

A Decentralized Protocol for Musicians



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Abstract

In 2020, the total revenue of the recorded music industry amounted to 23.1 billion U.S. dollars. Streaming made up 56% of this figure, bringing in 11.9 billion dollars globally with less than 12% distributed to artists. To further contrast this stark inadequacy, during the NBA 2019/20 season, players were paid more than 50% of the league revenue.

In order to tackle this problem and other concerning issues for musicians, Tamago, a decentralized music streaming NFT Hybrid built on the NEAR public blockchain, is stepping into play.

Tamago offers a fresh new type of streaming platform powered by decentral NFT Hybrid technology which returns **exciting streaming revenues back to the artist** in which artists can earn strikingly higher revenue than giant competitors such as Spotify, including the ability to customize your own *price-per-stream*.

Tamago's platform will offer **100 percent streaming revenue back** to the artist with special patron supported pools while demonstrating the power of a scalable modern web3 model to serve artists world wide without gatekeeping or bias.

The platform is designed as a bridge that cuts out the intermediary through decentralization and community power between the music and the listeners. Tamago is the Spotify killer.

Tamago Key Protocol fundamentals:

1. Community driven token economy (\$TAMAGO) fuelled by Tamago's unique music streaming / NFT hybrid platform.
2. Decentralized audio storage with safe key management encryption for content protection.
3. Artists are paid per stream via an NFT/IPFS dataset meets patreon model
4. A Featured Search protocol for fairly querying audio and metadata.
5. Fans earn rewards for listening and popular playlists through a streaming paid-for-play model.
6. Decentralized governance for artists, developers and fans to share in important decision making and upgrades.
7. Transparent ledger for viewing shared audio and metadata.

Tamago focuses on education and cultural awareness to onboard the largely untapped independent arts and local communities all over the world into the NEAR and blockchain space with high quality international music evenst. The platform aims to test the current deficient status quo and serve as a voice and token for the artists, by the artists, and eliminate all intermediaries.

Simplicity and ease is the driving force for the Tamago model. Consider Soundcloud in its very first version, stripping the advertisements and powering the streaming and monetization on the NEAR blockchain. The

extraordinary benefit of building Tamago on NEAR means greatly reduced fees so that artists gain much higher revenue returns.

Artists will be able to generate estimations between \$0.35 cents to \$0.58 cents a stream. Although this may seem not too high upon first sight, that is estimating a 9053.3180778 % improvement from Spotify in gains.

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A Introduction

It's generally well known that streaming has helped people listen to more music than ever before, it is now easier for smaller and independent artists to get their music heard, and it has largely eliminated music piracy. People are listening to more music now, from more artists than ever before because of streaming services and their prevalence. Streaming is how most of us get our music now. Physical sales and digital downloads (although still in existent among smaller niches) continue to decline in our post-Napster world, and streaming is the dominant form of distribution.

Although these highlighted benefits have paved many to accessibility and increased exposure potential for all artists, there continues to be a lot of talk about streaming killing the music industry and the measly royalties artists get paid from streaming. [1]

Unlike physical sales or downloads, which pay artists a fixed price per song or album sold, Streaming intermediaries, such as Spotify, tend to pay royalties based on the artist's "market share"—the number of streams for their songs as a proportion of total songs streamed on the service. This could theoretically prove to be much more substantial, however, Spotify distributes approximately 70% of its total revenue to rights holders, who then pay artists based on their individual agreements. Multiple artists have criticized the policy, most notably Thom Yorke and Taylor Swift, who temporarily withdrew their music from the service. The convoluted network of intermediaries taking cuts and lack of overall transparency piggybacking on artists.

According to the RIAA, 75% of the recorded music industry's revenue in 2018 came from music streaming and estimates as far as less than 12%

distributed to artists. Meanwhile, the NBA 2019/20 season, players were paid more than 50% of the league revenue. Centralized music platforms such as Spotify are largely encumbered by legacy tech stacks and outdated models yielding unsustainable monetization which in turn compromises fair-play and distribution bending to the the influence of big institutions and brands. This stifles even the most talented independent artists from breaking through into the airwaves in the streaming age compared to the previous physical and digital age.

A.1 Current Issues & Underlying Problems

1. The leading streaming music companies — YouTube/Google, Spotify, SoundCloud, Apple and others — have been routinely accused of treating artists poorly through duplicitous contract structures and low payments. This major lack of overall transparency leads to trust and payout issues.
2. The slow-churning and clunky level of intermediaries create substantial payout delays to artists and content creators.
3. Derivative content such as remixes and covers are often censored due to licensing and rights complications.
4. Overall lack of transparency and inconsistent information-flow renders incomplete data which prevents content creators from rightfully getting paid for their work; these earnings end up accumulating in Digital Service Providers (DSPs) and are often left untapped or recouped with further costs out of the artist's shares.
5. Unfair streaming advantages to 'popular playlists' influenced by big labels are an ongoing issue. In August 2015, Billboard reported that Spotify was among the streaming services influenced by "pay for play", in which labels pay for songs to be placed on popular playlists followed by many users. Daniel Glass, executive of Glassnote Records, stated that playlist promotion was "a very, very big deal".
6. Overly complicated publishing and licensing problems persist with a lack of accessibility which block content.

A.2 The Tamago Platform

The Tamago Project offers a simple and effective solution to these problems powered by a combination of the NEAR blockchain and NFT Hybrid Streaming technology.

Tamago's purpose serves as a bridge to provide fair-play streaming services which protect the fundamental worth and dignity of every artist with equal opportunity and opens up a fresh and optimized streaming monetization for all artists.

The fundamentals of Tamago are founded on the freedom to distribute and monetize audio content without intermediary convolusion and transparency, connecting both fans and artists together for community and cultural growth. The platform's development and usability are guided by the following principles:

1. Artists should be fairly paid based on streaming value in addition to value which artists, brands and fans provide to the community.
2. Direct artist and fan connectivity, transactions and engagement are prioritized.
3. Compensation and streaming revenue is transparent, dependable and unvarying to stream count and price attributions.
4. Access must be free for all and not compromised by incumbents. Access is aligned with the democratization of assets; anyone can use and engage with the Tamago Protocol provided they respect the community and platform rules and other users.
5. Users and group contributions to Tamago yield rewards and supportive community governance.

The Tamago NFT/Hybrid Protocol delivers a decentralized approach for artists and fans alike to use a modern and lightweight high-quality streaming platform without intermediaries clogging the airwaves. The

Tamago infrastructure encompasses the following key elements integral with each other:

1. The Tama Token and Utility tokens powered by NEAR

NEAR is eliminating the barriers to Web 3 adoption. With high speeds, low fees, and progressive UX, NEAR's climate-neutral blockchain propels Tamago's token economy for streaming security, transparency, and optimized remuneration.

2. Accesible & Transparent Streaming Ledger

A simple and immutable source and point of access for all transactional data and tracing within the Tamago Protocol.

3. Data Querying

A clear and easy to navigate UI for user access and searches of content and audio metadata

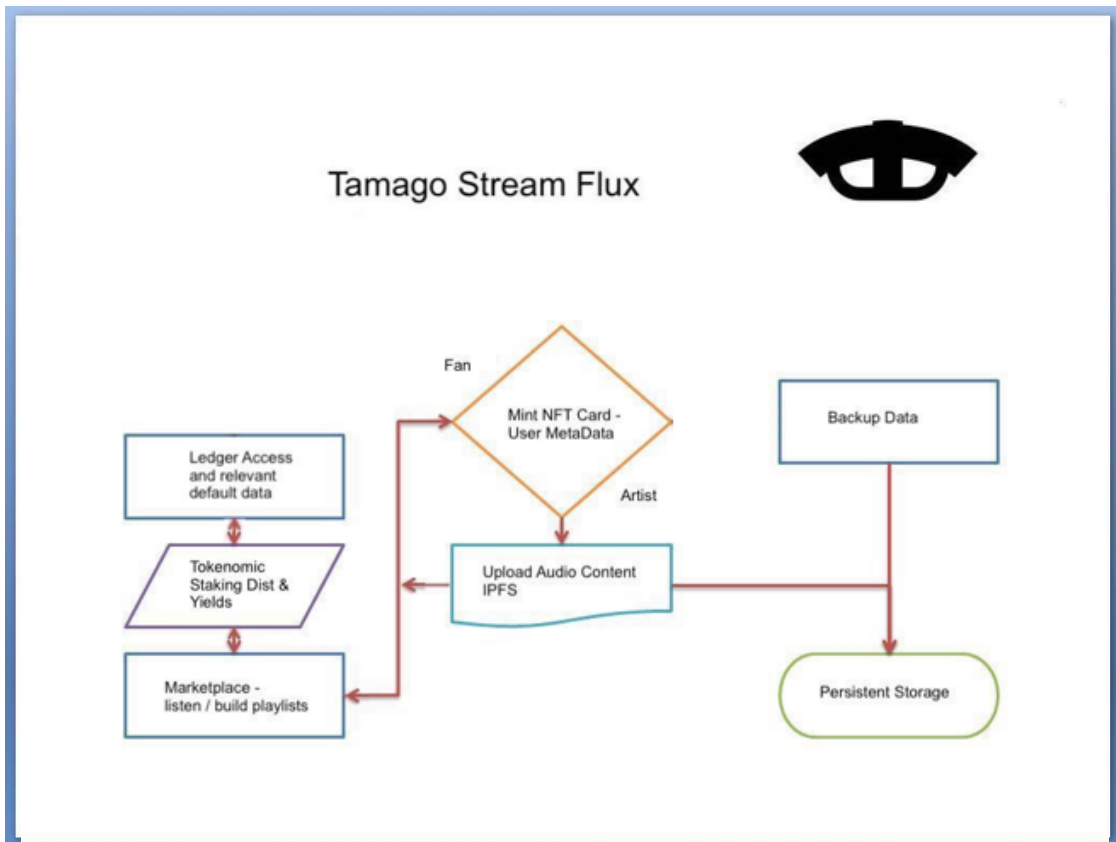
4. Community Governance

Community governance towards decision-making features and improvements towards community value executed by community members that have a vested interest in their community.

The combination of these components instills a community oriented approach in which all supportive users through contributive efforts share in the growth and success of the Protocol. Tamago provides Open Source of its main features on Github including transparency of transactions running on its DAO.

The protocol leverages IPFS for audio content hosting to more efficiently store and share large files with Web3 hosting on cryptographic hashes that can easily be stored.

A.3 User Growth & Awareness



Tamago is uniquely positioned to connect with independent local artist communities worldwide in a way that current decentralized or centralized streaming platforms remain disconnected from. Founded in part by globally acclaimed electronic artists and engineers from the music industry who have organically generated millions of streams and have worked with grammy nominated artists alike. With upcoming events and working relationships with some of the leading and cutting edge brands in the Independent Music Arts, Tamago is gearing up for an explosive 2022 with an emphasis on public awareness and community growth.

B Tamago Token Design

The Tamago currency denotes a base streaming value sourced from a community pool, donations, NFT sales and more. Both artists and fans can opt-in to actively hold onto and/or lock up their Tamago holdings for increased yields on streams along with awarded consensus-taking processes.

Tamago is built on NEAR with high speeds, low fees, and easy access, NEAR's climate-neutral blockchain currently allows for fractional gas transactions to power the Tamago token (\$Tama) and can unlock new streaming possibilities through the community's support.

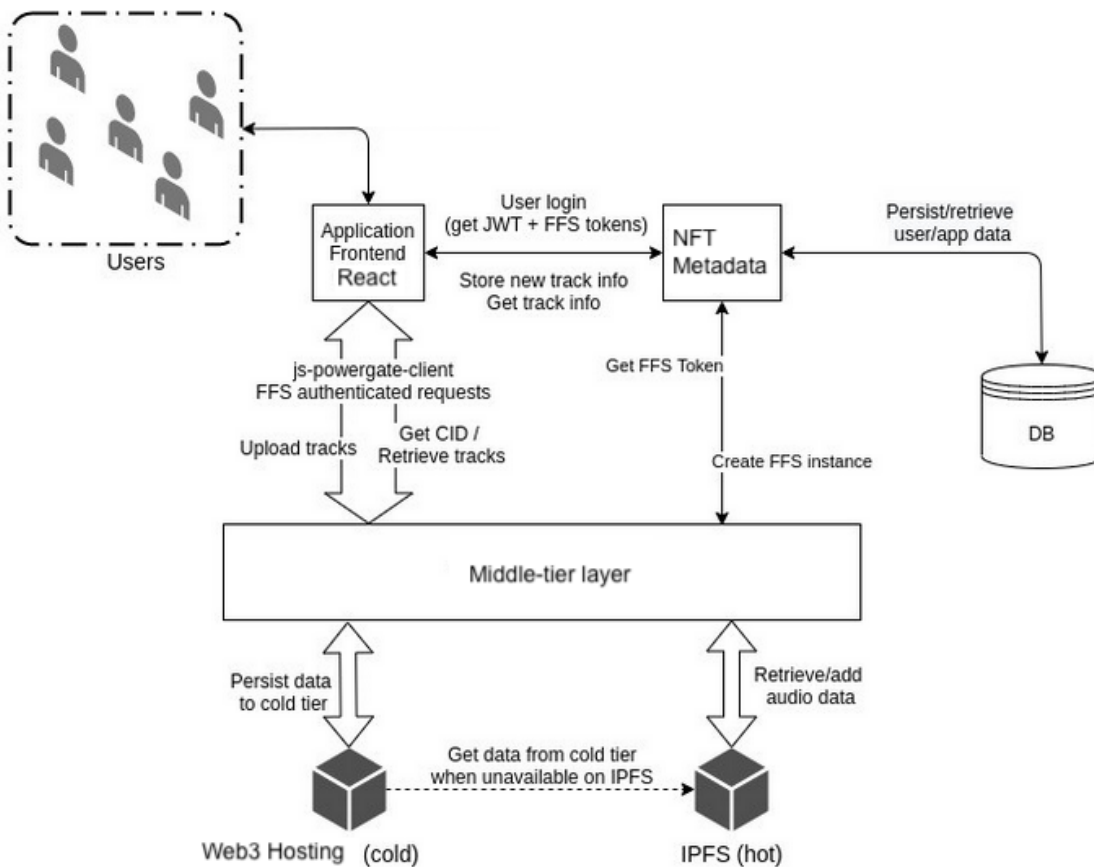
B.1 Tamago Token (\$Tama)

The Tamago Protocol token (symbol \$Tama) derives the following signature values:

- High Speed
- Secure Transactions
- Collateral & Staking

Tamago tokens are staked for additional benefits and special added services. For artists, this includes different price streaming revenue options and rewards as well for fans to earn special access and rewards along with exclusive content and features.

Both fans and artists benefit from seeding \$Tama with the fundamental community principle favouring those who input higher value and remain authentically active in the community through NEAR chain metrics, as opposed to just those who stake the highest value yet remain inactive.



B.2 Tamago NFT Marketplace

Since the project is moving towards being inherently designed via NFT serverless metadata extrapolating to a seamless interface between audio streaming, additional NFT functionality is therefore less than a few steps away. Artists will have the option to sell their audio uploads as NFTs and set a royalty fee so that fans can buy the uploaded audio content as an NFT and add it to their own marketplace - not just as shared playlists but with ownerships rights. A new and very exciting collectible feature addition to streaming.

C Multi-TamaFS: Decentralized Storage

All audio content uploaded through Tamago is decentralized, readily available, and uniquely identifiable. Streaming is a basic mode of tech-democratization and ensuring fair play and free accessibility for all users is delivered through the Tamago protocol. Artists uploading music,

descriptions, artwork and other data, along with fans transacting with the data are all displayed both on the UI and accessible via the NEAR Ledger. Storage must be scalable while providing a positive user experience as network traffic increases.

In order to remain scalable and maintain a decentralized unity including the audio data which is being uploaded to the platform, Tamago leverages IPFS (Interplanetary File System) which is decentralized because it loads the content from thousands of peers instead of one centralized server. Every piece of data is cryptographically hashed, resulting in a safe, unique content identifier: CID. Using a backup pinning technique through Web3 hosting, Multi-TamaFS is the solution for an encrypted decentralized distribution capability. A key point in the above definition is multitiered. Basically hot and cold tiers of storage with IPFS nodes acting as the hot caching layer, and alt-pinner serving as the cold persistence layer.

Storing new data involves adding the data to the hot IPFS layer and push a config for the returned CID. The data identified by its CID can be retrieved back from IPFS through the client. [2]

C.1 Audio Content Upload

Tamago will require an open-license agreement for all artists uploading content for streaming on the platform. The content is uploaded through encrypted key management providing NFT metadata to Multi-TamaFS. All content permission will be transparent and viewable on the NEAR ledger. Multiple modular streaming models will enable various options for users to access content and artists to stream in different tiers.

Powering Tamago with NEAR allows for the permission system to excel with:

1. High speed and time efficient transactions
2. Climate Neutral NFT minting and trading
3. Transparency for all parties

C.2 Tamago NFT Streams - Near Ledger

Tamago proposes an NFT Streaming hybrid, as the concatenated smart contract interactions of the NEAR blockchain associated to NFT and streaming activity of Tamago's overall content. The Streaming Ledger will include the following:

- Dependable Audio content and streaming metadata
- Artist metrics and track content
- Transparent Revenue Streams
- NFT meta-and-on-chain data

Users can mint tracks to upload via an NFT marketplace model:

```
track_mint(  
    &mut self,  
    track_id: Option<TokenId>,  
    metadata: TokenMetadata,  
    perpetual_royalties: Option<HashMap<AccountId, u32>>,  
    receiver_id: Option<ValidAccountId>,  
    track_type: Option<TokenType>,  
) {
```

JSON could be used for file structure along the lines of:

```
{  
  "trackName": "...",  
  "extLinks": ["...", "...", ...],  
  ... other metadata ...  
}
```

Artist can make changes to their file content and metadata by updating content and metadata through Multi-TamaFS and updating the IPFS link. The tracks are listed, enumerated, and indexed similarly to NFT tokens. Streams are counted to their 'tokenized' tracks.

C.3 Platform Registration / Login

Tamago's UI leverages the single source of immutability for all addresses recorded with the NEAR wallet and all discovery and content retrievable within NEAR.

When a user registers with Tamago for the first time they can simply connect through their NEAR wallet and setup their login details by minting an NFT USER ID Card to bootstrap into the blockchain as the backend and updating local state.

D Tamago Tokenomics

Holders of \$Tama are rewarded by paying less platform fees as well as gain special access levels to events and event perks including VIP access, special party tickets, artist merch and much more community driven engagement.

E Social Feeds And Community Features

Tamago's Streaming Ledger provides an open portal access which maintains a consistent source of verifiable data within Tamago that is traceable (via NEAR based NFT address and transactional data). This extends to both fans and artists including social engagements within the Tamago platform. Users will be able to have the following added features:

- Listen to audio content via streaming
- Add tracks to their own playlists
- Buy tracks that are for sale and create their own '*music store*'
- NFT meta and on-chain data.
- Mint comments as NFTs (added to view functionality with Guestbook)
- Create public or private playlists
- Users can 'heart', save, and repost their preferred tracks.

Social interactions are amalgamated within Tamago so that all users can view the same metrics and data engagements. Fans can check out tracks that they have been streaming and what users are engaging. These metrics provide fairly exposed models for recommendations and audio streaming supported by the Tamago community.

E.1 Search Discovery Querying

Tracks are indexed on Tamago as NFTs which render them easily available for querying by users. Querying will be applied through the fundamentals of Tamago which consist of:

- Accessible content with quick and efficient search results.
- Preventative mechanisms to block influence and revenue manipulation
- Decentralized data on the NEAR ledger

E.2 Community Voting - Utility Governance

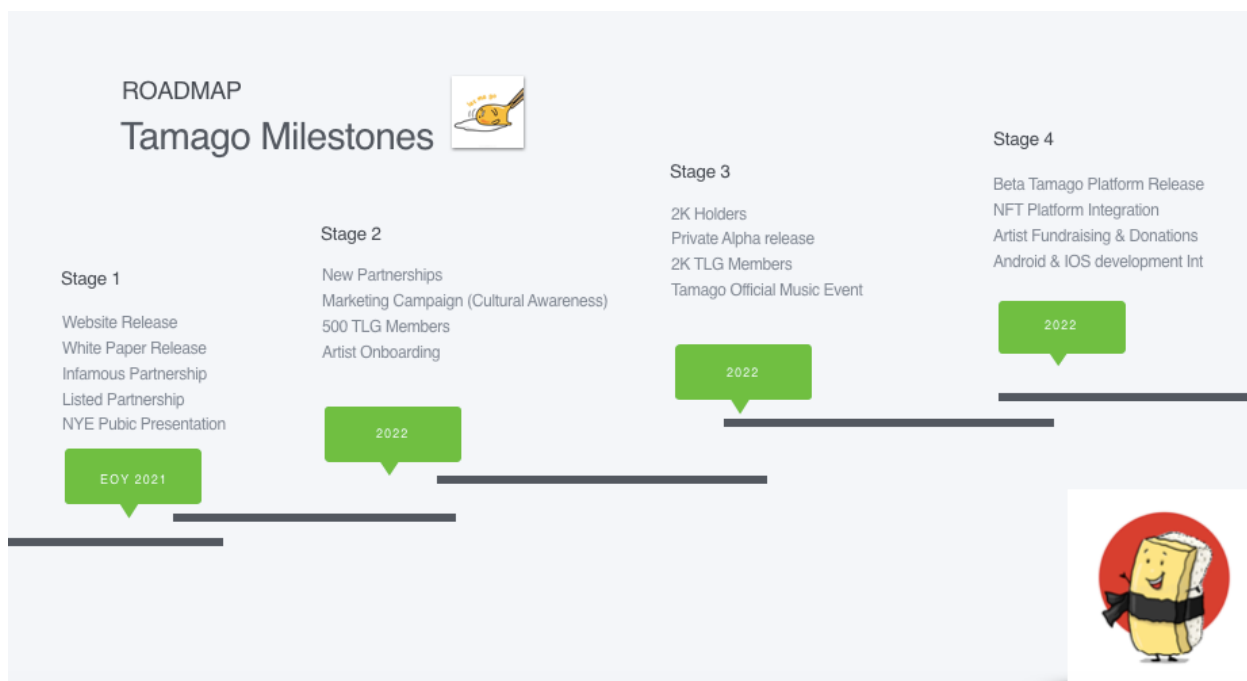
In order to uphold the key values of decentralization, Tamago community governance plays a fundamental role in the development of the protocol. Artists, developers, fans, DAOs and all individuals and groups related to the Tamago eco-system are enfranchised in the voting process for important upgrades and features. [3,4,5]

The Tamago streaming protocol encourages a community powered project which is defined and extrapolated upon with attribution including:

- Tamago community events, meetups and rewards
- Features, upgrades, and core DApplication changes
- Staking, Pools, and payout structures
- Tama distribution
- DAO voting proposals integrated by sub-groups of valued members

Tamago is built on community empowered decision-making governance. While the governance of artists and fans differ in their formation from the developers, all groups connect through the growth and development of the platform. Community voting is extensible by both technical and non-technical means enabling accessibility for all valued Tamago members to participate in fair voting whether or not they have a programming or technological background.

This decentralized political blueprint allows for a unique combination of varying philosophies and approaches to govern the protocol. Valued members (members that are both active and supportive to the community) will be granted increased accessibility through Tamago.



F Tamago Roadmap

Tamago has plenty of ammo to strike quickly in order to educate and promote mass awareness geared towards the largely untapped independent arts and cultural communities into the blockchain space and NEAR community.

Tamago aims to test the status quo and serve as a voice and token for the artists, by the artists, and eliminate all intermediaries. Since the conversation with current streaming monetization problems of centralized giants provides value through basic engagement, Tamago has an accelerated and extensible advantage on its path as a token representing the underground arts. The Tamago journey in itself pertains its own unique value.

F.1 Project Foundation (11/2021)

Soon after Tamago's project conception, the project is funded and supported by NEAR's Human Guild for growth and development. Tamago has already formed key and well-respected partnerships within the Music Industry, has upcoming internationally recognized music and blockchain based events, and is in the process of developing its Private Alpha and MVP both to be released in early 2022.

F.2 Private Tamago Alpha (02/2022)

4 months post founding the protocol, Tamago aims to have a private alpha readily available for early interested parties to test the platform and provide feedback. During this stage feature enhancements and details will be modified and improved in a controlled environment before beta release. Leading up will include a strongly developed and rooted community space for social interaction and IDO launch.

F.3 MVP (04/2022)

The MVP launch of Tamago culminated by the build up of community based growth and educational awareness will develop explosive growth for the platform where fans, artists and music appreciators may all participate and earn rewards for their value as users. International press awareness and Tamago based music events are to follow in stride.

F.4 Quantum Tunnelling Into The Future

Tamago as both a platform and a community will break barriers with new features off the shoulders of Near and NFT technology to bring in revenue streams for audio to artists that have never been possible to do so before. The Platform is backed and positioned with a third-generation blockchain based on PoS, processing 100,000 transactions per second while running much more efficiently than PoW chains and compensating that footprint with reforestation projects setting Tamago as the most cost efficient and carbon neutral NFT audio based decentralized music streaming platform model to date.

Tamago's fundamentals will never deviate from simple designs, user friendliness and accessibility for intuitive user interaction and a high quality lightweight experience powered by Web3.

The community governed and ruling economy of Tamago will provide the necessary changes to the Protocol and governance will be measured through participants of dependable contributions and activities that support the community and protocol continually updated and publicly visible.

By upholding these decentralized fundamentals, Tamago will always exist as a voice and shield to serve and protect artists in this evolving age of streaming directed and voted upon by the community.

G Decentralized Powered Audio Streaming

Tamago's source of power comes from core community values that an individual or collective's quality of work will prevail provided the right environment, nurturing, and backing to do so. From the tech stack to its fundamental philosophies, Tamago's visionary approach towards streaming is more than attainable thanks to the forward-thinking advancements of NEAR and the impressive Tamago core team of developers and its community stewardship.

The Tamago protocol empowers and rewards each passionate individual or group to contribute and share their local cultures and authenticities from all over the world to grow collectively to new heights. Tamago's growth is an ultra fusion of word of mouth, blockchain credentials, combined with deep music industry roots. Its outlined model exists thanks to the incredible advancements and strong support in the blockchain space from NEAR to its founding wisdom and unique position in the Music Industry. Tamago prioritizes creating a free space for authentic sounds on the global airwaves to flourish without gatekeeping, without advertisements, and Tamago simply has no time to waste on generic outdated formulas to take precedence.

Tamago serves the independent arts above all and those who create interesting content valued by unique and diverse communities. If you're an artist, curator, or music appreciator we invites you to take this liberating journey with us in its most early stages and be the pioneer and first adopter that makes the change.

The music industry has fallen into a dark cloud over the past few years struggling and failing to support so many talented and respected contributors to the culture and because of this has prevented richer and deeper content to thrive and make the world a more interesting, diverse, and shared place. Without real viable and transparent remuneration to content creators so that music discovery can continue to be taken to new heights without industry Goliath influencing content streaming.

As Leonard Cohen once so aptly suggested, 'There's a crack in everything, that's how the light gets in.' - the Tamago platform stands on the shoulders of giants to tear through the cracks and open up new paths forward that favours the artists and content creators over the intermediaries.

Tamago is founded upon the cultural imperative to protect and give recognition of the fundamental worth and dignity of every artist and its platform is limited only by the hearts and minds of its community contributions and values. Catch you on the flip side.

The future has already arrived. It's just not evenly distributed yet. - W.G.

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