



OurSong

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Background

OurSong is a new online music community-marketplace initiated and backed by KKBOX GROUP, a digital music entertainment leader in Asia. OurSong aims to accelerate music creation and promote cross-culture, cross-genre collaboration among musicians across the world.

As the digital world evolves, we are witnessing a generational change in societal perception towards content and recognize the need for new mechanisms that better standards for attribution, administration and contribution in content in commercial and public domains, while incentivizing creativity to flourish in the new Information Age.

Through adopting the decentralized nature and technical characteristics of blockchain technology, OurSong proposes a new dimension to the music business. OurSong runs contrary to long standing practices that inhibit the acceleration of innovation, creativity and collaboration as a result of rigid, hierarchically layered processes riddled in non-transparent business practices, copyright management and royalty distribution.

The core concept of OurSong lies in the realization of **Copyright Public Ownership (CPO)**. CPO removes the limit to the number of people who can co-own a piece of music copyright, fundamentally reconstructing the premise of copyright ownership in today's music industry.

For example, imagine the social and economic impact of the current music industry if the copyright of a popular song was shared among 500,000 fans and the song's creator(s). Legacy issues faced in music production, promotion, distribution, copyright management, licensing and transfer would all see constructive disruption.

In today's practice of copyright, the concept of CPO is impossible to realize due to the absence of a universally-recognized tracking and homogenous record-keeping system of copyright ownership and history of transactions. While the technical challenge is hard enough, such a huge endeavor would not be economically feasible. Blockchain technology has the ability to process trust-free agreements and transactions at scale. It also allows automation to regulate the limits and usage of copyrights while guaranteeing creators the usage of their song(s) are accurately attributed and compensated for.

The advent in blockchain technology fosters the feasibility and implementation of CPO while also legitimizing new forms of remixing and adaptation that have emerged in the digital age. What is needed is a well-designed, practical application to incentivize musicians and fans to adopt and work together towards materializing a new "musiconomy".

We believe OurSong strings together the critical pieces of the copyright puzzle with a design that removes barriers of collaboration and innovation and unlocks fair compensation to creators.

We proudly present - OurSong.com, a new online music community-marketplace where creators and fans can share stories of creation and ownerships of songs together, accelerating creativity through collaboration for future generations.

From a fan's point of view, OurSong is a new type of social media service. Through a "News Feed" called STORY, fans can discover the process of creative collaboration. Fans get a glimpse of the song making process, its context, behind-the-scenes perspective, creative progress, and engage in real-time interactions with their favorite musicians by following a STORY. Fans also help boost the audience reach, awareness and engagement of a STORY when posting feedbacks or sharing its link to their friends.

Furthermore, fans can become copyright shareholders by participating in a song's CPO event. If offered, they can buy a percentage portion of the song and enjoy a proportional share of future copyright royalties while providing creators with necessary funding to cover production and marketing resources.

From the creator's viewpoint, OurSong is a "one-stop music business enabling service" that integrates musician networking, collaboration, copyright management, sales distribution, royalty split, fans engagement, crowd-funding and viral marketing services.

OurSong allows creators to raise necessary capital to cover production and marketing resources by enabling them to sell part of their copyright ownership. An individual who purchases part of the copyright may be a fan or any person who supports the creator's dream, even a record company or music publishing agency.

Every change in the ownership structure is logged into Ethereum, creating an immutable record of creation. This is not only transparent but makes copyright, distribution and compensation easy to process at scale. Any form of work done or contribution is validated through smart contracts, allowing creators to focus their time and energy on what matters most: creating great music.

OurSong uses The Muzeum Protocol, published by the KKBOX Group, as an open protocol to enable the establishment of peer-to-peer authorization through a decentralized immutable database in public domain. In the future, developers can use the content generated from OurSong to develop DApps based on the same protocol, thus accelerating the formation of a new global music ecosystem.

I. Features of the Platform

Social Songwriting

OurSong's innovative design allows each song-in-creation to have its own "News Feed" which we call a "STORY." It allows creators of the song to share their song creation journey, inherent ideas, milestones and accomplishments with their fans before a song is officially released. In STORY, the creators can share the song's background and inspiration, behind the scenes, version updates for followers to listen, watch and read about how it came to be. This social media friendly feature makes it such that when a song is done, it would have connected with an audience already, making the promotion much easier. Post-release, it serves as the best source of truth for information pertaining to the song. While credit sleeves may have been as true as the publisher wished it to be, that practice is almost gone and we hope OurSong can become the single source of "truth" for a song's ownership, attributive data and background information.

The Co-creation Ledger

The Co-creation Ledger documents the music creation process from its origination. Whether a project begins with a melody, lyrics, beat, arrangement or idea, it allows creators to log different versions of the sound recording all the way to the completion of the final song master recording. Every creators' contribution is fully and permanently recorded into a transparent and searchable public database. Similar to how software development projects have version controls, music can be developed iteratively and versions can be archived. From its conceptualization to the completion, each version of the song will be recorded on the Bitmark blockchain. Each Bitmark will have its unique digital fingerprint, author and time stamp of the work file, which serves as proof of evidence for its creation should copyright disputes occur.

Reference and Adaptation of Creative Works

Blockchain technology also provides a solution to the use of derivative works in sharing economies because of its transparent features and technical capabilities. OurSong addresses the issue of sampling, referencing and other forms of derivative works in the digital world through a system of attribution and compensation that benefits originators of inspiration and original works.

The above mentioned system allows creator(s) to set a portion of a song's copyright ownership to another song which they have either referenced from

or adapted (for e.g., sampling, remixes) part(s) from as a component of a new song.

A song can also have multiple references and adaptations where all creators will be honored and rewarded with the corresponding royalty splits.

Furthermore, OurSong allows multiple “generations” of inheritances of a song (inspired by Object Oriented Programming in software development) in which the copyright royalty will cascade all the way through generations of “ancestors”. We can also say that the family tree of each song is accurately documented so the entire family members of past, present and future adaptations will receive copyright royalty in perpetuity.

Digital Song Deed (DSD)

In the past, fans showed their love of music and distinctive taste through their personal collection and display of CDs, vinyl, or other physical forms of musical records. But after the rise of digital music consumption, the collection of physical records became less meaningful for fans. In OurSong, the “share” or “ownership” of a song is realized through the issuance of a Copyright Share Token, a digital asset on the Ethereum blockchain. Since ownership of the token is recorded on a blockchain, it cannot be arbitrarily copied and tampered with. However, this record of ownership is stored on a distributed ledger and simply put, a string of numbers on the Internet does not possess the tangible qualities that encourage collectability.

OurSong provides a unique “Digital Song Deed (DSD)”, a dynamic, server-rendered virtual certificate with unique motion graphics generated by a song’s acoustic fingerprint, along with its cover artwork, creators information and Ethereum smart contract address of the Copyright Share Token, visualizes the song’s ownership (ERC20 token rights on Ethereum), providing its bearer with a digitally tangible and social media friendly representation of ownership. Clicking into the DSD also allows viewers to access the song’s STORY, providing a glimpse into its creative process and origination.

Global Digital Distribution Service

With full distribution services to all major digital streaming platforms, OurSong provides creators direct access to the global music marketplace. Creators can set agreed terms and OurSong’s distribution service will ensure every contributor is fairly and promptly compensated.

Copyright Share Token & Copyright Public Ownership (CPO)

At any point during a project, creators' (for e.g., project members) consensus of copyright shareholding structure can be registered. After work is complete, each project member (under the mutual consensus of all members in a project) will receive a "Copyright Share Token" on the Ethereum blockchain according to the agreement.

OurSong allows project owners, under the consent of all other copyright shareholders of a song, to apply for listing a song's copyright on OurX, OurSong's designated online marketplace. Once approved, the song will be eligible for Copyright Public Ownership (CPO) and its copyright shareholders will be able to freely sell their shares on OurX. The song's copyright shares will then be able to be traded in public. Fans can buy copyright shares to show support and earn future copyright royalties.

CPO changes the dynamics between fans and creators. Imagine opening like your own restaurant and inviting all your friends to dine there. The more they consume, the more you earn. Win-win. The copyright royalties will motivate fans to support their "own song" creating a new form of "viral marketing".

Smart Revenue Sharing

The use of "Copyright Share Token" transaction records on Ethereum greatly simplifies and shortens the process of complicated legacy royalty calculation and distribution allowing a song to have say, a thousand owners, with the occurrence of continuous change in ownership structure, without disruption to efficiency.

II. Business Models

Copyright Public Ownership (CPO) Enabling Service

OurSong will help copyright shareholders enable the listing of a song on OurX for a nominal service fee.

Copyright Shares Trading Marketplace (The “OurX” Exchange)

Owners of Copyright Share Tokens can privately sell or transfer ownership to others. However, when a Copyright Share Token owner chooses to trade copyright shares on OurX, OurSong will charge a service fee for the facilitation of this transaction.

Content and Copyright Royalty Distribution Services

OurSong has privileged access to KKBOX Group's Soundscape music distribution platform which provides global digital distribution services to Spotify, Apple Music, KKBOX and an increasing list of the world's major music streaming platforms. With such privileged access, music content on OurSong also gets the most favorable service terms on Soundscape's content distribution fee. After a song is released, OurSong's copyright royalty distribution service can process the royalties collected from not only the Soundscape platform, but also from other sources of royalty collection organizations or individuals and distribute it to the corresponding Copyright Share Token owners. OurSong's Copyright Royalty Distribution Service will charge a transaction fee for the facilitation of royalty distribution.

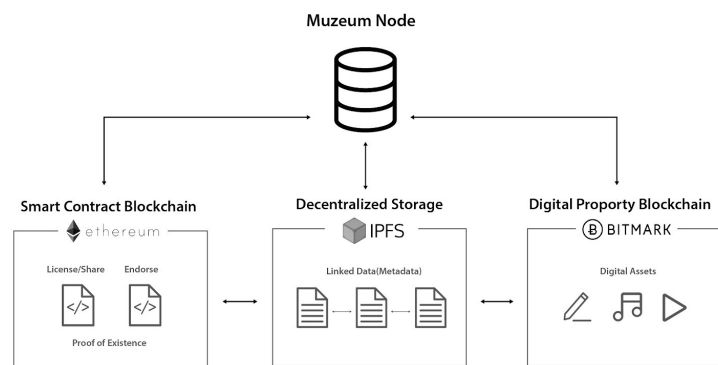
Professional Service Online Marketplace

In the future, OurSong plans to launch an online marketplace for creative professionals to buy and sell merchandise and offer professional services. Creators can develop and sell their own-branded merchandises, used collectibles and offer a host of professional services (for e.g., mixing, mastering, video production, equipment rental, session work-for-hire, consulting, music performance tickets, etc.) online. Service providers can price their merchandise and/or services in fiat currency or OurCoin equivalent. (Service fee applicable.)

III. Technical Structure

OurSong uses The Muzeum Protocol developed by KKBOX Group as the underlying technological architecture.

The Muzeum Protocol is a open-source public domain framework built upon blockchain-based decentralized databases that supports “collaborative honoring”, a system where creators’ consensus of collaborative contributions and compensation and terms for further exploitation of their works are documented and can be accessed on the open Internet through the use of smart contracts.



3.0 Architecture Overview

- Smart Contract Platform
 - Ethereum blockchain
 - Copyright Share Token
 - Endorsement Smart Contract
- Digital Assets Management
 - Bitmark blockchain
- Public Domain Open Database (distributed storage and standardized open data)
 - [IPFS InterPlanetary File System](#)
 - [LCC Framework](#)
 - [JSON-LD](#)
 - [schema.org](#)
 - [Coala IP](#)

3.1 Ethereum blockchain Smart Contract Platform:

Ethereum

The Ethereum blockchain will be used to generate smart contracts for licensing, ownership validation and copyright share distribution agreements.

Copyright Share Token

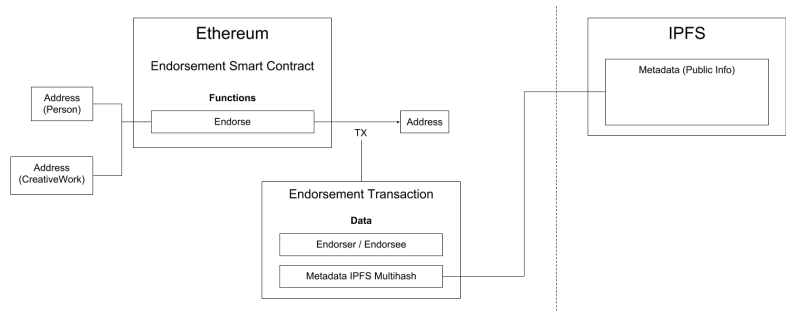
OurSong's Copyright Share uses the Ethereum blockchain ERC20 Token standard smart contract. The default amount of shares of each copyright is 1,000,000. The amount of shares of each copyright can be set by the creators between 10000 to a million. The naming rule of the Token Symbol is: OS<song_id> (for e.g., OS1, OS777, OS98765... etc.)

A project owner, with unanimous approval from all other copyright shareholders in a song, can decide to sell shares of the song to be sold public on OurX. The detailed listing procedure for songs on OurX will be disclosed in updated versions of this whitepaper so please do check in at a later date for more information.

OurSong will monitor and track all transactions of Copyright Share Tokens on Ethereum and use its latest snapshot to determine the most updated distribution of copyright ownership status for the accurate calculation and distribution of the corresponding royalty payments (revenue splits).

Endorsement Smart Contract

Every creator in OurSong can use the Endorsement Smart Contract to endorse other creators and a owner of the Creative Work Smart Contract can also endorse contributors (for e.g., graphic designers, video producers, photographers, etc.) to a project. Educational institutions and certifying agencies can also use it to issue and document certifications. The endorsement information will be stored in IPFS as linked-data and its IPFS address will be recorded in Endorsement Transaction as an immutable record on the blockchain.



(Picture) Endorsement smart contract architecture

Contingency Plan

In the event which the usage of Ethereum blockchain becomes too crowded and its scalability issues cannot be resolved in the foreseeable future, OurSong's service quality may be impacted with more frequent delays during copyright transactions. In order to maintain OurSong's smooth operation and quality of service, it is possible that we will migrate our service to another smart contract blockchain.

3.2 Digital asset management: Bitmark blockchain

OurSong uses Bitmark blockchains to manage ownership and the encryption of files.

The Bitmark blockchain records ownership and transaction history of digital assets. Each digital asset has a unique fingerprint on the Bitmark blockchain, and each digital asset can be republished with multiple Bitmarks with each having a unique Bitmark ID. In the Muzeum Protocol, each creative work is treated as an asset and will be recorded on the Bitmark blockchain and each time a license is issued, a new Bitmark will be issued and the ownership of the Bitmark will be transferred to the authorized person. After receiving the Bitmark, the authorized person will have access to the asset file. (The transfer here represents the transfer of digital assets and has nothing to do with the transfer of copyright.)

3.3 IPFS distributed storage and linked-data

OurSong uses the Interplanetary File System (IPFS) as the protocol for distributed storage. IPFS is an open protocol that allows files to be distributed and stored across all nodes of the network, thus data will not be lost due to hosting server failures, providing a robust storage infrastructure. With IPFS's openness, it is ideal as an open database in conjunction with blockchain-based applications.

Museum adopts part of the Coala IP protocol concept, using the Rights Reference Model (RCC) proposed by the Linked Content Coalition (LCC) and implements JSON-LD as well as the semantic definitions of schema.org for the purpose of establishing an open semantic network.

To make metadata mutable, Museum publishes IPFS content to the IPNS namespace. The latest version of metadata on IPFS can be accessed with the same IPNS URL. This preserves flexibility for change of data while maintaining the requirement of data openness.

Digital Assets Security Control

Additional security for the private keys that managing digital assets such as Copyright Share Token and OurCoin will be provided based on multi-sig schemes. Key recovery services based on Shamir Secret Sharing will also be available. As an example, the OurSong management team will partner with third-party (non-custodian) key services that can store key shares for recovery. The recovery process will also take in account estate planning so that situations like death can be handled gracefully.

IV. OurCoin - OurSong's Own Virtual Currency

A standard aspect of today's online gaming culture is the use of digital currency in exchange for tokens, items, or materials that assist players throughout gaming universes. Similarly, we would like to comprise a dedicated, diverse and dynamic culture where creators and fans are engaged in sharing their passions and resources. As such, we've designed OurCoin, our own unified virtual currency as an integral part of the OurSong community.

OurCoin (OUR) is a non-inflationary blockchain virtual currency used by the OurSong platform based on Ethereum's ERC20 Token Standard. The initial issuance amount will be set at 300,000,000. OurCoin is created out of the need to facilitate healthy economic growth and activities within the OurSong community. We realized to achieve this, we will need to implement a monetary policy to expand currency supply relative to the volume of users and economic activities on the platform, preventing speculative possession and trading that may cause abnormal fluctuations in price stability, thus making OurCoin favorable for day to day transactions.

Positive Economic Impact - OurCoin as a Trading Utility

OurCoin is designed to become more popular as time progress because of its speed and cost. Users (Creators and Fans) can transfer and receive funds at a fraction of fiat currency transfer time. OurCoin is used to streamline the process of Copyright Share Token trading on OurX. These transactions include payment for the purchase of tangible or intangible merchandises, activities and professional services available across OurSong's marketplace. We will also use OurCoin as the primary currency for other related applications developed out of the OurSong architecture in the future. Transactions in OurCoin will receive a discounted service and transaction fees among other benefits to be disclosed in the future.

Positive Social and Psychological Impact - OurCoin as a Incentive Reward

Psychological and social impacts of OurCoin on OurSong's collaborative culture are inextricably linked to the above described economic impacts. There are many positive social and psychological influences that can be supported with the introduction of OurCoin. Creator and fan behavior is influenced by many factors including motivation, culture, and social

economics. OurCoin incentivizes creators and fans to share information, socialize and build relationships with others. In the future, it will eventually influence users' creativity in the form of individualized personas and ultimately building the OurSong cultural awareness. This will give users a sense of escapism, advancement, and challenge of scouting good opportunities in creativity. In many ways, OurSong is an online community that is as entertaining as it is educational. OurCoin offers more incentive for users to promote our culture and recruit new users to join the OurSong community as well providing fulfillment for investing their time and money in fostering music creation. These social and psychological impacts provides many possible beneficial outcomes for creators, fans, and the OurSong community. With more satisfied creators and fans collaborating with each other while simultaneously learning, spending, and socializing, the benefits of OurCoin are clear.

Creator's Gratuity

Among the usages of OurCoin that we will implement to make positive social and psychological impact on the OurSong community, the first and foremost is the design of Creator's Gratuity. In the beginning of every year, a predetermined amount of OurCoins will be rewarded to copyright shareholders who receive copyright royalty through OurSong's copyright royalty distribution service as rewards for their contribution to the creation of content on OurSong community.

We plan to allocate a minimal amount of of 1,250,000 OurCoin grants every 3 months for the next 20 years. A copyright shareholder will receive his share of Creator's Gratuity, calculated directly proportional to the amount of his/her share of copyright royalty of a given period (as shown in the following table) every three months.

For example, if a Copyright Shareholder "A" has ownership in N copyrights and the quarterly allocation of total Creator's Gratuity is 1,250,000 OurCoins, his quarterly Creator's Gratuity can be calculated as follow:

$$A's \text{ Creator's Gratuity} = \frac{\sum_{i=1}^N (\text{Royalty of } COPYRIGHT_i) \times (A's \text{ ownership \% in } COPYRIGHT_i)}{\text{Total Royalty Distributed by OurSong}} \times 1,250,000$$

Fan Airdrop

One tenth (10%) of the initial amount of OurCoin (i.e. 30,000,000) will be reserved for future airdrops to expand the size of the OurSong community. Each newly registered user is eligible to receive a small amount of OurCoin after being authenticated. Additional OurCoin will also be given based on the user's contribution to the community.

OurCoin in the Future

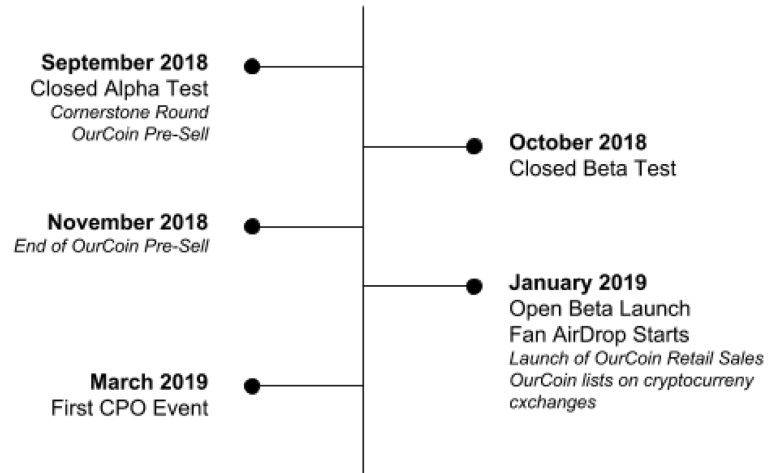
It is possible that products and services priced in OurCoin become widespread as OurSong community grows and begins to function like a fiat currency. In the future, all digital currencies will likely be forced to develop and adapt within the larger financial and regulatory frameworks.

Led by the massive global gaming industry, virtual currency has been one of the biggest innovations in finance in 500 years. The gaming industry alone is expected to be a \$160 billion market in 2020. With such massive turnover and anonymity, the virtual currency culture will surely spread to other forms of online entertainment communities like OurSong. It can be expected that OurSong will also be a part of the fintech industries and may become targets of regulators, tax authorities and law enforcement. OurCoin will need to offer stability and security to users to drive revenue growth and loyalty.

In addition, OurSong will need to carefully balance the requirements of government and society with the needs of our users to avoid costly regulation and reputational damage. Once these concerns are addressed, we can expect to see the popularization of OurCoin in both the entertainment and finance sectors.

Note: We reserve the right to use the Company Reserve in order to prevent hyperinflation of OurCoin from jeopardizing our musiconomy. (for e.g., Irregular increase in speculative investments, lack of economic generation, etc.). In such situations, we might adjust OurCoin's value to a price that can be justified by our economic size.

V. Roadmap



VI. Conclusion

Technology is literally “rewriting” music. With collaboration at an all time high, there is an acceleration of hybrid crossovers, covers, remixing and originality driving a mashup of genres, cultures and trends. We are living in a collaborative renaissance but the ability to monetize our efforts do not exist. OurSong presents a once in a generation opportunity to create a new dimension for innovation and collaboration void of legacy restrictive practices from the music businesses. It allows for new creative opportunities to be discovered while simultaneously updating a copyright architecture inherited from the Industrial Age. By rewriting the rules of musicnomics for the Digital Age, future generations stand to benefit most from this democratization of creativity and collaboration.

Welcome to OurSong, a musicconomy for us, by us.