



WHITEPAPER

A Blockchain Platform for the Entertainment Industry

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Abstract

The pop music market in the past had a clear division between producers and consumers. Today, however, the public are consumers and also producers at the same time. The activities by fans supporting their musicians are not only productive activities that independently create added value, but also act as secondary contents that are shared with both artists and fans who enjoy their music. In fact, the activities and the contents generated by the fandom are sometimes a decisive factor in bringing artists and their music to success.

However, in the traditional market, there has been no attempt to track and measure the impact created by the activities of the fandom, nor to provide fair rewards for them. Fans who contribute to the increased popularity of artists are not rewarded for their efforts and contributions, and they ironically become more distant from artists they support as artists gain more fame. In addition, web portals and social networking services, where most fans engage in their supporting activities, earn profits through such activities but do not share the earnings with the contributing fans.

We present STAYGE Network, the new ecosystem for artists and fans, and a cryptocurrency, STG. STAYGE Network uses blockchain technology to tokenize the artists' fandom to provide a fair evaluation and reward system that is independent of specific companies and services. The value of fan activities that historically have neither been measured nor recognized will now be fairly evaluated by this community and be substantiated through a cryptocurrency, STG.

STAYGE Network will gear towards healthy and sustainable growth in the entertainment market. Activated communities through rewards systems encourage the participation of artists, investors and various stakeholders in entertainment industries. Through their voluntary participation, a variety of services such as media production, crowdfunding, ticketing, and commerce can be provided in STAYGE Network. Moreover, it will act as a peer-to-peer platform that does not involve any unreasonable fee structure. The economic ecosystem created by STAYGE Network will share the added value with every contributor. We strongly believe that it will be a foundation of the sustainable growth of the ecosystem.



Background

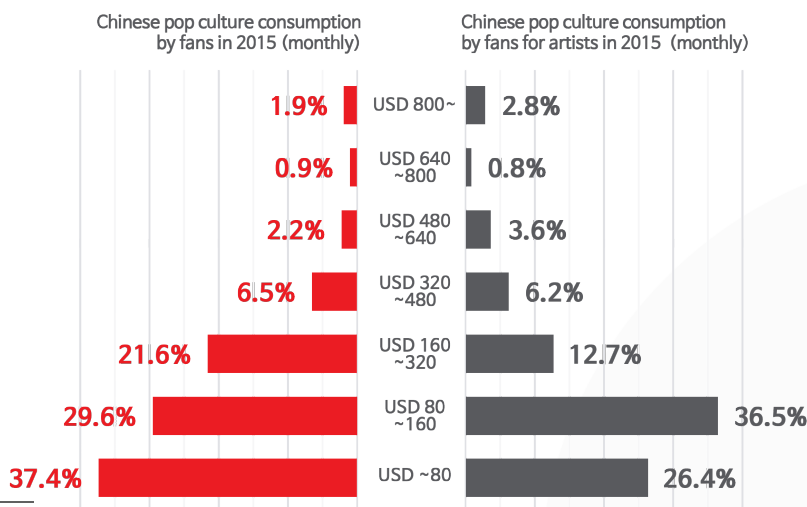
The global entertainment market was approximately 1.7 trillion USD by 2015 and has grown steadily at a CAGR of 4.4%¹ Fandom of various artists, and their contents are the foundation of this massive industry. Therefore, it is no exaggeration to say that most business models in the entertainment industry are rooted in fandom. The development of technology is transforming the fan identity from a simple consumer to an active participant in the market, and the impact of fandom on the entertainment industry will continue to increase in the future.

Issues in the Entertainment Market

Absence of Rewards System for Fans

In the traditional entertainment business structure, fans supported the industry through proactive consumption. For example, the size of China's pop music industry surpassed USD 45.4 billion(CNY 285.1 billion) by the end of 2014 based on high-level spending by the twenty-somethings who are active consumers in the Chinese economy². 73.6% of Chinese fans consume more than USD 79.6(CNY 500) monthly, and the top 2.8% of them are spending especially actively, spending about USD 797(CNY 5,000) monthly.

In addition, as the world of social media evolves, opportunities for fans to participate in the production and distribution of artists' contents are increasing, which has blurred the boundary between consumers and producers in the market. Artists and original contents they produce are reborn into new contents through their fans, which sometimes lead to the success of the artist. In most cases, however, the fans do not receive any rewards for their contribution.



¹ PwC, Global Entertainment and Media Outlook 2016-2020, Ovum.

² IResearch & Yinyue, 2015中国音乐粉丝白皮书(2015 Chinese Music Fan Whitepaper), 2015.



Fragmented Services

The user experience in various services that fans use is extremely fragmented. Fan communities, fan websites, commerce sites, crowdfunding sites, and ticketing sites that fans visit are not closely linked; data in these websites are not collected and structured into available forms. Fans use different IDs for each service, and it is impossible for artists or entertainment companies to determine whether a user from one service is an identical person with a user from another service. As a result, artists are not able to effectively use the data of fans' activities, and fans are hardly recognized for their contributions.



Lack of Sustainable Fan Marketing Tools

The entertainment market is based on fandom. Artists need fans to make a profit, and the marketing is vital to collecting fans. However, there are no sustainable and scalable fan marketing tools. Artists are still encouraging their fans through small activities such as giveaway events run by social media or music streaming services. This type of fan marketing tool is not scalable. Moreover, the rewards for fans are too random to expect their continuous participation.



Difficulty in Stable Fundraising

The fandom data is too fragmented to make accurate decisions to achieve better results. In such an environment, the industry can not get away from the “high risk-high return” decision-making structure, and thus have to take on higher risk for unguaranteed results. For example, it costs around USD 500K for an artist to debut in the K-Pop market, but there is no data available to plan to reduce the risk. In this market environment, the artists and the contents that are relatively unknown and are not yet market validated have difficulty acquiring enough production funds. Creative and novel attempts face immense difficulty in securing the production costs, where on the other hand, market-validated contents are overfunded. If this situation persists for long, there will be a lack of diversity of the contents which would subsequently impact the growth of the market negatively.



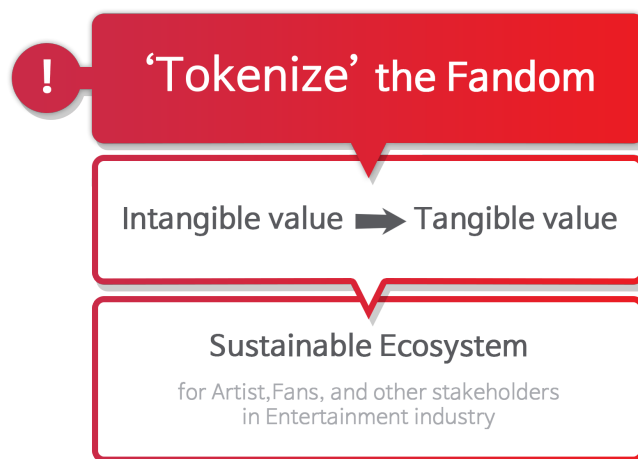
STAYGE Network

STAYGE Network is a blockchain-based Artist-Fan ecosystem that STAYGE One will co-create with all artists, fans, and business partners in the entertainment industry.

Mission

STAYGE One’s mission is to create a sustainable platform where everyone, including motivated fans, artists, and a variety of stakeholders in the entertainment industry, to grow and benefit more equitably.

To this end, we are tokenizing the fandom that is the true foundation of the entertainment industry. Fandom's influence was intangible in previous ecosystems but will have tangible value through STAYGE Network. Tokenized fandom will be a driving force for the ecosystem and market expansion.



Value of STAYGE Network

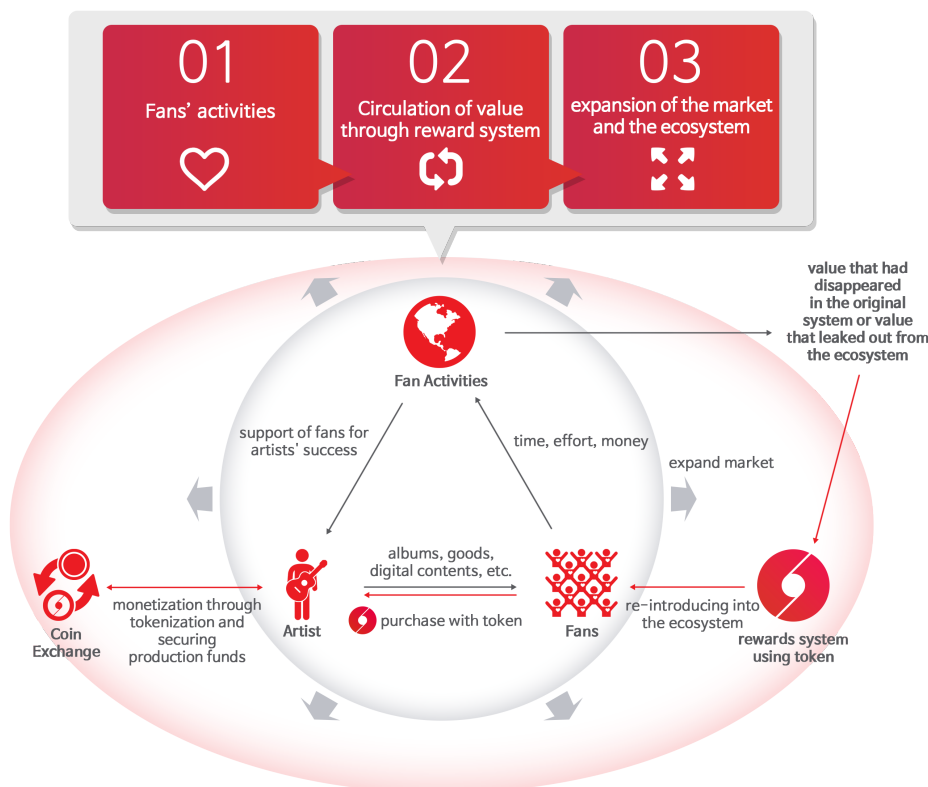
Fair Rewards System for Fans’ Contributions

Blockchain technology is changing the paradigm of the production and recording of traditional values in the era of industrialization. The production of value is no longer a producer's exclusive property, and the generated value is not circulated only in the traditional manner in which it is delivered exclusively from a producer to a consumer through transaction or exchange. In a new ecosystem brought by blockchain technology, the value is created by the “community” and delivered through “sharing.”³ In addition, all of these activities are recorded within the community based on blockchain technology.

³ Alex Pazaitisa, Primavera De Filippi, Vasilis Kostakisa, Blockchain and value systems in the sharing economy: The illustrative case of Backfeed vol 125, 2017.



STAYGE Network equitably rewards fans for their value-creating activities by using a cryptocurrency, which fans can use to purchase products such as albums, goods, and digital contents provided by artists. A fair rewards system motivates fans, and this encouragement leads to higher levels of participation and the acquisition of new groups of fans. This means STAYGE Network functions as a self-motivated fan marketing platform. Moreover, STAYGE Network introduces previously unrealized, intangible value into the ecosystem in the form of cryptocurrency, enabling a virtuous cycle in which both the fandom’s value-creating activities are monetizable and consumable goods can be purchased, providing a new driver for the sustainable expansion of the market and the ecosystem.



Interconnection of Services via Cryptocurrency

The crypto economy links together various services in the ecosystem which has been fragmented until now. Even when fans make use of various services in the ecosystem, all of their activities are recorded in the blockchain of STAYGE Network, and fans are able to purchase contents or are rewarded by the same cryptocurrency. Recorded information in the blockchain and the amount of the cryptocurrency reserve will be an index for fans’ contribution to the success of their artists, and their contributions can be recognized through these specific figures in the community.

Artists had been unable to collect data about their fans in the fragmented environment. In contrast, STAYGE Network allows artists to easily analyze data about their fans, such as identifying the size of their fandom and the loyal fans among them and to make use of these data for their own activities.



Sustainable Fan Marketing Tool

The motivated fan community itself becomes a sustainable fan marketing tool. A fan community can be activated just by continually supplying contents by artists that can be purchased with a cryptocurrency. Fans can be rewarded for their contributions and use these rewards to continue supporting their artists, and their high levels of participation attract new fans into the community.

Improvement of Production Environment

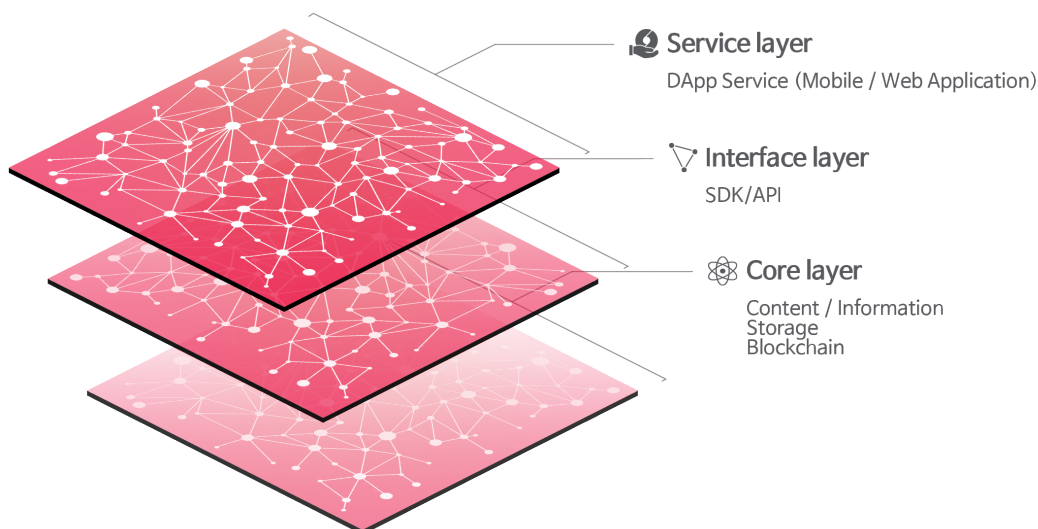
Because all services in STAYGE Network are connected to each other through blockchain and cryptocurrencies, much larger amounts of data can be collected and utilized than in the existing fragmented environment. The increasing data utilization means a reduction in risk. Decisions that previously had to rely on investors' experience and intuition can be replaced by rational decisions based on data, which can make the funding ecosystem sound for artists and their production of various contents.

In addition, blockchain technology enables more sophisticated crowdfunding. Compared to the past crowdfunding methods led by artists or producers, the new forms of crowdfunding are available in STAYGE Network in which fans can initiate, define the concept of their projects and voluntarily raise money. Various novel ideas that had previously not been attempted due to the previous production environment can now be proposed and produced under the leadership of fans.



STAYGE Network Structure

STAYGE Network consists of three layers: Core Layer, Interface Layer, and Service Layer.



Core Layer

Core Layer is a platform where all the information of STAYGE Network is stored. The information delivered through STAYGE Network includes transaction information related to products and contents, information on community activities, and content data.

The information is stored in two forms; the first one is source information and the other is hashed information which is abbreviated. Source information is comprised of various forms such as text, pictures, and videos, and it contains all the information of contents created by artists and fans. However, since the source information is too large to be directly stored in the blockchain, this information is hashed before it is stored. The hash is organized in the form of a tree, and only the topmost hash value gets stored in the actual blockchain.

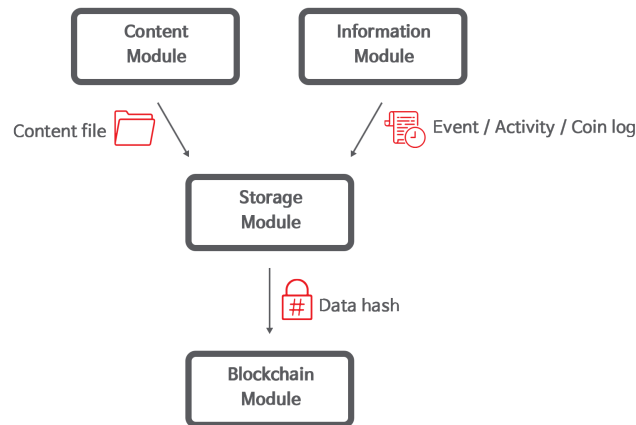
STAYGE Network supports various hash algorithms using self-describing multi-hash.⁴ This scheme eliminates the limitations of existing blockchain networks that can store only a limited size of information. The various formats and sizes of data can be stored in distributed storages across the network with data integrity. This method is widely used in Swarm⁵ or IPFS⁶, and STAYGE Network uses a modified version of IPFS technology which is not dependent on Ethereum.

⁴ Definition of Multihash (available at - <https://multiformats.io/multihash>)

⁵ viktor trón, aron fischer, daniel a. nagy, zsolt felföldi, nick johnson, swap, swear and swindle incentive system for swarm, 2016. (available at - <http://swarm-gateways.net/bzz:/theswarm.eth/ethersphere/orange-papers/1/sw%5E3.pdf>)

⁶ Definition of IPFS (available at - <https://ipfs.io/>)





Using this technology, all information is stored in a distributed system, and upon request, the information is retrieved from the distributed repositories using the content address information. This approach has the advantage of being able to retrieve a lot of information in parallel without getting serialized information from a single server. In addition, this makes the system more stable because information can be retrieved from other repositories even when some are not operational.

Blockchain Module

STAYGE Network utilizes a blockchain network that supports fast consensus algorithms and smart contracts. The blockchain protocol 1) distributes the hash of the contents and various information, 2) distributes the contents and the information itself, and 3) issues the coins during periodic block generations.

STAYGE Network combines the nodes recommended by the community and the supporting backup nodes into delegated nodes, and these combined nodes form the blockchain network. This is a DPOC (Delegated Proof of Contribution) consensus algorithm that modified the existing DPOS⁷ concept. The existing DPOS has technical merits in solving various chain problems, but is problematic in that the stakeholders maintain their vested interests according to the stake. Therefore, if the rewarding method according to the stake is substituted with the rewarding method according to the community contribution, the problem of the existing POS system can be solved. This is in some ways similar to the POI⁸ or Delegated Harvesting mentioned in NEM. However, the DPOC method used in STAYGE Network differs in that the criteria for granting the incentive also includes data storage contribution and other contributions from community activities, in addition to the three factors⁹ considered by POI.

This configuration can lead to fair consensus process and, through this fair consensus process, can encourage users to make more substantial contributions to the blockchain network.

⁷ bitshares, Delegated Proof-of-Stake Consensus (available at - <https://bitshares.org/technology/delegated-proof-of-stake-consensus/>)

⁸ Definition of POI consensus algorithm (available at - <https://nem.io/investors/harvesting-and-poi/>)

⁹ NEM, Technical Reference, 2018. (available at - https://nem.io/wp-content/themes/nem/files/NEM_techRef.pdf)



Storage Module

STAYGE Network utilizes distributed storage functions such as IPFS. However, considering the nature of community activities, we plan to partially change the content distribution algorithm so that the nodes of the same community can be placed in close proximity as well. This is because we anticipate that the activities of distributing contents and information among the nodes in the same community will become more active. These nodes are then fairly rewarded with cryptocurrencies through the consensual rewarding algorithm.

In the early days, many storage repositories might not be needed, and STAYGE One can directly support some repositories to provide stable storage. Later, when the community is activated and many users contribute as storage nodes, the community itself can provide support for the storage repositories.

Subsequently, contributions to the repository function become an important factor in quantifying the overall community contribution, and the nodes are rewarded through these contributions.

Content Module

Content Module provides the function of storing contents of various formats by utilizing functions of the Storage Module. The same content is not stored redundantly in one node but will be stored in at least two repositories in one community for stability. If a community is unable to provide the repository functionality, repositories from other communities can be used instead.

In case of a swarm system, it usually consists of files that are not duplicated in a single swarm unit, but this can be changed to provide files in a stable and swift manner. For example, frequently accessed files can be placed in more repositories to improve access speed. In addition, it is also possible to distribute copies in various places to be protected from data loss. This function can be calculated according to community activities, and we plan to develop a function to automate the distribution of repositories.

Information Module

Information Module provides the function to record all the information coming in from the Interface Layer. This function utilizes the smart contract feature provided by the blockchain network, and all the records are distributed to the nodes. The ability to search and analyze distributed records will also be provided here later. Also, based on the information stored in various nodes, the activity amount of users participating in the community and the degree of nodes participation are all quantified, and a certain amount of coins are distributed through the consensus algorithm.



Interface Layer

Interface Layer provides various APIs and SDKs to utilize the functions provided by the Core Layer. Through the function of the Interface Layer, it is possible to implement functions such as wallet, token exchange, and transaction of various goods. The service application developed in this way constitutes the Service Layer that is to be described below.

STAYGE SDKs will support a variety of operating systems and programming languages and will provide many examples for service developers to use with ease. STAYGE APIs will also be provided for developers who are familiar with API calling methods, and developers can easily and quickly create services in ways they originally used. Through this approach, various partners can easily participate in STAYGE Network to provide DApp and enhance the value of the ecosystem altogether.

Service Layer

Service Layer refers to various applications developed using SDKs and APIs provided by the Interface Layer. The basic DApp services that can be seen in the Service Layer include communities that use rewards systems, goods markets that support token transactions, and ticketing services, etc. Some of the more sophisticated services include crowdfunding and exchanges that can trade tokens across various communities. It also provides the DApp Marketplace function that can provide and retrieve a list of these various DApp services.



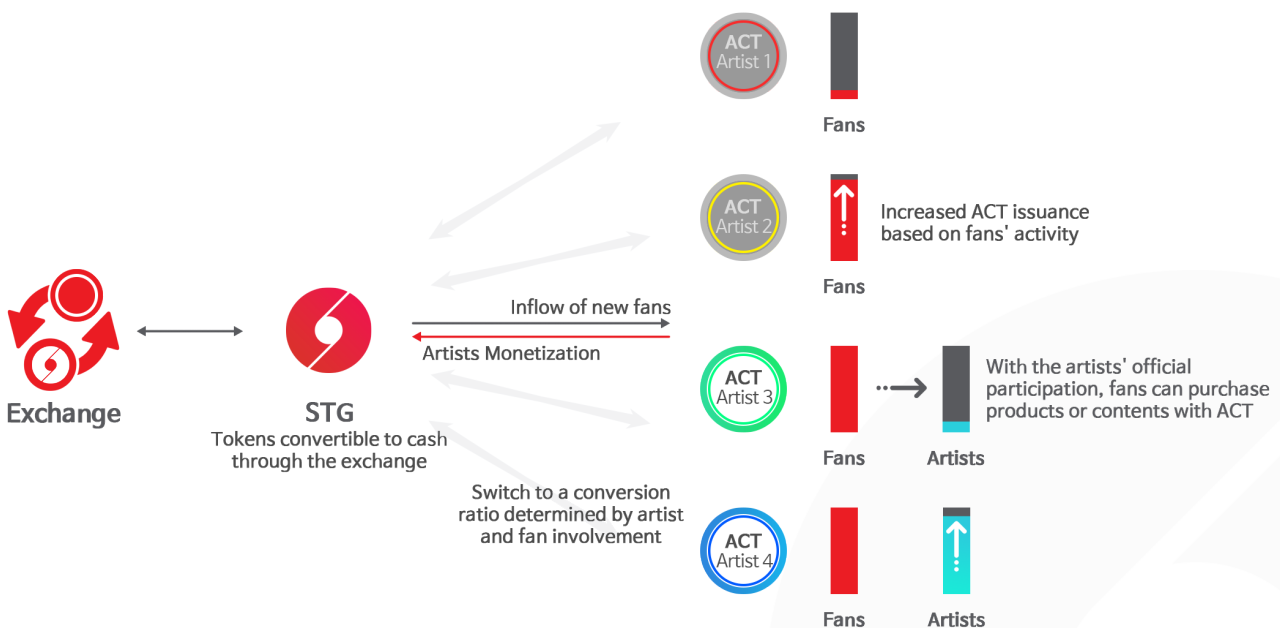
STAYGE Economic System

STAYGE Coin(STG) & Activity Token(ACT)

STAYGE Network economic system is composed of two types of cryptocurrency, STAYGE Coin(STG) and Activity Token(ACT).

The key currency of STAYGE Network, STG, has the role of connectivity with other communities and is also used as a base currency in STAYGE Network. Members of communities can participate in the decision making processes of STAYGE Network, the sponsoring of projects, and the purchasing of goods and payment of artists' guarantees, etc. with STG. They can purchase STG at coin exchanges or receive it as rewards for their contributions. STG will be issued as a token and will be converted to a coin after launching of mainnet.

ACT is issued by each community, and it is a means of transaction and rewards which are given according to one's contribution. ACT rewards can include decision making in the community, the purchase of products or tickets, and digital contents consumption. Artists can also earn ACT through offering their products and contents in fan communities. ACT that artists earn can be converted to STG based on the conversion rate determined by the degree of community activation. ACT is converted to already issued STG, and thus does not result in the new issuance of STG. Therefore, the issuance of ACT by community activities does not mean the dilution of the STG value, but rather the increase in the value of STG.



Since the rate at which ACT converts to STG is not determined by the bidding of STG and ACT, it is not possible to obtain trading gains by intentionally adjusting demand and supply. This means that the community of artists based on ACT can be a healthy and sustainable community space for artists and fans. It is impossible to make the short-term profit by securing the ACT of a specific artist in STAYGE Network.

The artists and fans can compose the independent ecosystem through each of communities' ACT. Decisions of respective communities are determined by the participation of the contributors to each community. In this sense, each community in STAYGE Network is decentralized and independent. This means that artists' participation in STAYGE Network can have the same effect as creating a blockchain network or DApp on their own.

STAYGE Coin(STG)

Original Amount and Additional Issuance

Initially, 10 billion STG will be issued and distributed to the market. Once communities are created and ACT is issued through fans' activities, any additional issuance is to be decided after comparing the amounts of STG and ACT issuance.

$$\frac{2}{3} \sum STG \geq \sum R_n \cdot ACT_n$$

When the estimated number of all ACT converted to STG exceeds two-thirds of the total amount of issued STG, community leaders can vote on whether or not additional STG should be issued and if so, the specific additional amount. By keeping the amount of STG issuance above the amount of ACT issuance, we can create an environment where the newly issued ACT is freely converted to STG, thereby ensuring the stability of STG price.

Transaction and rewards

A coin transaction between users occurs when a product is purchased or by participation in a vote via STG. When a coin transaction occurs, community leaders within STAYGE Network perform authentication of the transaction. Some leaders participating in this process are rewarded for their authentication. Community leaders to participate in authentication are selected based on their contributions to the community. When a coin transfer is completed, STG is paid as a reward.



Usage

Converting to ACT and joining a community

In order to participate in a community, participants can convert their STG to ACT in any community in STAYGE Network.

Making payments to artists

STAYGE Network enables autonomous participation in various entertainment businesses involving artists. These businesses usually make use of the contents and artists' publicity rights to generate revenue or engage with artists to create on/offline events and contents. Any business that involves an artist must pay the artist a fee in the form of a performance fee or a revenue share.

Business members participating in STAYGE Network can use STG to deliver the contract information, and to pay the performance fee or a portion of their revenue to artists. Contracts and payments using STG are managed in a safe and transparent manner, eliminating the risk of engaging in the unfair contractual relationship as exists currently.

Community activities or purchasing goods that involve multiple artists

Purchasing of goods or community activities of a specific artist can be done via ACT, but it should be done by STG if it is bound to multiple artists. For example, purchasing music festival tickets or compilation albums cannot be done via ACT and can only be done using STG. STG can also be used to participate in the decision-making process to determine the direction of STAYGE Network.

Community Activity Token (ACT)

Issuance

ACT is issued to each artists' fan community. When fans autonomously create a fan community of a specific artist and are recognized as a valid fan community, ACT is then issued according to the activities within said community and consequently given to the contributors as rewards for their activities. This is similar to the concept of providing SP and SBD as rewards to writers in Steemit.¹⁰ ACT is only issued through the community activities of fans, but fans who have difficulty spending time in community activities can purchase STG and convert it to ACT of artists they support.

¹⁰ Steem An incentivized, blockchain-based, public content platform, 2017. (available at - <https://steem.io/SteemWhitePaper.pdf>)



The following is an example of an activity in which ACT is issued.

Community activities where ACT is issued

- When you contribute as a repository node
- When posts you had written in the community get the positive response from the community members
- When you participate in the evaluation of other members' posts
- When you write comments on posts written by others
- When you share posts written by others outside in the form of a permalink
- When new members join the community through a permalink shared by you
- When you participate in a vote created by an artist or a fan in a community
- When you link accounts of other social media services(Facebook, Instagram, Youtube, Twitter, etc.)
- When you make and sell products related to your artist
- When you are recognized for contents you previously made on your artist that helped promote your artist by linking your external accounts or by receiving authentication from the community; for example, a fan who had uploaded artist-related contents to YouTube in the past can request a community to authenticate it by linking the YouTube account to the respective STAYGE account and selecting the content. Community members can participate in a vote to certify that the content is indeed authored by the fan. Both the user who made the request for authentication by uploading the content and the members who participated in the authentication process receive the reward.

Controlling ACT Issuance

ACT issued through the activities detailed above are affected by the impact of the activities, fandom size, and the price of STG.

$$\text{The amount of ACT issuance} \propto \frac{\text{Impact of the activity}}{\text{Fandom size} \cdot \text{STG price}}$$

The greater the impact of the fan activities in the community, the greater the amount of ACT issuance. The smaller the fandom or the lower the STG price, the greater the amount of ACT issuance. For the fandom that has already reached a certain size, the issuance of ACT will be slowed down. Also, it will be slowed down when the STG price rises sharply. This ACT issuance control can help prevent an unlimited increase in the amount of ACT issuance for a community.



Transaction and Rewards

When purchasing goods via ACT or participating in a vote, a token transaction occurs between users. STAYGE Network does not provide a means to trade ACT through legal tender, and ACT can be obtained by converting STG.

The following are the types of ACT transactions and their rewarding methods.

Artist-to-Fan ACT transactions

Artists can receive ACT in return for providing their fans with albums, goods, digital contents, and others. For ACT transactions between an artist and a fan, the authorized delegation of the community participate in the certification and does not receive rewards. This is to allow artists to offer their products and contents directly to their fans without any charge. Instead, the delegation of the community can be rewarded through authentication of ACT transactions between fans.

While there are no fees for transactions in which the artist provides value directly to the fans and receives ACT, third-party companies can participate in the ecosystem by providing value-added services to artists in which they receive service fees or engage in profit sharing arrangements if contracted by the artist.

Fan-to-Fan ACT transactions

Fans can trade artist-related goods or content through the interface and services provided by STAYGE Network. In such transactions, the community leaders (artists) and the delegation participate in the certification process and pay rewards for the ACT transaction between fans.

Usage

The right to speak and make decisions within the fan community

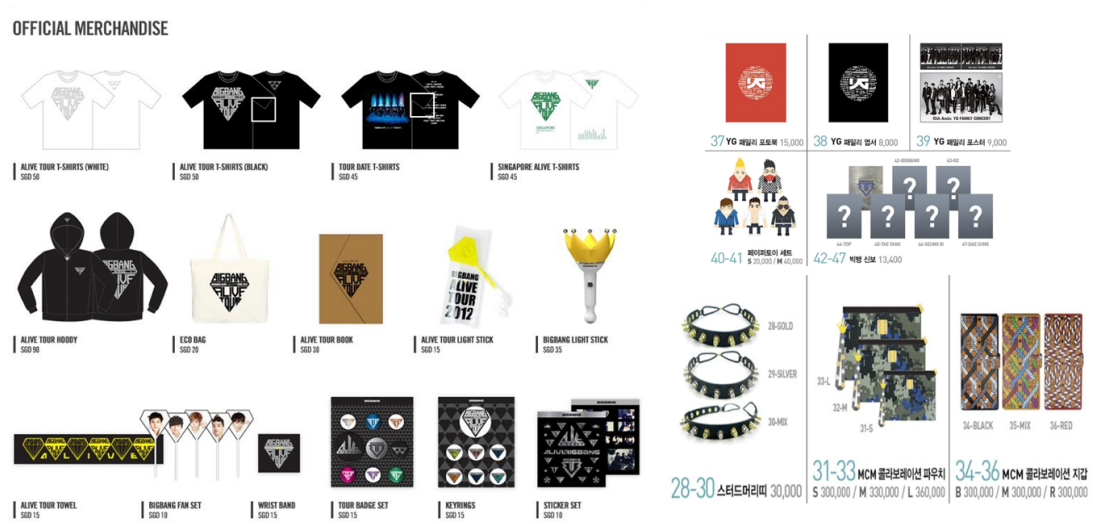
Fan community decisions are made through fans' suggestions and votes. Fans who want to participate in these decisions must have the ACT of the artist. The following items can be initiated and voted through ACT.

- Changing the fan community designs (fandom logos, background images, etc.)
- Suspension and exclusion of community activities for certain users (e.g. abusive users)
- Participation in artist-generated votes
- Suggestions for artist activities (fan meetings, promotion strategies, etc.)
- Changing the fan community function and user-specific permissions



Purchasing artists' official albums or goods

An artist can sell an official album or goods after the artist has officially registered in the community. The artist receives ACT in exchange for the sales and can convert ACT into STG to realize the profit. It is entirely up to the artist to decide which products to sell and at what price. The artist has tools to determine to price for their products which are created by STG market price and STG/ACT conversion rate of the artist. Additionally, a function will be provided that can perform automatic pricing based on STG market price.



[Picture: An example of musician goods (Source: YG E-SHOP)]

Purchasing tickets for artist concerts or fan meetings

Tickets such as concerts and fan meetings can be purchased with ACT as well as artists' official albums and goods. Artists can sell all the seats of the concert or only a portion of them with ACT.

Purchasing artists' digital contents

You can purchase artists' exclusive or pre-release contents with ACT. It is also up to the artist to decide the contents to be sold and their respective prices. STAYGE Network provides tools for purchases with ACT and the enjoyment of contents in various formats such as video, live broadcast, and music.



The Conversion Between STG-ACT

Conversion Rule

Converting between STG and ACT is possible once the artist has joined the community. When an artist officially participates in a community, the community's ACT can be converted to STG through the conversion service provided by STAYGE Network.

However, STG and ACT can only be converted according to the following rules.

- There must be parties on both sides who want to convert from STG to ACT, and vice versa.
- The conversion rate is determined based on artist contribution and community activity, and both indicators reflect all past and real-time indicators.
- When an individual converts STG to specific ACT, there is a conversion limit per day, which is determined by the amount of the total issuance of ACT and the price of goods that can be purchased with ACT. This prevents individuals from purchasing more ACT than necessary in the short term.
- ACT can be converted to STG after holding it for a certain period (one week). During this period, conversions are limited, which prevents ACT conversions for arbitrage.
- Users who agree to the declared conversion rate can request for conversion of their ACT or STG. If there is a sufficient amount for conversions, it occurs immediately, unless the conversion is pre-scheduled for implementation.
- The community delegation participates in the conversion certification voluntarily, and there is no separate fee for the certification.

The rules specified above aim to make ACT-based communities a healthy fan community space for artists and fans.

Conversion Rate (x)

The STG-ACT conversion rate is influenced by two indicators: Artist Contribution (AC) and Community Activity (CA). By reflecting the two indicators, artists can be assured of a minimum conversion rate even if they are inactive.

AC and CA are reflected in the conversion ratio of 8:2.

$$x_n = 0.8 \times AC_n + 0.2 \times CA_n$$



The probability density up to the conversion ratio (R) is finally used for actual conversion.

$$R_n = \int_{-\infty}^{x_n} f(x) dx$$

$$f(x) = \frac{1}{\sqrt{2\pi\sigma^2}} e^{-\frac{(x-\mu)^2}{2\sigma^2}}$$

μ :average, σ^2 :variation

Artist Contribution (AC)

Artist contribution is zero before the artist participates in the community. AC begins to be measured once the artist has joined the community.

The following items are reflected in AC.

- Products type provided by artists in the community (M)
- Communication with fans (C)

The items above are measured periodically and are reflected at a higher rate as they are closer to the present. In addition, the figures above reflect the response of the fans to measure the impact of their activities they have had on the community.

$$\text{Artist Contribution (AC)} = \sum \alpha \beta (M_n + C_n)$$

(α : The influence ratio by period β : Influence)

Community Activity (CA)

Community activity is calculated by measuring the following items.

- Number of transactions between nodes using ACT / Number of STG-ACT conversions
- Number of content uploads by fans / Percentage of active users
- Size of community
- Amount of ACT issuance

The items above are weighted differently by item, and they reflect different rates depending on the period.

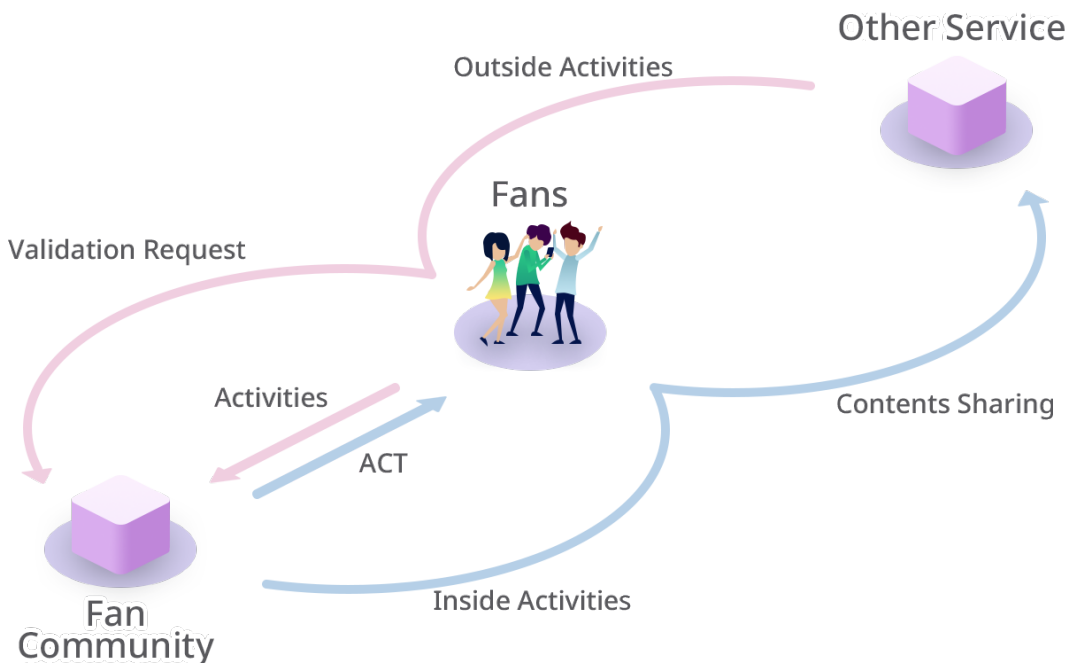


Applications and Service Examples

STAYGE Network encourages the existence of various services in the ecosystem by providing SDKs and APIs. At the initial stage of the ecosystem, first party services that provide basic functionality will be offered, and various third party services will emerge in the ecosystem. The services that STAYGE One can provide directly or the services that other participants can provide in the ecosystem include the following.

Fan Communities

STAYGE Network is a blockchain network that provides rewards for fans' activities via cryptocurrencies. Therefore, the fan community that serves as the home base to fans for their activities is the most fundamental service of STAYGE Network.



Creation and Approval of Communities

A fan or an artist can make a request to create a community in the network, and the approval is granted through the vote of the users. When applying for a community, basic information about the artist must be provided so that users can determine whether the community is suitable to be created in the network. For example, a request to create a community for a fake artist that does not exist in the real world, a community that already exists, or a community for objects, may be rejected through the votes of the participants.



Step-by-step Activation Process

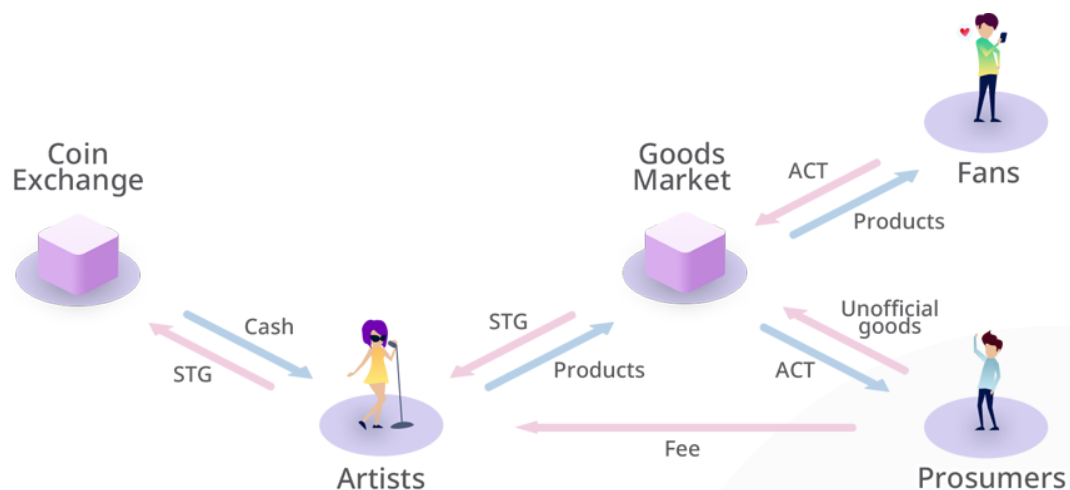
Even if a request for creating a community receives approval, all community functions are not fully activated. The community functions are activated step by step depending on the number of fans who are willing to participate in the community, the amount of fans' activities, and the direct participation of the artist.

Insight on Fan Data

In STAYGE Network, all fan activities are recorded in the blockchain. STAYGE Network provides tools that can authenticate fans' activities, offline or in external services, through the community and for evaluation of their contribution. This allows artists to gain insight of what activities their fans participate in and in what scale, and thus enables them to create new strategies reflective of their fans' ideas. Through this, artists will be able to perform new types of activities focused solely on their fans, without having to be exclusively engaged in traditional performances, broadcasts, and streaming services. In addition, business partners such as advertisers who contract artists can make more accurate decisions based on the data of the artists and their fandom.

Goods Market

Once the artists officially participate in the community, a variety of stakeholders in the entertainment business who sell artists' albums and goods can autonomously participate in STAYGE Network. They can use STG and ACT payment systems to expose their products to their fans, and fans can purchase products using STG or ACT.



Provides a Product-pricing Tool

Product sellers could be uncertain about pricing, as the STG price and STG/ACT conversion rate are volatile. To solve this problem, STAYGE SDKs and APIs provide information such as the STG price and the STG/ACT conversion rate that can be referred to in product pricing, and an option that can adjust product price automatically depending on STG/ACT fluctuations. Through this, the goods sellers can set the price accurately according to the current STG and ACT status in real time or dynamically adjust the amount of STG and ACT received from the sales to maintain a certain selling price.

Unofficial Goods Legalization

Fans produce unofficial goods related to artists. Postcards, stickers, photobooks, and others that are directly photographed and edited by fans using their artistic skills are sold to other fans. These activities are generally accepted as fan activities, but some activities could be illegal in the form of copyright infringement or the publicity rights of the artists. In STAYGE Network, this form of activity for fans is formalized and legalized, proposing a new type of goods transaction that will help both artists and fans.

Revenue of artists

The products autonomously produced and sold by fans are transacted based on the ACT of the artist, and a certain fee is charged for ACT transactions between fans. This fee is provided to the artist in return for their publicity rights and the copyrights of the primary content produced by the artist. The production and the sale of unofficial goods by fans is illegal in the existing ecosystem, but in STAYGE Network, however, this in turn, is a helpful, legal activity that is profitable for artists.

Benefits for producers of unofficial goods

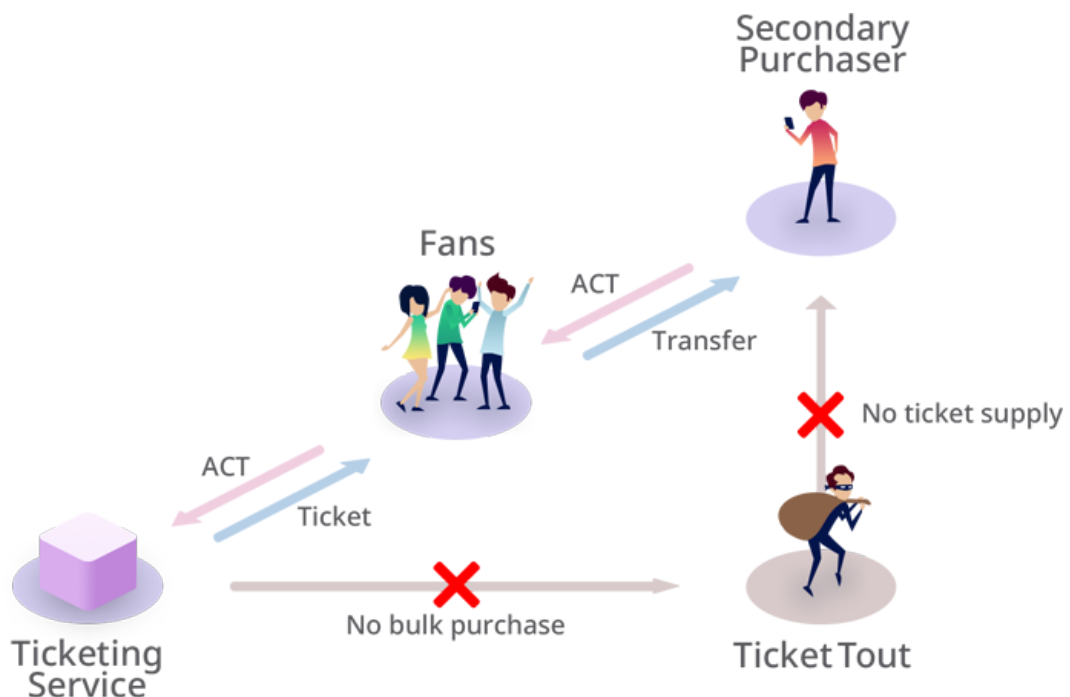
Fans who produce unofficial goods in the existing environment receive orders directly from their own websites or fan communities in the form of an online bulletin board and sell their products through account-based remittance. The method of receiving orders and confirming payment receipt in the form of bulletin board comments is prevalent in certain countries or in small communities due to inconveniences in payment systems and is especially cumbersome in the case of increased orders. However, the marketplace provided by STAYGE Network provides tools to easily sell products and process orders, as well as providing unrestricted payment services based on STG and ACT.



Ticketing Service

Market Distortions caused by illegal Brokers

Concert tickets by renowned artists have market distortions due to illegal brokers. They make profits by securing large amounts of tickets and then reselling them at higher prices. The total market of illegal brokerage, including sports event tickets, will reach USD 8.44 billion by 2015. For artists, the ticket sales are limited, so the presence of the illegal brokers does not help them increase their profits in any way. For fans, it costs tens of times more than the regular prices of tickets to attend concerts they like. In other words, the presence of illegal brokers threatens both artists and fans in the current ticketing market for concerts.



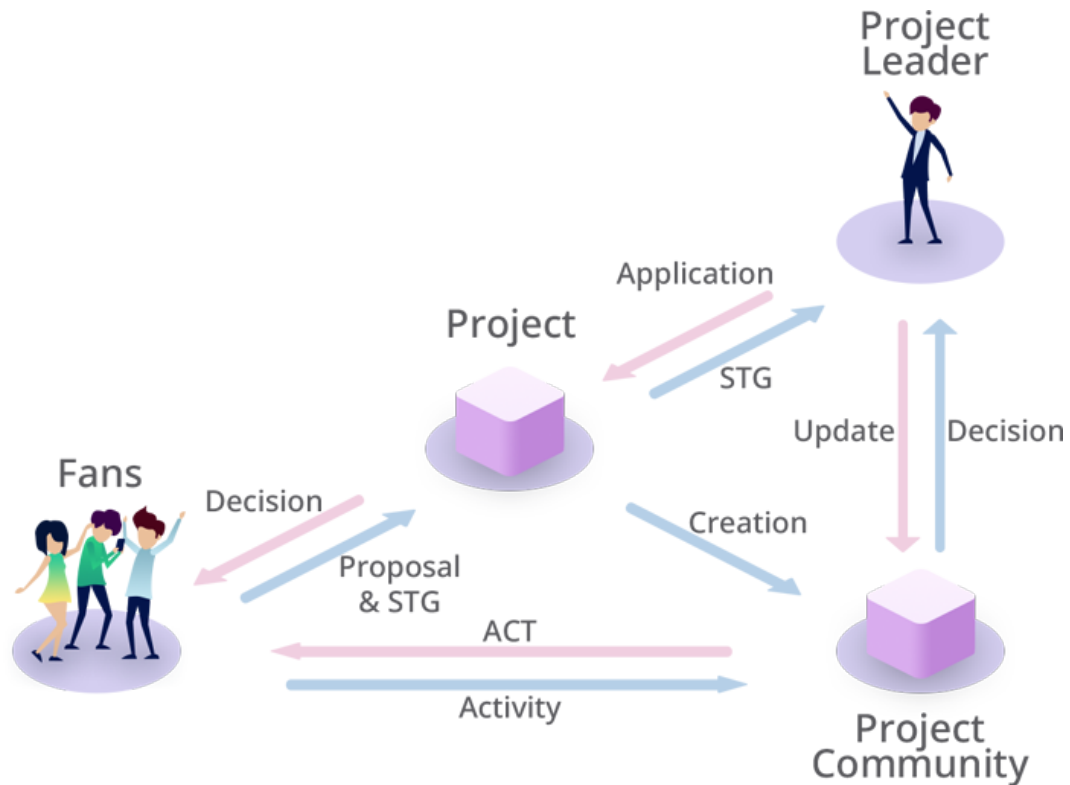
Fan-friendly Ticketing Service

It is possible to limit the number of tickets that can be purchased per wallet address used for ticket payments, while also giving ticket-purchasing priority to buyers with certain amounts of ACT. In addition, if the ticket cannot be used due to unavoidable circumstances, it can be transferred and recorded, thereby tracking the transaction route. This policy can provide a ticketing service with various additional functions, such as inhibiting the activities of illegal brokers and giving more opportunities to loyal fans.



Fan-driven Crowdfunding

Existing crowdfunding activities related to artists is currently only available through artists and crowdfunding firms. However, in STAYGE Network, anyone can propose a crowdfunding project and can voluntarily participate in such projects. For example, fans can propose an idea for a TV show that is best suited to the artist directly, and then raise initial funding with STG to select a producer and run a real project.



Project Proposal

Anyone can propose a project including artists, fans, and content creators. In order for the project initiator to propose a project to the community, a certain amount of STG must be deposited. This prevents the number of projects being proposed from growing out of control, which would make it difficult for community members to select sound projects.

The types of projects that can be proposed are as follows.

Projects that an artist can propose

- album production
- production of music videos
- production of goods
- production of other contents



projects that fans can propose

- production of contents about an artist(TV shows, image contents, etc.)
- concerts or fan meetings
- collaborative projects with other artists

Projects that content creators can propose

- production of TV shows or video contents

Participation in Projects

A member of a community can agree to a project by participating in the crowdfunding project proposed by an individual with STG. STG raised for the project will be used as funds for the project's development.

Decision Making for the Project Development

Community members who have invested STG in the project can participate in said project's decision-making process. Voting rights are granted proportionally to the amount of invested STG. Agendas that require decision making include the following.

- Voting for project discontinuance
- Voting for the selection of the project leader
- Proposal of project-related comments

Selection of Project Leader

The total amount of STG gathered in the project will be announced on the project page, and anyone can apply to become the project leader. The applicant for the role of the project leader is selected through a vote after being verified as an actual facilitator of the project. After the selection of the leader, the ownership of the collected STG is transferred to the project leader, and the project leader can use STG for the actual cost of the project.

Creating and Publishing a Project Community

When the project leader is finalized, the corresponding project community is created. Just as the ACT-based reward system in a fan community, the project community rewards participants who help with the project's progress and marketing through the project community's ACT. ACT can be used to purchase project-related goods and contents.



Business Platform

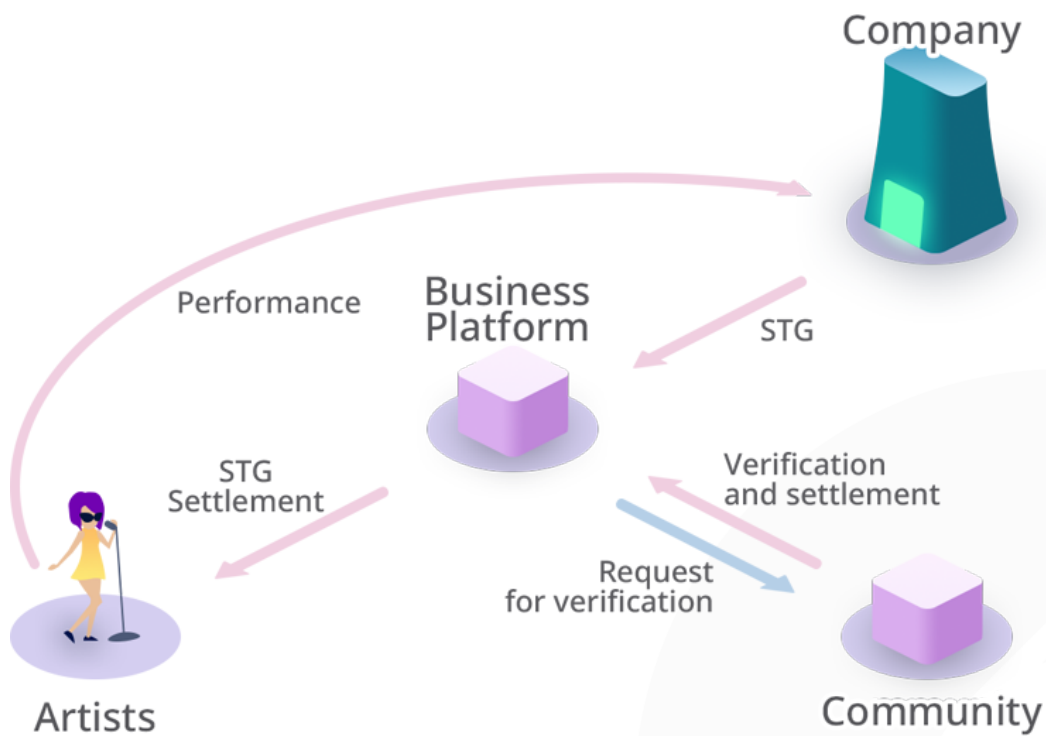
It is very illogical and inefficient when advertisers or concert promoters recruit artists. Most of the candidates are selected based on the intuition of the person in charge, and candidates are contacted individually to sound out their intentions and to adjust the terms. In particular, the method of cost settlement is difficult to satisfy both artists and business owners. The artists seek income to be paid up front, and the owners want to make payments once revenues have incurred. In either case, both sides must assume a risk that the other party might not make payments or may not fulfill the contract.

Data-driven Artist Selection Process

Attempting to recruit an artist for business purposes ultimately is an aim to target the artist's fandom. Consequently, when STAYGE Network has a large amount of data on artists' fandoms, it can help identify artists who are optimized for various business purposes.

Secure and Transparent cost settlement through Smart Contract

Using the smart contract feature of the blockchain, you can settle your profits transparently and fairly in a way that satisfies both artists and businesses. The artist's guarantee or revenue share ratio is recorded on the smart contract, and the cost and the revenue are automatically settled when the project is completed. In the event of a dispute, it can be resolved through the verification of the terms of the contract and the project's results



through the community.

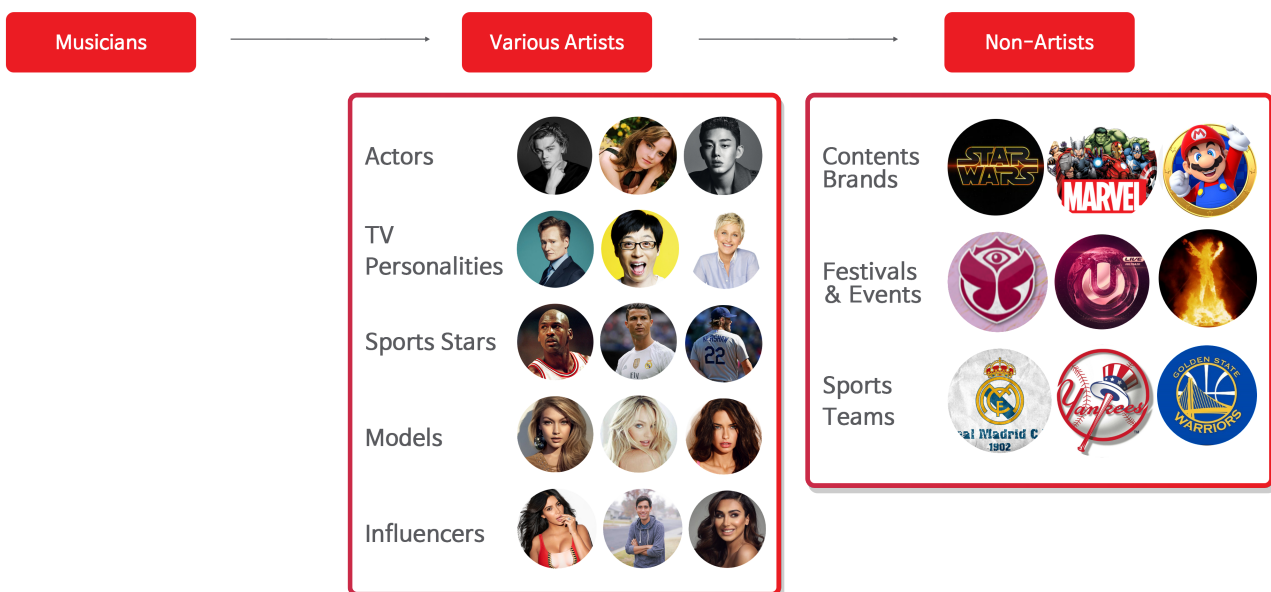


Plan

Expansion Plan

STAYGE Network initially focuses on creating music artists' fan communities and tokenizing fandom, but the areas of application are not limited to such artists. Fandom acts as infrastructure in the entertainment industry. As most business models are based on fandom, STAYGE Network can be expanded into a variety of genres, including actors, entertainers, sports stars, models, and influencers. In addition, it can be expanded to include brands such as Star Wars and Marvel Comics, which have expansive fandoms for their characters.

Once STAYGE Network has officially formulated the expansion plan, fans can voluntarily apply for the creation of fan communities of their favorite individuals or any brands they support. As fans join the community and there is more active participation, the likelihood that artists or brands will officially participate in the community increases. An economic system based on STG and ACT will be established right after their official participation.

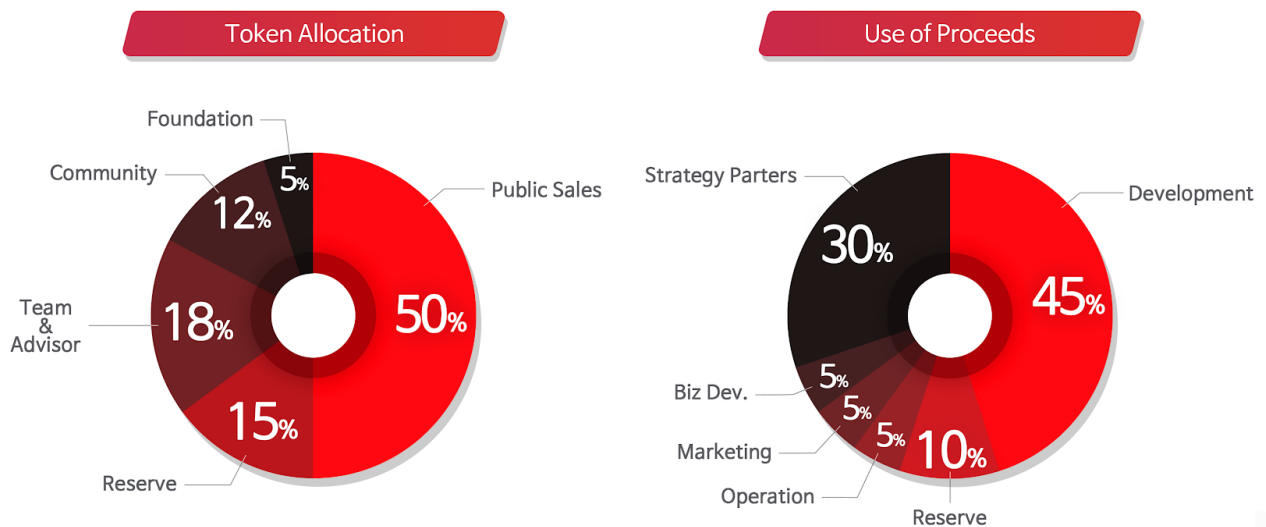


Token Sale Events

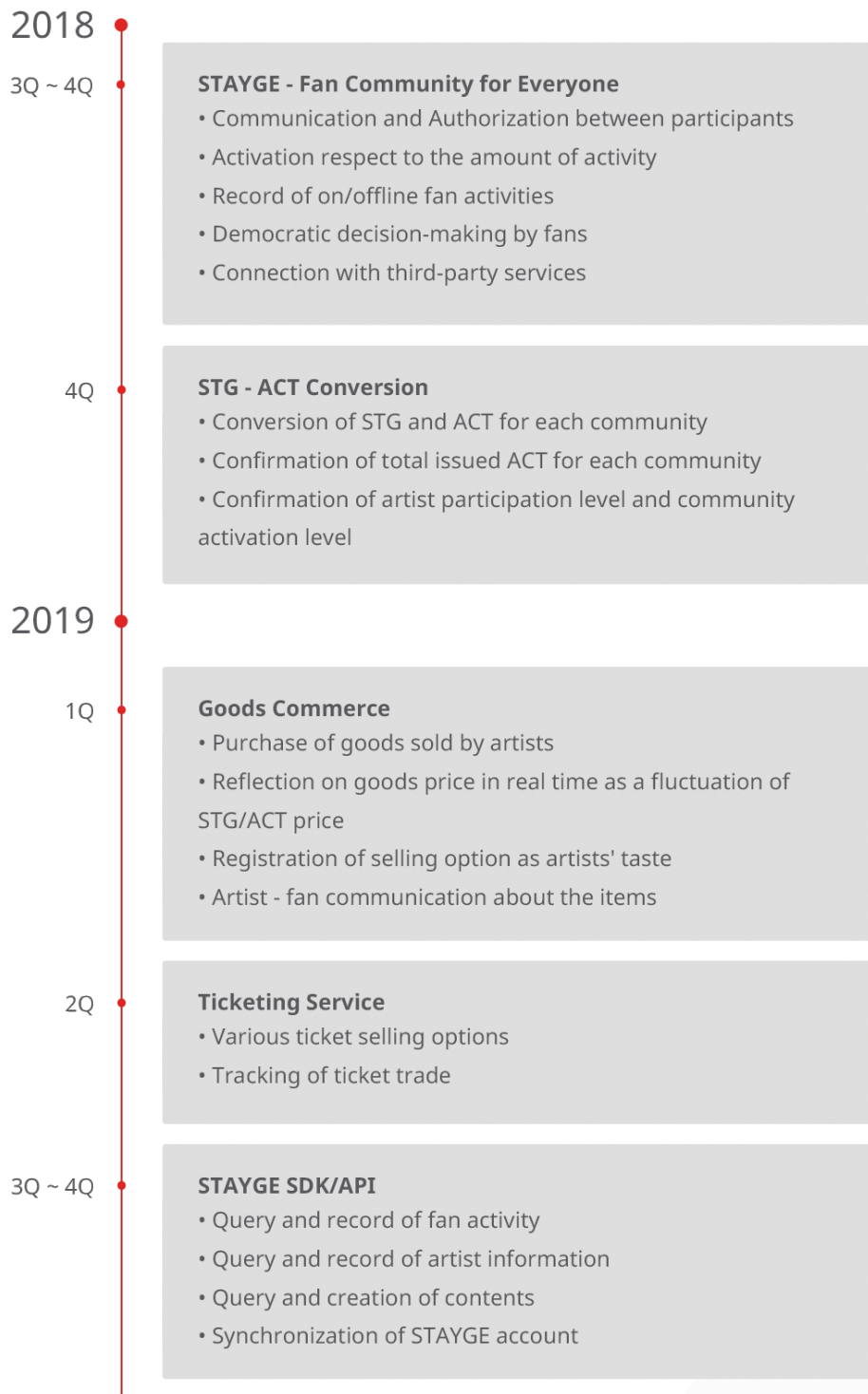
Participants in token sale events can contribute to STAYGE ecosystem in the beginning and receive STG. STG does not represent a stake in STAYGE. STG is converted to a coin from a token after the mainnet launch.

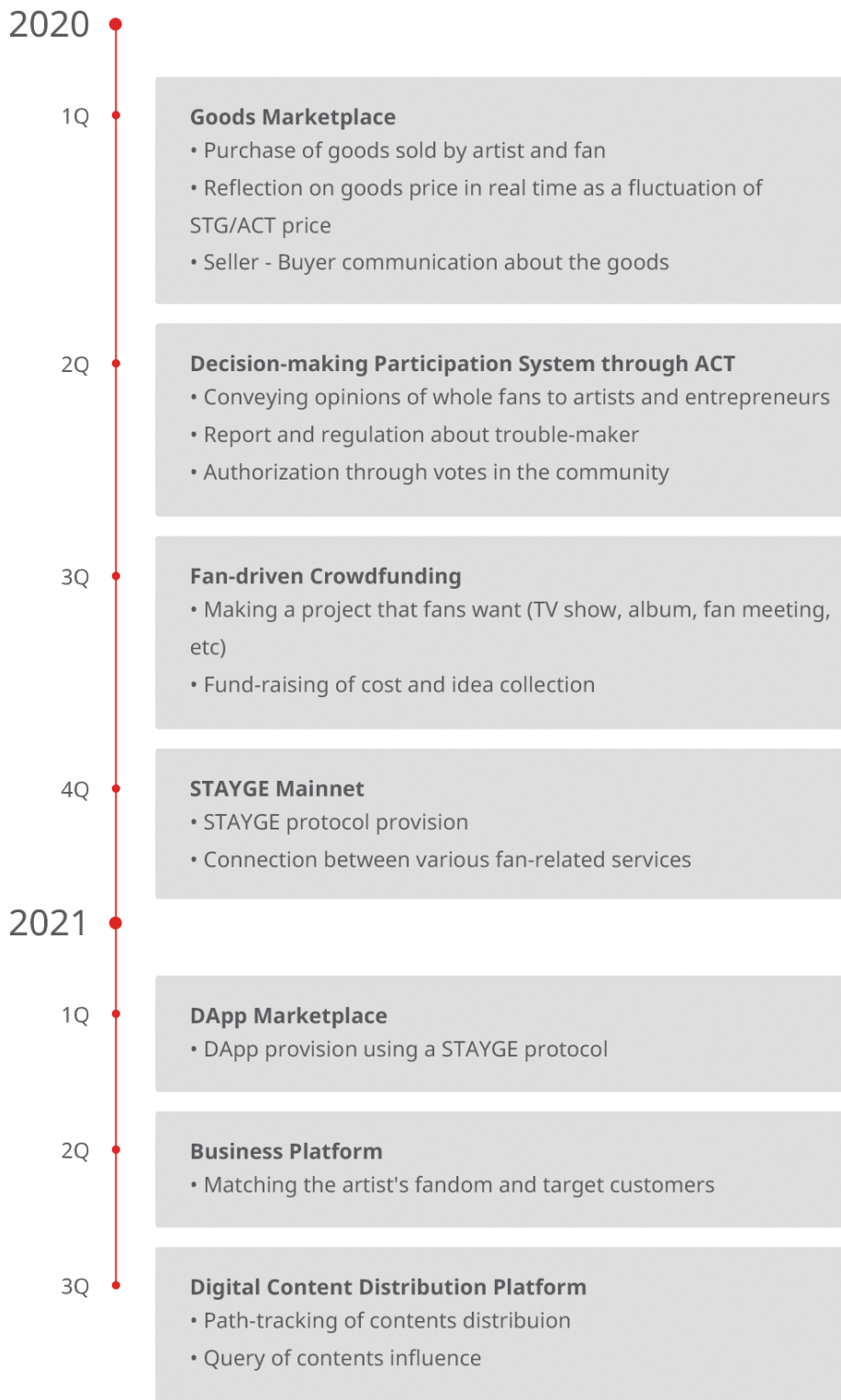
Key Information	
Token Name	STAYGE (STG)
Total Issuance	10,000,000,000 units
Token Sale Quantity	5,000,000,000 units
Accepted Cryptocurrencies	ICX Only
Token Price	1 STG = 0.0025 ICX, 1 ICX = 400 STG
Pre-sale	To be announced Benefits: Additional 15-30% of the purchased STG

Token Distribution



Road Map





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