



STREAM PROTOCOL WHITE PAPER 2.0



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1 ABSTRACT

Stream Protocol is a blockchain network-powered content revenue distribution system. When a user requests for settlement after revenue is generated from content, the revenue can be distributed in a fair manner according to clear standards as content-related information and contribution information of content contributors are recorded on the Content Smart Contract (Hereinafter “CSC”) of tamper-proof blockchain network.

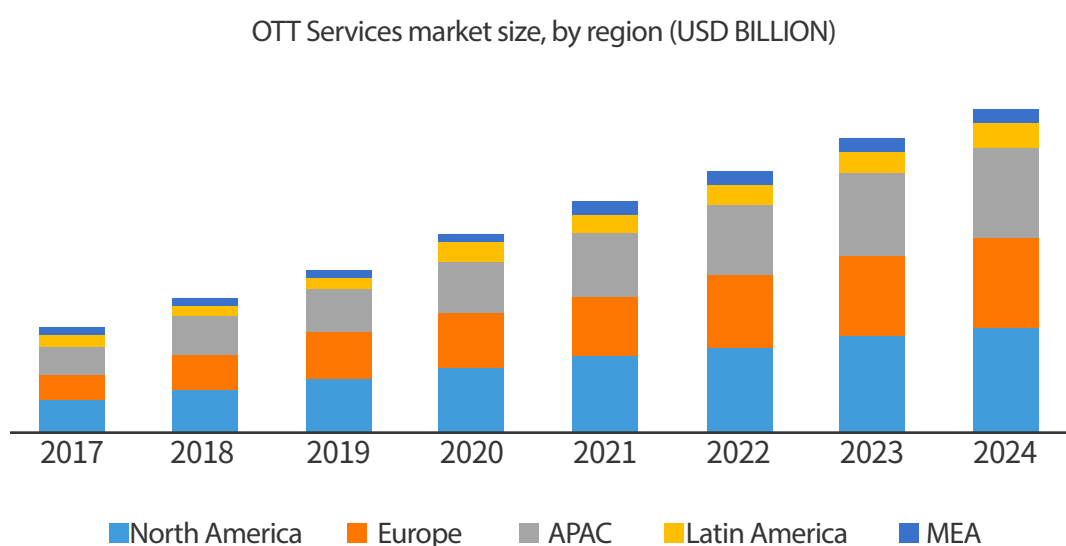
The system can solve the deep-seated problems held by the content market which is enjoying an exponential growth. First problem is the unclearness in revenue distribution standard. Second problem is the inefficiency in the content creation process. Current revenue distribution structure is unreasonable as content creators only receive fixed amounts of earnings regardless of the total revenue generated by content. It is also unreasonable as content creators often receive the same amount of earnings regardless of their level of contribution. Furthermore, re-investment on content and new content creation get delayed as the process from revenue generation to revenue distribution is complicated. Eventually, exponential growth in the number of content cannot be expected.

Stream Protocol builds a foundation for the sound growth of the content market by solving the abovementioned problems. Stream Protocol establishes an ecosystem where quality content can be created continuously by distributing content revenues with fair and clear standards while simplifying content revenue settlement and payment process. Furthermore, Stream Protocol turns content into separate shares by the level of contribution. Eventually, Stream Protocol will improve the content ecosystem in whole so that content contributors can focus on creative works while securing their rights. Also, Stream Protocol will enable the qualitative improvement of content through direct revenue distribution to each content contributor .

2 BACKGROUND

2.1 Exponential Growth of Content Market

Users can easily access and use various content due to the development of the Internet, a limitless virtual space, and infrastructure that fuels the Internet. Increased awareness of Internet users on content leads to the invigoration of the content market as users not only consume content but also generate revenue by uploading self-made content. In case of Over-the-Top (Hereinafter “OTT”) market, a market represented by Netflix, the market is expecting an increased global market size of 110 billion USD by 2020 according to a research conducted by the Boston Consulting Group. The number shows that the global OTT market has an infinite possibility as the market has grown 20% from 93 billion USD in 2019.



2.2 Unclear Revenue Distribution Standard

It is clear that the total volume of content revenue is increasing along with the invigoration of the content market. However, most contributors who participated in content creation only receive fixed amounts of fee from the revenue generated from content according to a certain contract or receive the same amount of fee regardless of their level of contribution. Moreover, contributors who participated in creative works get neglected in the revenue distribution process while platforms and a small number of studios and agencies take large share of revenues when certain content gets huge attention in the market for its value. In other words, most contributors who participated in making creative works do not receive the adequate amount of rewards according to their level of contribution.



2.3 Inefficient Content Creation Process

Beside the diversity of content which is sacrificed by the logic of capitalism, it gets difficult to expect qualitative and quantitative growth due to the current content creation process which only aims to maximize profitability. For contributors to receive revenues generated from content, they have to go through a complex process that requires a huge amount of time. Therefore, inefficiency occurs during the process. In most cases, contributors who participate in creative works have a hard time burdening labor costs, technical expenses, and production costs needed in the early stages. However, there is a need to improve the efficiency of the process including investment, creation and revenue distribution as it is impossible to overlook the profitability of content. In short, the need for a platform that distributes revenue accurately and rapidly according to fair standards and enables the reinvestment of the revenue for content creation is increasing as to build a sustainable ecosystem for the content market that expects exponential growth in coming years.

3 VISION

3.1 Fair Distribution of Content Revenue

Stream Protocol suggests clear standards for fair revenue distribution. The standard is open to everyone in a transparent manner as the standard gets recorded on the blockchain network. Therefore, the standard is safe from individuals and entities seeking unfair and unreasonable private interest. Furthermore, the standard can be used to reduce costs that can occur from unnecessary conflicts.

3.2 Sustainable Ecosystem for Content Creation

Content creators can continuously make quality content as the system alleviates the burden of costs by enabling immediate settlement of payment upon content contributor's request. Content creators can focus more on creative works as the system supports them to overcome the limits of the current content market where large-sized studios, distributors and agencies hold initiative.

3.3 Protection of Content Asset Rights

Ultimately, Stream Protocol will develop into a platform that accurately suggests the shares within content and protects the rights of content assets. Revenue generated from content gets paid out to contributors according to individual shares in content as the level of contribution or contracted terms and conditions becomes the share in content. Thus, a virtuous cycle where contributors can focus on making creative works while enjoying the protection of rights can be established.

4 STREAM PROTOCOL

4.1 Innovative Revenue Distribution

STREAM PROTOCOL is the system to distribute revenues from a content based on 'contribution portion' of each contributor in the content. 'Contribution information,' including the contribution portion, is registered on the STREAM PROTOCOL blockchain network and becomes linked with the Content Provider Platform. That serves as the clear standard for the distribution of revenues from the contents to the contributors. Shares in the content, which used to belong only to few producers including the director and script writer, are now also distributed to contributors who have explicitly participated in the production. The contributors can enjoy persistent income through contents to which they have contributed, and that can serve as an incentive to enhance the quality of contents. Furthermore, cost burden to the creators has been reduced by simplifying the complex revenue distribution process. Revenue generated from the content can be checked in real time, and because its settlement is on a daily basis, revenue distribution is made to content contributors in a short time. Such an efficient settlement system facilitates the quantitative growth of contents through the circulation of production, revenue distribution, and reinvestment.

4.2 Usage-based Billing System

STREAM PROTOCOL basically adopts the usage-based billing system in which the users are charged in accordance with the time they used the contents, instead of the contemporarily popular subscription system. This strategy is based on the choice for mutually complementary co-existence with the existing OTT platforms rather than the differentiation for competition. In the existing subscription system, the content users experience the inconvenience of purchasing not the content itself but the subscription service of the platform on which the content exists, and OTT platforms are forced to consume resources to keep the users attracted to the subscription service. Usage-based billing system is the efficient payment system that provides the solution to the aforementioned inconvenience and also enhances the revenue of the OTT platform. Resultantly, adoption of STREAM PROTOCOL with the usage-based billing system enables contents providing the services beyond the limit of an OTT platform.

4.3 Cross-Platform Data Usage

Strength of Netflix, a global OTT company, is not just subscription economy. The key point of Netflix is 'personalized OTT.' They collect and analyze watch data of their subscribers to provide personalized curation service and induce long-term subscriptions. Because STREAM PROTOCOL is not limited to a certain platform, it can collect subscribers' watch data across various OTT services to be added. Then, simple but clear big data consisting of contents and users only can be built and personalized service beyond the limit of 'platform' can be provided.

5 EXPECTED SCENARIO

5.1 Content Contributor (Creator)

Content creators should continuously focus on making creative works by earning revenues through guaranteed content rights. In the case of video content, guaranteeing content rights in OTT platforms has become an important issue as revenues generated from online platforms including but not limited to OTTs surpassed the revenues generated from theaters. Stream Protocol can guarantee contributor's individual content rights based on trustworthy information as contribution information is recorded on the blockchain network. As such strength can attract potential and current content creators, content creators will upload and show their creative works by using Stream Protocol. Eventually, Stream Protocol will become the industry standard.

5.2 Content Provider (Platform)

OTT platform companies including but not limited to Netflix, Amazon Prime Video, and Disney Plus are investing on content creation in a continuous manner in order to increase the number of subscribers and to increase retention rate. The purpose of original content and exclusive content is to retain the consumers. However, content channels shall be diversified in order to maximize revenue per content. Pricing system that allows users to pay per content is required in order to generate revenue with individual content as differentiation strategy gets weaker when content is shared among different platforms simultaneously. Stream Protocol can be adopted as a solution that connects such niche markets.

5.3 Content Consumer (User)

As diverse contents platforms appear and subscription system become popular, contents users became able to enjoy wider range of contents with smaller cost. However, the temporal limit in content consumption ironically raised the psychological cost of choosing the platform. As a service focused on individual content consumption not OTT platform, STREAM PROTOCOL can resolve such an inconvenience that the consumers may experience. Also, efficient content curation service can be provided because collection of data on the user's content consumption pattern not limited to a single platform is possible.

6 INNOVATION OF STREAM PROTOCOL

6.1 Blockchain-powered System

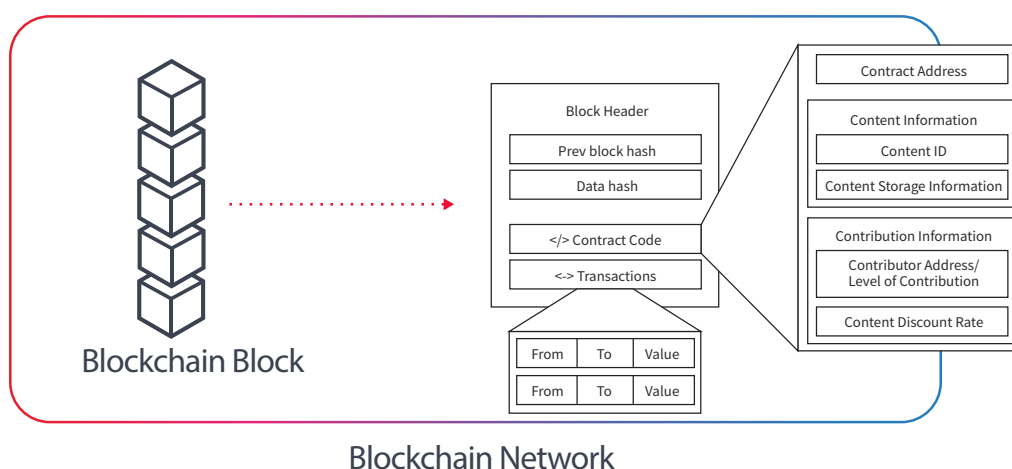
As mentioned above, the key feature of STREAM PROTOCOL is ‘distributing the revenue from the content based on the contribution portion of each contributor to the content.’ For the sake of innovation of revenue distribution feature, high credibility and security shall be prepared in the contribution portion. STREAM PROTOCOL operates as a bimodal blockchain system utilizing Klaytn and Ethereum.

6.2 Service Chain

The service chain operating on Klaytn records contribution information, including contribution ratio, and content-related information, to prevent forgery. Time credit, which is used for content consumption and revenue settlement, is recorded as transactions in the service chain in response to ‘KSTPL (Klaytn-SPTL)’ to ensure the trust of settlement details. Since TimeCredit is exchanged for a legal currency through a financial computer network, it can secure the stability and predictability of content revenue. To remove entry barriers for users unfamiliar with blockchain, these processes are executed on the basis of STREAM PROTOCOL and are not ostensibly obvious.

6.3 Content Registration

After content contributors create content, content providers register information on the creation, contribution information by contributor, and discount rate in the Content Smart Contract (CSC). The contribution ratio of each contributor, calculated based on the contract content at the time of the content creation, or related parameters such as the contributor's working time or investment, can be used as contribution information. No matter how the contribution information is established, the reasonable distribution of content revenue is guaranteed because the content stake based on the contribution information is irreversible data that does not change without consensus modification.

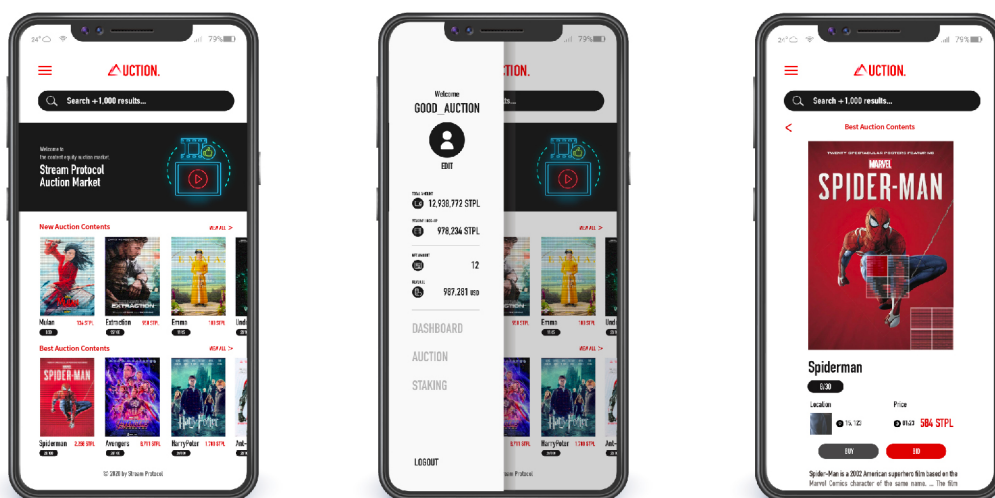


6.4 Content Revenue Equity Auction System

Meanwhile, Ethereum issues two types of tokens used in the 'Content Revenue Equity Auction System'. One is a non-Fungible Token (NFT) created under ERC-721, which equitize the revenue allocated to the STREAM PROTOCOL operating entity. 3% of the total revenue from the content using this system is attributed to STREAM PROTOCOL as a validated share and 3% of the total revenue is equity in NFT. The amount of NFT issued for each content varies. For example, if 100 NFTs are published in a content, they represent a 1% stake in each NFT and receive a portion of the content revenue by a proportion equivalent to the number of NFTs in question. Profits paid at this time are sent to NFT holders' wallets with stable coins such as "Terra" and "Tether."

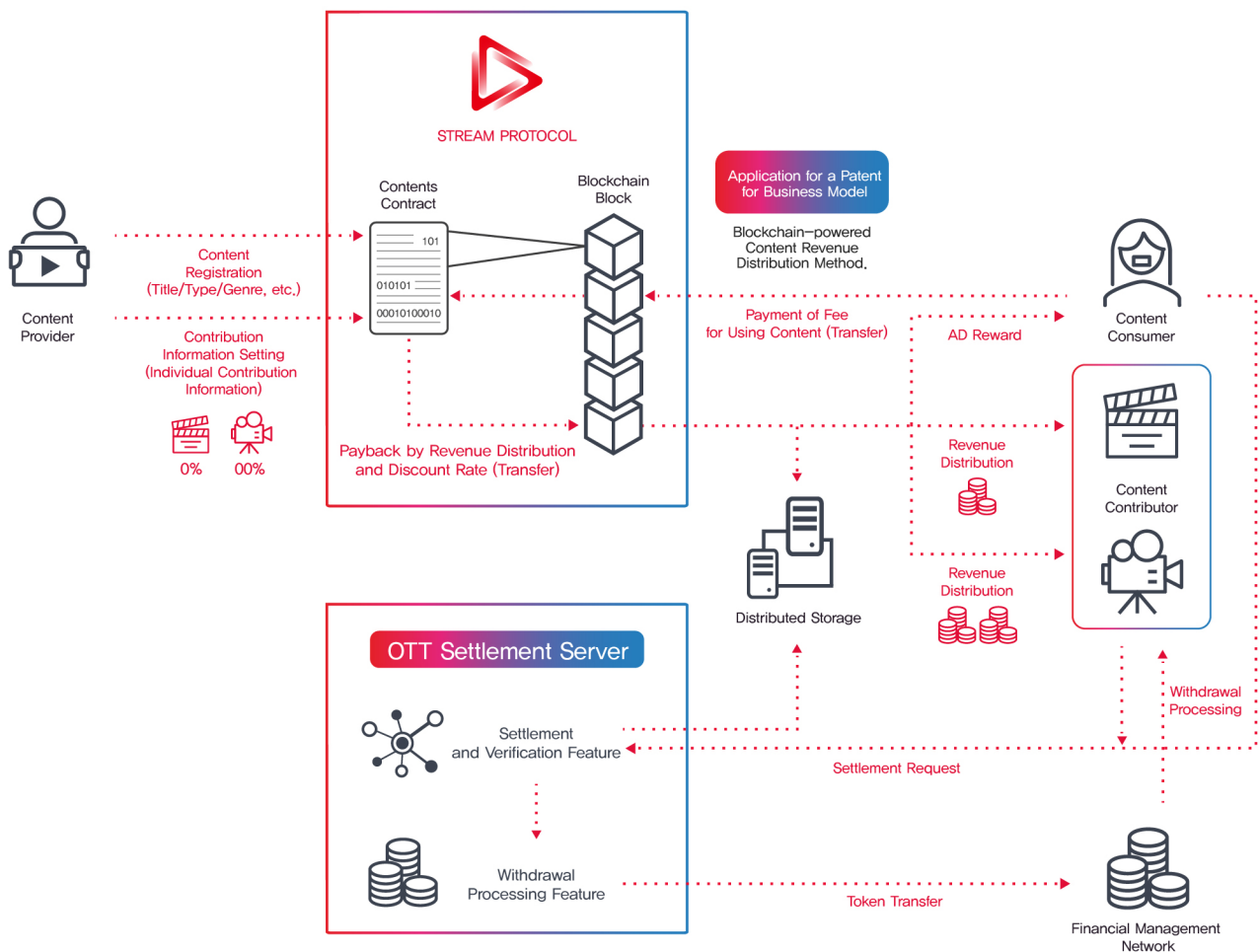
The initial supply of NFT's share of content revenue is auctioned off, which is an STPL token issued under ERC-20. The winning price of NFT, which has a stake in content revenue, depends on the expected profitability. For content that is expected to have a large number of replays over the long term, many STPL tokens will bid for NFTs of that content. As long as content is steadily produced, these auction systems can function as a demand for STPL tokens and as a means of buy-back, resulting in long-term price stabilization of STPL tokens. After the initial supply through auction, NFT's transactions are entirely left to the market. NFT's price is formed and transactions are made based on the principle of supply and demand on the decentralized exchange.

The more content that uses STREAM PROTOCOL, the more active the auction system will be. This will soon lead to an increase in the amount of STPL tokens paid for the auction and a decrease in the amount of STPL tokens in circulation. The staking system will be introduced later to prevent side effects of excessive price increase of STPL tokens due to excessive supply reduction. The STPL token used in the auction is sent to the MASTER wallet of the operating entity of STREAM PROTOCOL, some of which are paid at interest once a week to users who stake the STPL token.



6.5 Content consumption and Revenue settlement

If a content user pays the cost in proportion to the time spent on content, a time credit corresponding to the cost is recorded in the CSC account, and STREAM PROTOCOL uses it to calculate the total revenue of the content. The proceeds are then calculated according to the contribution information recorded in the CSC and the time credits are distributed. The revenue distribution is made quickly and accurately on the following days, after the daily content revenue is settled on a daily basis.



6.6 Content Curation

STREAM PROTOCOL provides curation based on the actual user data of the content as a service that enables content users to access individual content without restrictions on platform boundaries.

Since content payments are made on a pay-as-you-go basis and time credits corresponding to payment costs are recorded on the blockchain, the amount of time credits consumed by content users can be the basis for content evaluation. In a way of rating content as a kind of "immersion," if a content user consumes a lot of time credits for a particular content, it can be seen as being immersed by investing time in that content. For example, if 120 minutes of content is consumed with a time credit equivalent to 120 minutes, that content can receive a high rating. On the other hand, if only 30 minutes of time credit is consumed for a certain content, the rating of that content will be low.

If time credit consumption was the criterion for ratings, the time credit consumption pattern is used as the basis for personalized curation. Information about content is also recorded in the CSC on the blockchain, so analyzing the information of content users consuming time credits will enable content users to recommend the next type of content they can consume. Just like big data-based services, STREAM PROTOCOL will also become more accurate as the number of users increases and the number of content usage accumulates.

7 ROADMAP



2020 10

Stream Protocol

- Development of contract based on Klaytn
- Development of REST API



2020 11

OTT Media service based on Stream Protocol

- Development of blockchain payment and settlement system
- Start development of interworking of streaming service



2020 12

Stream Protocol based OTT Media Service

- Beta Launch



2021 Q1

Stream Protocol based OTT Media Service

- Completion of interwork streaming service development
- Starting development of equity Auction service interwork
- Official Launch

2021 Q2

Stream Protocol based OTT Media Service

- Beta Launch of NFT equity Auction Service Application
- Expansion of business partnership

2021 Q3

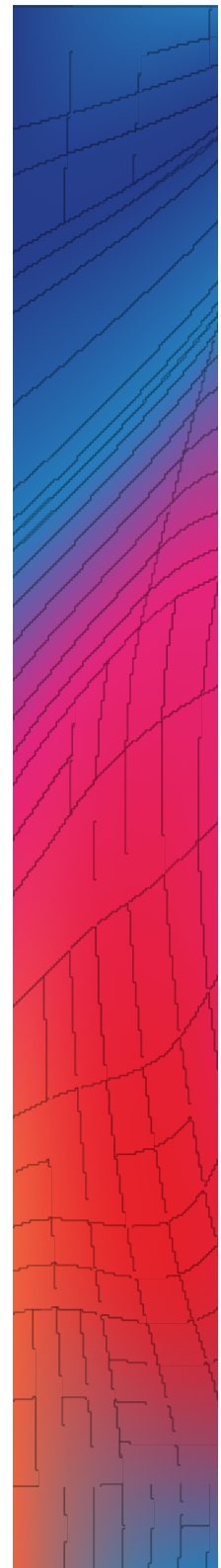
Stream Protocol based OTT Media Service

- Official Launch of NFT equity Auction Service Application
- Expansion of streaming service based on Stream Protocol

2021 Q4

Stream Protocol based OTT Media Service

- Add of 'STPL Staking' function in the NFT equity Auction Service application



8 TOKEN METRICS

8.1 Token distribution



Category	Token Amount	Ratio	Lock-up Period
Token Sale	20,000,000	4%	-
R&D	75,000,000	15%	-
Marketing	125,000,000	25%	-
Operation	100,000,000	20%	-
Eco System	100,000,000	20%	-
Team&Advisor	50,000,000	10%	Lockup for 1 year after first listing, release of division for 3 years
Reserve	30,000,000	6%	Unlock after 2 years from first listing
Total Amount	500,000,000	100%	-

8.2 Use of STPL Token

Auctions for stake in content revenue

Auctions for stake in content revenue

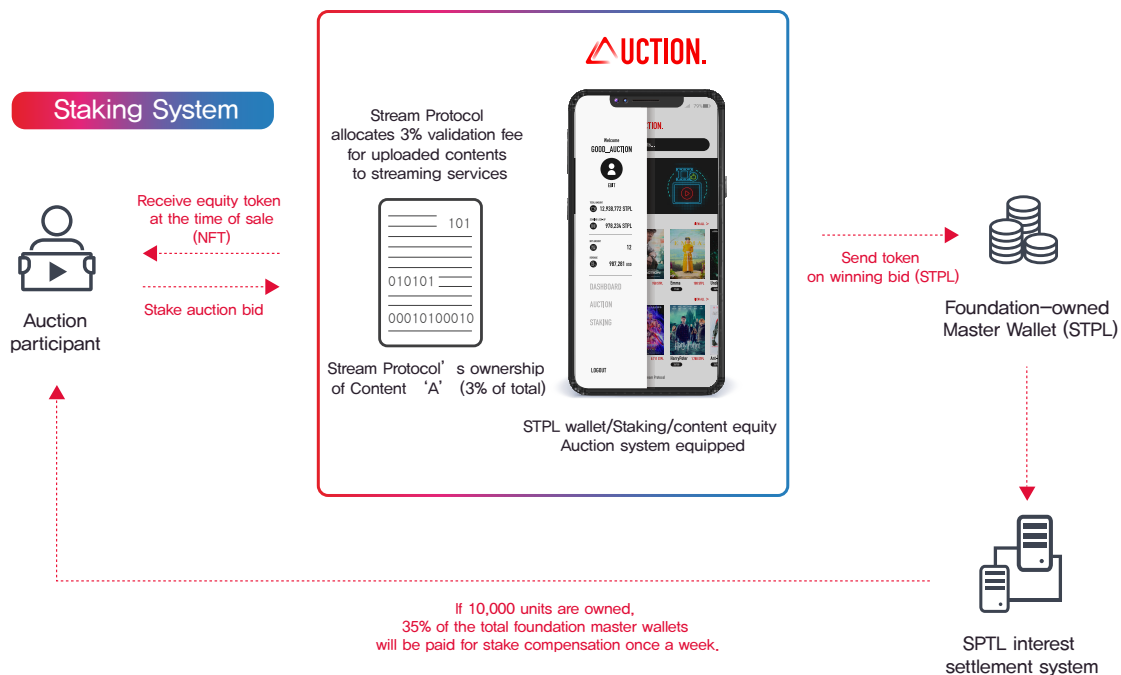
The NFT auction of revenue shares of content registered with STREAM PROTOCOL may only be bidable with STPL token.

Staking

When the Staking system is introduced later, the STPL token will be paid to the STPL holder as interest in proportion to the amount of the holding.

As a reward of watching advertisement

'Klaytn-STPL (Klaytn-STPL) tokens can be received as a reward of review of the contents and survey. The received KSTPL can be converted into a time credit in the streaming service and used for viewing paid content.



9 GENERAL INFORMATION

This “Whitepaper” describes the token economy and token features of STPL. This Whitepaper has no relevance with any kind of guide and shall not be interpreted as a suggestion or investment attraction for any securities or other financial instruments under no jurisdiction. This Whitepaper cannot be revealed or distributed to the United States of America or its citizen (as defined under Regulation S under Securities Act of 1933 as amended). Also, this Whitepaper shall not consist any kind of advice (finance, law, tax, etc.) and shall not be relied upon in regard to decisions to purchase the Token. This Whitepaper was written in accordance with the view and plan of the Company as of the date stated on the cover page. The “Company” shall hold full discretion to revise parts of the Whitepaper from time to time depending on its business orientation. Revised version of the Whitepaper shall be in effect as soon as it is revealed.

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