MODA Protocol

Web3 music protocol

Progressive decentralization of digital music distribution and monetisation

Litepaper

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Abstract

MODA Protocol is the maturation of MODA DAO - an initiative aimed at reshaping the music industry, providing a more efficient framework for music distribution and monetization. It harnesses the capabilities of Web3 technology to foster meaningful connections between artists and their fanbase.

MODA Protocol adopts a structure that promotes community engagement through decentralized autonomous organization (DAO) governance while making use of a range of decentralized storage technologies, such as IPFS (InterPlanetary File System). Additionally, it offers an optional on-chain audio fingerprinting feature to safeguard copyright protection.

The revenue generated within the MODA Protocol is from various sources, derived from the repayment of project launch loans and revenue-sharing fees accrued from sales, trades, and distribution on newly launched platforms operating through the protocol. These funds are automatically directed to the protocol and distributed according to DAO governance structures.

The $MODA token serves as a key incentive mechanism, stimulating user participation within the network, aligning incentives, reducing developer fees, and granting access to specific platform features. Furthermore, NFT (Non-Fungible Token) standards are employed to facilitate unique digital ownership of musical assets.

There are more than 200 million songs online today, and with a surge in music production democratization via software, gaming and AI we could be headed towards billions of tracks in the coming years. Streaming revenue is set to grow 10-fold in the next decade, and with over 250 music streaming apps and digital download stores around the world, an enormous opportunity exists to streamline storage and data delivery services providing cost efficiency, accuracy, more value for creators and healthy profits. Decentralized storage and computation networks are set to become 100% green in 2024, offering storage at half the cost of Amazon S3.

This music storage, data-management and delivery opportunity represents an annual revenue opportunity surpassing $1 Billion USD every year.

1.Overview / Background

1.1 Background

Established in 2021, MODA DAO set out with the vision of revolutionizing the intersection of music and emerging Web3 technology, particularly within the context of the music industry. Addressing critical issues such as the lack of control and equitable compensation mechanisms, MODA DAO originally conceived a decentralized ecosystem that aimed to foster direct interaction among artists, labels, and fans, eliminating intermediaries.

However, it soon became apparent that a more robust approach was needed, focusing not only on community unity and integration but also on product utility and commercial potential.

Emerging from this need, the MODA Protocol builds upon the accumulated knowledge and insights gained from MODA DAO's journey, including valuable experiences from partner projects like emanate.live and business collaborations such as AYITA and mau5trap seven20, along with grant recipients such as Sokan Games.

Essentially designed as an evolution of its predecessor, the MODA Protocol capitalizes on the opportunities presented by Web3 technology to transform existing music distribution and sales practices. With features like decentralized storage, on-chain audio fingerprinting, meta-data standard and revenue generation through distribution fees, it stands poised to usher in a significant paradigm shift in the industry.

1.2 Overview

The MODA Protocol operates as a distributed technology network, governed by token holders and guided by DAO-like principles. It empowers stakeholders, including artists, DJs, managers, and labels, to regain control over their digital music assets and related collectibles, promoting fairness, transparency, and security. The protocol leverages various Web3 technologies to create a platform that eliminates intermediaries, facilitating direct engagement between artists and fans.

On top of MODA, projects can build either completely user-friendly Web2.0 style experiences, or fully degenerate decentralized applications.

Governance within the MODA Protocol continues to be community-driven, with $MODA token holders actively participating in decisions related to fee allocations and feature enhancements, ensuring an equitable say in shaping the platform's future trajectory.

In addition to serving as a distribution hub, the MODA Protocol also supports NFT standards, allowing artists and labels to create unique and valuable digital assets that can be directly sold to their fanbase.

2. Project Framework

The MODA Protocol leverages innovative technology to create a more decentralized, open, autonomous, and transparent environment for music distribution.

2.1. $MODA Token:

Central to the MODA Protocol is the $MODA token, serving as the native currency within the ecosystem. This token incentivizes network participants, rewards contributors for their efforts, and plays a crucial role in the platform's governance structure and economic model.

2.2. NFT Standards:

Additionally, the platform incorporates new NFT standards based on the Music3 framework of MODA DAO. These standards empower users to create and sell their music as verifiable, exclusive, or scarce digital assets, opening up new revenue streams and fostering relationships between artists, labels, and fans.

2.3. Smart Contracts:

The MODA Protocol relies on a network of interlinked cross-chain smart contracts primarily developed under MODA DAO, which are already operational on the Ethereum mainnet. These contracts form a critical part of the MODA Protocol's infrastructure.

2.3.1. EVM Index

To seamlessly connect with various blockchain networks, including Ethereum and its Layer 2 scaling solutions, the MODA Protocol utilizes an EVM index. This index facilitates faster transaction processing while reducing fees associated with on-chain activities. An automated numerical value, such as 'MODA-1-1-10,' has been established through a new contract component known as the MODA ID system.

2.3.2. Catalog (formerly Fingerprint Contract)

One notable feature of the protocol is its on-chain audio fingerprinting technology, which enables automatic identification and tracking of copyrighted content. This feature ensures better protection for artists and fair compensation for their creative work. While previously mandatory, this aspect will now be optional, reducing entry barriers and costs. Songs lacking fingerprints will be registered using IPFS Hash derived from track metadata and audio file binary code. Rules within each registry, owned by developers or business partners utilizing the protocol, can define token staking levels, influencing behavior and ecosystem fees.

2.3.3. Releases Contract

The platform includes an artist release contract that streamlines the process of releasing music on the platform, providing clear guidelines regarding distribution, royalties, and intellectual property rights. Several such contracts are live on the Ethereum chain, as exemplified by this one for mau5trap: [Link to contract on etherscan].

2.3.4. Release

Within the context of the MODA Protocol, a release refers to any track or album made available for streaming, downloading, or purchasing. Each release contains unique audio fingerprint metadata, with specific contracts detailing terms of payment and distribution, securely stored via IPFS. New types of releases can be determined by MODA or launched by ecosystem developers.

2.3.5. MODA Registry

The MODA Registry is a top level contract that serves as an index for many Catalogs and contains artist profile information. Catalogs must be registered to be part of the MODA ecosystem. This contract also allows artists to assign "Manager" roles to enable managers and labels to act on behalf of the artist for any other contract.
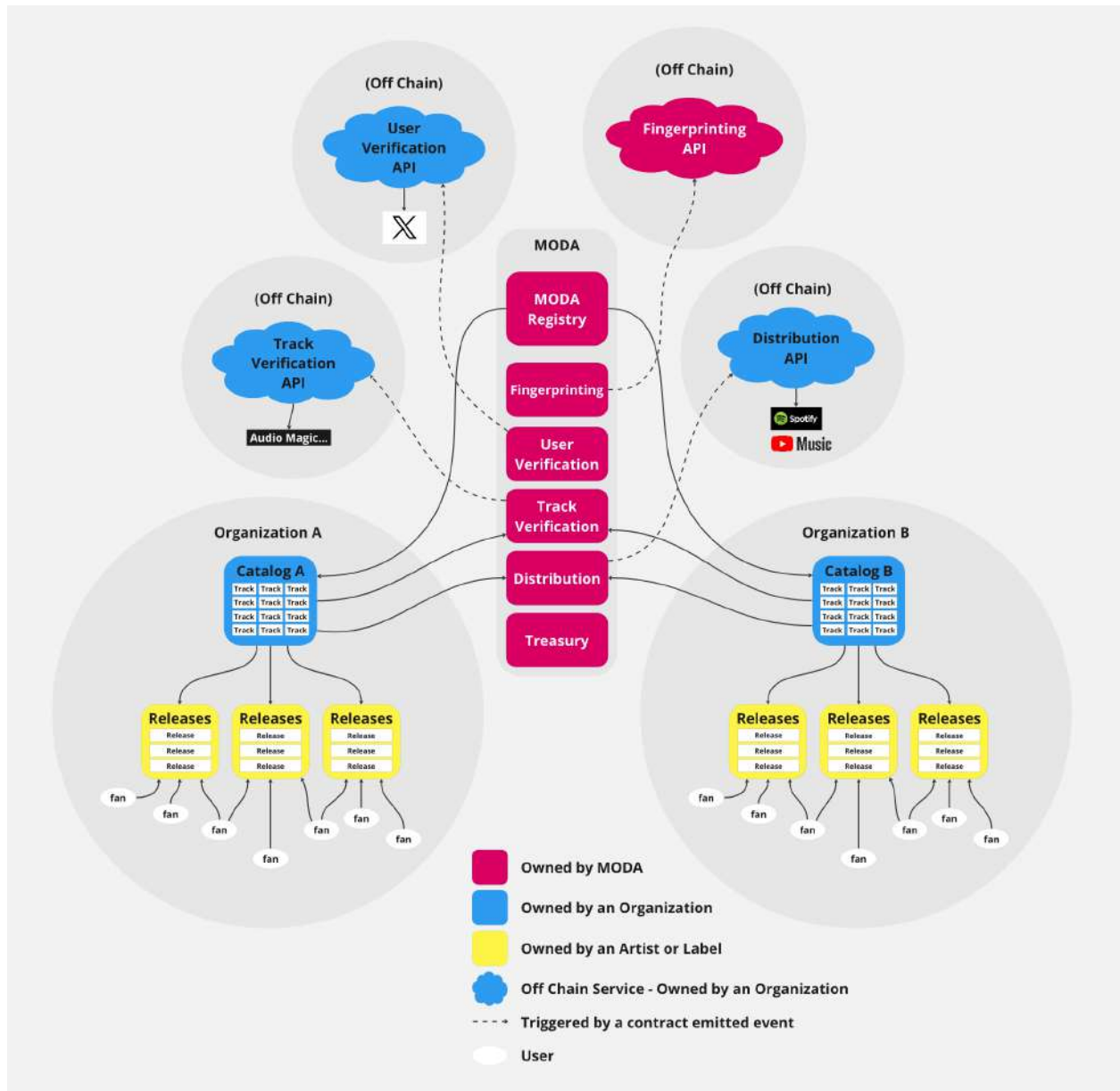
2.4. Metadata:

Metadata plays a pivotal role in accurate music identification and efficient distribution, as elaborated in the original MODA DAO Music3 Whitepaper. This metadata includes track titles, artist names, album titles, genre, record label information, and other critical details, aligning with DDEX standards.

2.5. IPFS:

The InterPlanetary File System (IPFS) serves as the platform's choice for secure and decentralized digital file storage, ensuring data availability even if certain network nodes go offline. This characteristic makes IPFS an ideal solution for decentralized music distribution.

Protocol Labs, Filecoin and its partners have several new cold storage, warm storage, CDN and compute products launching in 2024 and all of these will be explored and considered.

2.6. Private Storage:

In addition to public storage options, the protocol supports private storage, enabling artists and labels to exercise full control over their content while harnessing the platform's capabilities.

2.7. Metaverse Music:

MODA DAO has been at the forefront of introducing industry-friendly metaverse music licensing and performance standards, both at the community and professional levels. This initiative is manifested through live events hosted in the custom-built V3RSE nightclub. The ongoing work encompasses the development of new fair payment systems, distribution mechanisms, and licensing arrangements tailored for virtual environments.

3. Tokenomics and Network Revenue:

The $MODA token continues to play a central role within the MODA Protocol ecosystem. It serves as the native cryptocurrency facilitating transactions on the platform, with burnt tokens being permanently removed from circulation. Beyond transactional utility, the $MODA token also operates as a governance token, granting users rewards for contributions, such as content provision, moderation, and participation in the governance process.

Music businesses adopting the MODA Protocol have the opportunity to reduce transaction fees by accumulating $MODA tokens, thus aligning incentives with more valuable contributors within the ecosystem. The fee structure is as follows:

- 500 MODA tokens held = 5% fee
- 3,000 MODA tokens held = 3% fee
- 25,000 MODA tokens held = 2.5% fee
- 100,000 MODA tokens held = 1% fee
- 250,000 MODA tokens held = 0.25% fee

An organization functioning in a DAO-like manner, assumes the governance of the protocol. It oversees development, policy-setting, and decision-making regarding upgrades, with a commitment to preserving the protocol's DAO roots, decentralizing decision-making, and upholding democratic ethics, recognizing the community's pivotal role in mission success.

To effectively manage supply and demand dynamics of the $MODA token, a buy-burn mechanism will be implemented. This mechanism involves burning a portion of supply paid using $MODA, thereby reducing the total token supply and promoting value retention over time, while also incentivizing network participants.

Network revenue within the MODA Protocol comprises distribution fees, subscription fees, and transaction fees charged for contract usage. These mechanisms ensure equitable value sharing among artists, labels, and other stakeholders, enhancing the overall sustainability of the ecosystem.

4.1.1. Example Distribution Revenue Flow:

To illustrate the revenue flow, let's consider an example: a Kx5 music track titled 'Escape' was released in March 2022 and garnered approximately 67 million streams on Spotify in the first year, equivalent to around $159,000 USD. Within the MODA Protocol's 1% revenue model, this single song would generate $1,590 in protocol revenue.

Out of this revenue:

- 60% is used to buy $MODA tokens ($954), which are used as follows:
  - Burned
  - Added to grants
  - Added to liquidity
- 40% is held as ETH for the following:
  - Adding to the Grants Pool ($190.8)
  - Adding to the MODA DAO Treasury ($190.8)
  - Adding liquidity ($238.5)

From this one track, we see the potential to not only save artists and labels money, but to generate protocol revenue. Now imagine 200 million tracks in 2023 and with AI derivatives and generative music booming, we will soon hit 1 Billion Songs in distribution globally.

Given the potential to power multiple new distribution businesses, the MODA Protocol opens up significant external revenue opportunities.

4.1.2. Example Subscription Revenue Flow:

Suppose a new Web3 streaming and NFT trading platform is launched using the MODA Protocol, charging its users $10 per month as subscription fees. Holding the minimum amount of $MODA, in this scenario, $0.50 USD per user per month is sent trustlessly to MODA. or $50,000 per month if they hit 100,000 subscribers.

4.1.3. Example NFT Sales and Trading Fees:

Continuing with our example, this new Web3 platform sells over $1 million worth of Music NFTs in its first year, charging a 5% fee for each sale. Out of this 5% ($50,000), 5% is directed to MODA, amounting to $2,500.

4.5. Token Allocations and Vesting:

The $MODA token allocation and vesting schedule, defined in 2021, ensures a fair and sustainable distribution of tokens. The team's tokens are vested over time, and a portion is reserved for community and ecosystem development.

With the project's relaunch, stakeholders have extended their vesting as follows:

- Angel Investors, Teams, and Partners: Extended vesting from 3 years to 5 years (ending December 1, 2026).

4. Blockchains

5.1. Ethereum:

Built on the robust foundation of Ethereum, the MODA Protocol maintains EVM (Ethereum Virtual Machine) neutrality, benefitting from Ethereum's reputation as a durable and well-established blockchain system for decentralized applications (dApps). Ethereum's open-source nature facilitates seamless interaction with smart contract features, extensively employed within the MODA Protocol's framework.

Additionally, Ethereum's extensive developer community and thriving ecosystem make it an excellent choice for dApps catering to the music industry. Efforts are underway to address scalability issues through solutions like Layer 2 scaling and EVM enhancements, promising improved performance and cost-effectiveness.

Developers have the flexibility to choose their preferred EVM chain when deploying MODA contracts, ensuring adaptability to different blockchain networks.

5.2. Scaling and Selection of Protocols:

The MODA Protocol focuses on scaling through Layer 2 solutions, with a particular emphasis on Polygon and mainnet Ethereum. These selections are driven by market expansion opportunities, comprehensive third-party support, low gas fees, and the mature NFT infrastructure necessary for MODA Protocol's musical platforms based on NFTs.

While other Layer 2 solutions like Optimism, Arbitrum, zkRollups, and ZKSync offer significant cost and scalability improvements, they currently lack maturity in terms of NFT ecosystems and exhibit varying efficiency rates and gas expenses. As these Layer 2 ecosystems mature further, the protocol remains open to potential integrations that align with its requirements.

MODA Protocol remains EVM agnostic, and will support developers from any ecosystem to deploy.

5.3. Scalability via Agnostic Approach Towards EVM:

Recognizing the imperative need for scalability, the MODA Protocol adopts an agnostic stance towards EVM, allowing for deployment across diverse blockchains such as Polygon, Optimism, Base Network and Avalanche, among others. This approach optimizes transaction confirmation speeds while reducing associated fees, ultimately enhancing scalability metrics and improving user experiences.

5.4. Integration of EVM Index:

The MODA Protocol facilitates the integration of new EVM ecosystems through the initiation of an index contract for the EVM. This index acts as a gateway, permitting the integration of official smart contracts from various EVM ecosystems, ensuring scalability and integrity by leveraging existing infrastructure within different EVM ecosystems.

5.Applications, Platforms & dApps

The MODA Protocol actively encourages dApps to build on its framework, utilizing open-source components such as artist release contracts and metadata management, alongside audio fingerprinting services. These dApps can contribute to ecosystem growth by offering revenue-generating services, including access to music catalogues.

Developers leveraging their tokens in dApps are required to provide an airdrop targeting $MODA token holders during the network launch, incentivizing adoption rates among developers working on dApp projects. This fosters stronger communities around these protocols, subjecting each project to grant submissions and online proposal voting.

As the MODA Protocol expands across more EVM-based ecosystems, opportunities for decentralized applications (dApps) to positively contribute to protocol growth increase due to seamless integration capabilities afforded by cross-chain support facilitated by Moda's indexing contract relating to EVM, thereby expanding the reach of the protocol significantly. This expansion presents the potential for increased collaboration with other blockchain-based music projects.

6. Auto-Repayable Launch Loans

To support scaling across diverse genres, catalogs, and geographies, Web3 music developers receive assistance when launching products through the MODA Protocol. Partners can choose to utilize native tokens as a funding mechanism for governance and overall growth initiatives. The tokenomics framework revolves around repayable loans, which are repaid threefold through initial loan amounts via sell tax revenues.

For instance, consider a scenario where a new NFT marketplace is launched on the MODA Protocol, receiving $25,000 as grants for developers. The repayment of this amount could be achieved through daily trading volumes amounting to just $5,000, with a 2.5% sell tax. This repayment structure results in repayment to MODA three times over a duration of four months.

Once repaid, the generated project revenue can be allocated for further project development and marketing initiatives. We call these tokens Launch Bonds, and a separate Launch Bonds paper will be released soon.

7. Moat

To establish a robust network effect, the MODA Protocol introduces several moats designed to incentivize participation from DJs, labels, artists, and other stakeholders.

One such moat involves the NFTs with audio fingerprints, providing immutable records for music distribution while preserving ownership rights, a unique feature compared to traditional platforms.

Another significant aspect of these moats is access to extensive musical catalogs, where participation in the MODA ecosystem offers opportunities for collaboration between creators.

Additional incentives within these primary moats include governance rights, revenue-sharing models, and support for new projects built on existing infrastructure, including dApps. These incentives promote adoption, leading to the creation of vibrant and self-sustaining communities that contribute positively to the evolution of the music industry.

8. Content / Licensing / Catalogs:

The MODA Protocol is engineered to manage various types of digital music content, whether it belongs to an artist, a record company, or an independent distributor. While dApps developed on the MODA Protocol have the flexibility to integrate their own content, they are required to use essential watermarking and fingerprinting APIs to validate and track content across the network, services similar to those offered by Audible Magic.

In addition to individual content, MODA Protocol core contributors are actively working towards securing organisational partners with bulk catalog licenses at an industry level. This endeavor involves negotiations with major record companies and independent distributors, along with collaborations with existing entities in the music industry. The ultimate goal is to establish a consolidated platform for licensing and distribution, making extensive catalog access effortless for dApps and developers.

By facilitating seamless access to a diverse range of music genres, the MODA Protocol offers compelling incentives for developers and users alike, fostering active participation within the network. Furthermore, audio fingerprinting and NFTs serve as verification tools to ensure security and transparency, thereby boosting growth within the ecosystem.

9. Roadmap

2021 - Q2 2023 (Milestones already reached within MODA DAO):

- Token introduction
- DAO Governance
- NFT standards
- Audio Fingerprinting
- Launch Virtual Nightclub

Q3 2023 - Planning & launch phase under MODA protocol

Q4 2023:

- Open-source current repositories under MODA V1
- Ecosystem grants & Developer recruitment
- MODA Studio contracts

Q1 2024:

- First version release: UI under Moda studio
- Initiate buy & burn mechanism
- Token re-launch (TBC)

Q2 2024:

- Release audio fingerprinting & watermarking APIs
- Begin large-scale catalog licensing at industrial levels

Q3 2024: Start building infrastructure for comprehensive on-chain distribution toolkits

2025:

- Introduce EVM index contract while integrating new EVM ecosystems
- Incentivize development of dApps & creation of content
- Implement distribution fees as protocol revenue

Ongoing:

- Decrease operational costs & enhance automation
- Seek out collaborations with other music industry stakeholders
- Continuous improvement and updates to protocol features & capabilities

10. Future Vision

The ultimate vision for the MODA Protocol is to create a fully decentralized musical ecosystem that redefines how various stakeholders within the music industry engage. At its core, the protocol empowers artists to release their creations on platforms powered by MODA, where each release is represented as a unique audio-fingerprinted NFT.

These NFTs contain all the metadata necessary for tracking a song, ensuring that revenues are distributed immediately to the rightful owners, eliminating intermediaries such as performance rights organizations (PROs). Distribution revenue can also be routed to the same parties, along with synchronization fees.

DJs could have exclusive access to tracks playable only when the corresponding NFT is owned. This arrangement leads to real-time reporting and payments flowing back to record producers and songwriters, providing an additional incentive for fans to acquire these NFTs, thereby boosting artist earnings.

To ensure sampled songs receive fair compensation, algorithms based on audio fingerprinting systems could be implemented. This approach ensures equitable rewards for all contributors involved in the creation of music.

In the future envisioned by the MODA Protocol, all songs may be hosted on a distributed network, allowing streaming platforms to bid for desired music, dynamically pulling tracks into apps as needed. This efficient method of music distribution maintains necessary revenue streams for artists while making music more readily available to audiences.

The overall view embodied by the MODA Protocol aims to create a transparent, equitable, and accessible platform that revolutionizes the way we perceive the release of new music. It envisions a future where artists have greater control over their work, audiences have more direct access to music, and intermediaries are minimized, leading to a music industry that is fairer, more efficient, and more artist-centric.

The MODA Protocol represents a significant step towards realizing this vision, leveraging cutting-edge technology, decentralized governance, and innovative economic models to empower artists, labels, DJs, and fans alike. Through its commitment to Web3 principles, the protocol seeks to usher in a new era of music distribution and monetization that benefits all stakeholders in the music industry.

With its roadmap, ongoing development efforts, and dedication to fostering a thriving ecosystem, the MODA Protocol is poised to make a substantial impact on the music industry, ensuring that it remains relevant and adaptive in an increasingly digital and decentralized world. As it continues to evolve and grow, the MODA Protocol holds the potential to reshape the music

industry landscape and provide a more equitable and efficient platform for the distribution and monetization of music.

Ultimately, with the Web3 Music Launchpad approach, MODA Protocol could eventually aggregate all of the music that has come from the launched projects and start to build a digital music distribution, sales and streaming platform that could rival soundcloud or even Spotify.

When we examine the global musical footprint across all genres and all geographies there is no one platform or protocol that offers access to a truly global catalogue of sounds.

MODA Protocol leverages substantial existing work from MODA DAO and its partners, combining technology, innovation, and a commitment to fairness to bring about transformative change in the music industry. MODA Protocol's vision for a decentralized musical ecosystem, empowered artists, and transparent revenue sharing represents a promising future for the world of music.