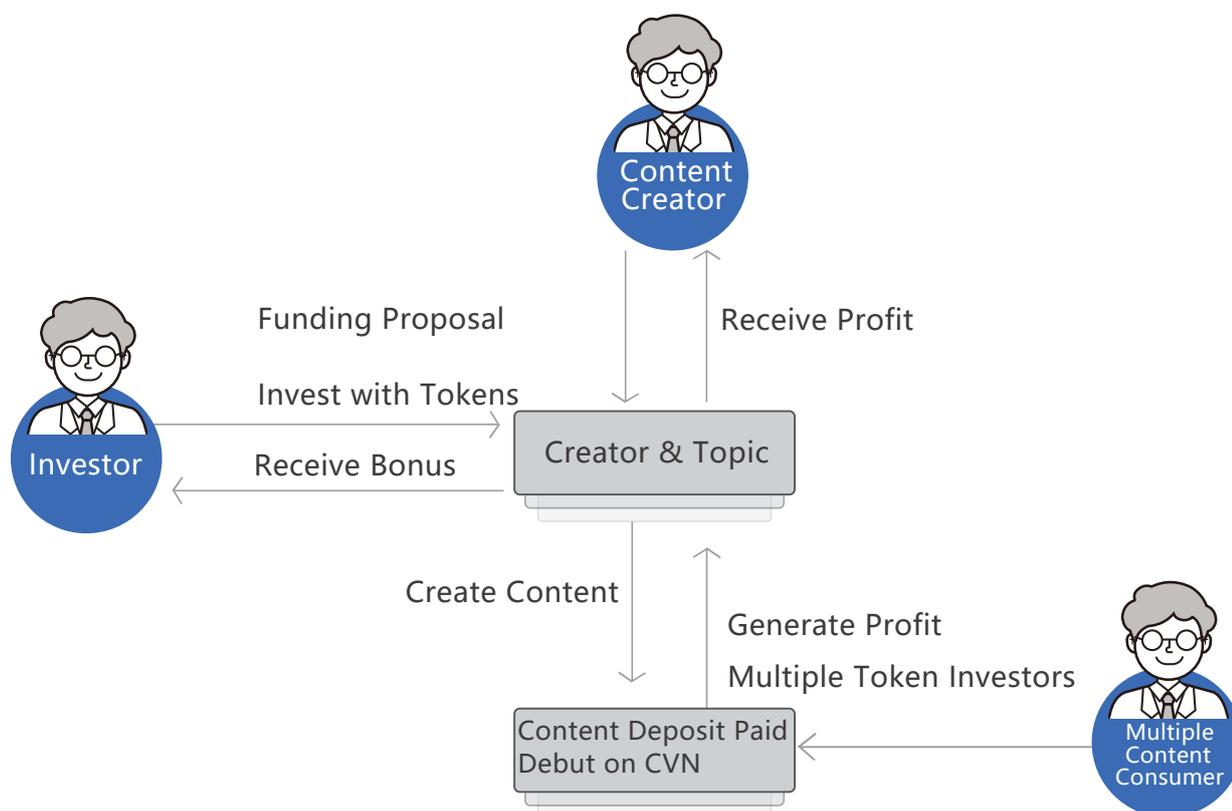
With spam cleansing and content rating system, when searching for content on CVN platform, results can be listed per user' s preference in comments, rating prediction, liked rate, distributor content count, etc..

4.5 Super Nodes for Content Distribution

Any individual or organization with resource or application developing capability can engage in secondary development on their own content distribution and commenting system, with more focus on their own fans and content, and more incentive for their fans to promote self-produced content, resulting in a win-win situation between distributor and promotion.

4.6 Quality Content Investment System

Content creator can choose to reveal teaser prior to release. Consumer can also make appointment for distribution and promotion based on their content of choice, assuming a portion of distribution cost with a down payment up front. With quality content, more contribution and quality content recommendation can be made to the platform, uncovering more quality content, gaining revenue in the process.



V.Commercial Appeal

5.1 Increasing Crypto Population with Quality Content

Numbers from a report on global blockchain economic development in December, 2017 indicates that China has a crypto population of 4 million, while the global crypto population is less than 30 million. Governments and blockchain projects are faced with problems such as limited use case scenarios and low impact in real world.

CVN aims at uniting content distribution and transfer platforms from all over the world. Leveraging on quality content' s properties such as self-promotion, large and highly adhesive user base, major platforms as well as their users are empowered through CVN, increasing content quality and creation efficiency, making the most of quality content, driving the system towards a crypto future, increasing global crypto capital volume, contributing to a quicker and better application of blockchain technology, making every netizen a modern crypto consumer.

5.2 Making World' s Largest Quality Digital Content Sharing Network

With 15 years' experience in content creation, distribution and operation, CVN team is well aware of how vital content is to a platform. Now with a major shift in global economy, CVN is able to empower quality content, give idle resources more value, then bring more users around quality content and its creators. With resource integration and technology support, CVN aims to provide for over 4 billion netizens with a digital content sharing network of multiple dimensions, languages, national and high purity.

5.3 CVN Token-based Business Development and Outreach

As a public blockchain with capability to empower quality content distribution platforms, CVN banks on daily activities of creators and consumers, iterating motivation system in CVN content value network, directing content consumers traffic towards DAPPs in CVN' s public blockchain, laying groundwork for DAPPs' promotion.

Users have a frequent, everlasting demand for content, which will bring many quality content as well as their owners into CVN network. CVN will be sitting on the most premium user pool in blockchain industry in the process of promoting CVN content value network, rendering help to blockchain and various other industries, leading blockchain industry towards a bright future.

VI. CVN Roadmap



Q3 2018	Point-based CVN P2P network launch.
Q4 2018	YYeTs DAPP with 15 million fanbase and CVN P2P network support on PC, iOS and Android platform launch.
Q1 2019	CVN test network creation.
Q2 2019	CVN value network beta test.
Q3 2019	CVN main network creation. CVN main network and wallet integration. PC, iOS, Android SDK development. Business development for more partners and development team.
Q4 2019	Importing hundreds of millions users in tactical cooperation with YYeTs, constructing top notch traffic portal for blockchain DAPP.
Q1 2020	A refined version of CVN main network launch.
Q2 2020	CVN' s blockchain collaborative content creation tool for content creators beta test.
Q3 2020	Blockchain-based content viewer for network, supporting all video, audio and document formats beta test.
Q4 2020	Traffic importing system (test version) for other non-content-based platforms blockchain projects launch.

VII Distribution Plan

7.1 CVN Distribution

CVN project has a total estimated contribution of 30000 ETH.

Round	Conversion Rate
Exclusive Offering	1ETH = 12280 CVN Token
Public Offering (Whitelist)	1ETH = 10230 CVN Token

1,000,000,000 CVN tokens are to be sold in the token sale, 65% of which will be reserved by development team and will be released in batches for CVN ecosystem construction.

All tokens held by development team will be released over the course of 2 years, such that the team will be sufficiently funded until full release of the project.

25% of all CVN tokens will be used for business cooperation with platforms with similar user volume as well as for motivation to content creators on the platform.

Percentage	Usage	Frozen Time
35%	Sale (Public and Exclusive)	None for exclusive and public offering, 3 months for free bonus tokens received in exclusive offering.
10%	Foundation	2 years, for ecosystem construction
20%	Team	2 years. Released every 6 months.
15%	Marketing	Mobilized in 2 years for Airdrop, promotion and business partnership.
20%	Mining	2 years. Released every 6 months.

7.2 Use of Proceeds

All funding received during token sale shall be allocated as follows:

Next Generation Content Distribution Platform

employing the characteristics of blockchain decentralization,

Establishes a reasonable mechanism for content distribution, transmission, filtering, and evaluation.

Thus, high-quality content can be widely disseminated and shared with the elimination spread of pornography, violence and other spam.

Supposing the Foundation sells a portion of the CVN, the specific allocation of funds will be as follows :

1)Paying for development :

The Exploitation of CVN's public chain including several modules costs huge expenses. Besides the fund also needs to cover the development of the platform such as technical research conducting, specialists recruiting , and team building. Therefore, Sufficient cash flow ensures the project to proceed as planned.

2)Marketing and operating expenses:

In order to stand out among fierce competitive content platforms, adopting fully propaganda to build and enlarge brand impacts is regarded as an effective measure. Furthermore, expense is a lot on continuing to promote and popularize the CVN platform for traditional content industries and blockchain enthusiasts. Hence, it is important to provide financial supports for marketing to ensure rapidly growth of CVN users and its key partner platforms.

3)Ecological Construction fees:

Funds will be invested to support content producers and businesses, especially increasing the world's major content distribution platforms and building a decentralized content value network.

4)Legal advice and risk control:

The blockchain industry is strictly regulated by law and thus financial supports should be prepared for legal work to ensure compliance with regulatory requirements. At the same time, we also need to reserve some emergency funds in case of certain unexpected legal incidents in the future.

5)Others:

Possible extra expenses and reserve funds in addition to the above.

Percentage	Usage
30%	Development
30%	Marketing and operation
20%	Ecosystem construction (motivating content creators) and business development
10%	Legal consultancy and risk management
10%	Other

Ⅷ.CVN Team



Gao Hua CEO

Founder of YYeTs – largest film and TV show culture community. Chief architect of YYeTs. Previously: Tencent, technical leader in Chongqing division. Over 15 years' experience in Internet product development.



Yang ShuGuo CTO

More than ten years of experience in Internet and software development, worked as a world famous enterprise such as Sun, Philips, and developed embedded browser middleware, operating level P2P seeding system, video DRM system, P2P file transmission system, P2P CDN system, fast broadcast box and so on, and high performance high availability and high availability services. Streaming media, network and embedded system have rich architecture and development capability.



Zhao Jixing COO

Former Operational Manager in Uber China. Long-term operational advisor for multiple Internet projects including YYeTs. Experience in operation for products with 10 million users. Leader and plotter for "From 0 to 3 Million Users in 40 Days" product operational challenge.



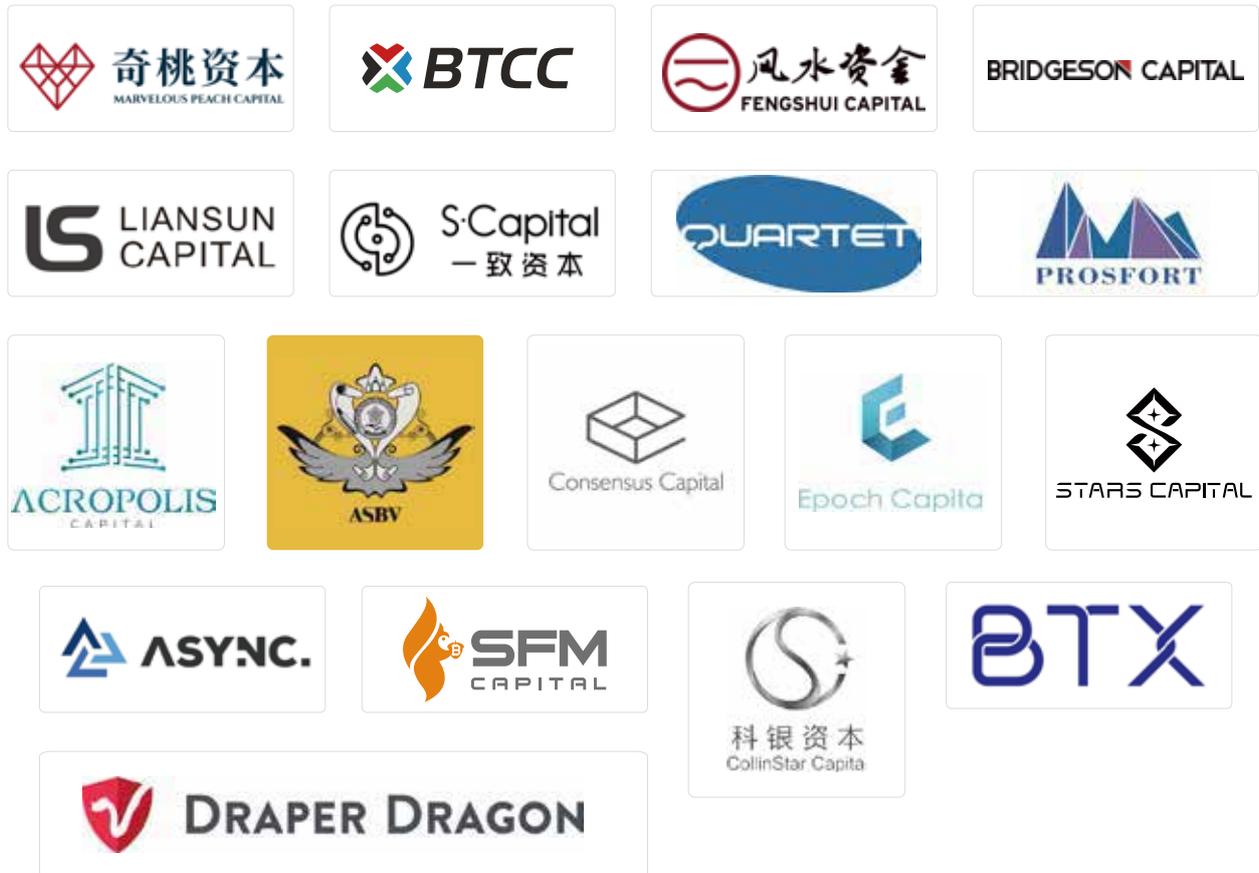
Ma HaoBo Technical consultant

Aelf founder, founder and CEO area, block chain industry expert. Early practitioners in the field of digital assets, formerly GemPay CTO, AllCoin CTOMember of the China Electronics Association block chain expert committee

IX、CVN Partners



X、Investment institutions (ranking without succor) Continuous renewal



XI 、 Contact Us



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