RADION

VERSION 2.0

E N G L I S H

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ABSTRACT

RADION is an independent audio content distribution web-based system that works as a music discovery and streaming platform with its own network distribution arbitrated by users. The platform can decrease the disparity of exposure between corporate music and new music by providing a "no custodian" method of payment in the music industry whereby artists are represented by a digital asset (MP3) with a public wallet key embedded in the file to receive direct payments, every time someone downloads their song(s).

RADION can work with Creative Commons Licensing and with the traditional business model with Copyright Registry from the U.S. Copyright Office. While both methods have their own benefits, we bridge these two different models with a single (no custodian) method of payment.

RADION empowers people to discover, vote, share, and circulate music/audio content with cryptocurrency incentives. Moreover, the platform enables the participation of investors who are willing to invest in new digital assets (songs). The system feeds itself by establishing an ongoing process that benefits every single user. Artists will no longer need to worry about a method of payment, branding, distribution, promotion, copyright registry, music licensing, or the enforcement of copyright with respect to sound recordings.

MUSIC INDUSTRY ISSUES

Currently, vast mechanisms for licensing music have emerged from opposing forces of the recording and the broadcasting industry—forces that began to form when music was first broadcasted on the radio. Today, the licensing of published music is almost exclusively facilitated by a few record labels. Unfortunately, these firms are not very easy to reach, unless you are introduced through a company that has direct contact with them. These companies are well known as talent-finders. Talent finders allow musicians to submit their tracks online through their website, but the ironic part is where the artist needs to pay to submit a track online so he/she can be evaluated to be "found." In some cases, these companies can arrange appointments with a record label, but in the end, this intervention only reduces the revenue of the artist, and even when one does manage to reach these entities, the rate of success (i.e., walking out with a contract in hand) is very unlikely.

If an artist/label has a successful career, he/she will receive no more than 15% revenue for a record—after all corresponding costs have been offset (marketing, manufacturing, and distribution). Almost 95% of artists/labels are submitted to this business model, which is why many are now looking for alternative options. Independent record labels are one of them, and even though they offer a better deal to the artist, they have a small network of distribution, which directly affects the respective profit margins.

We also observe young talents that pursue their music career without record labels, using social media and other channels, such as YouTube, iTunes, and Spotify to create their fan base and to distribute their music. YouTube allows them to gain fans and expose their music online. Nevertheless, most musicians are not able to strike a balance between expanding their fan base and obtaining the net value of their creation. Put plainly, they end up with many fans but little revenue.

iTunes and Spotify both provide an excellent opportunity to musicians and artists who want to sell a digital copy of their records. However, if the artist doesn't promote his/her own album, people will not reach their profile web page, and it would become just another song using hard drive space on an iTunes or Spotify server. Furthermore, the artist needs to set up a method of payment in order to get paid, and most of these companies require a minimum amount to release the funds, and/or only distribute payments on specific dates (in accordance with weighty contracts).

Marketing, promotion, and distribution are essential for the success of any artist/musician, but a simple "no custodian" method of payment is imperative. Unfortunately, these essentials require a substantial amount of capital in order to be effective. They cannot be ignored because they are attached to the main structure of the music industry—which, by the way, is monopolized—but if the industry is touched by a decentralized idea, the musicians will have a better chance to grow their career faster without a centralized entity.

SOLUTION

The solution is a web-based system that distributes music as a radio feed. The music can be tuned by any online radio station and any music players that support audio url feed and ID3 tags, including but not limited to: iTunes, Spotify, Shoutcast, and Jamendo. The song (asset) will be uploaded on the RADION platform in order to provide the necessary support for the traditional ID3 tags and new ID3 tags—and to assign a new cryptocurrency wallet. This will bring transparency, making it easy to identify the musician, along with his/her song. Ownership can thus be confirmed with blockchain authentication.

The system will also allow Creative Commons licensing and a blockchain registry basis, whereby users can also choose the traditional business model with a copyright registry from the U.S. copyright office. In any case, the system allows audio content creators to make revenue in a matter of minutes with blockchain and "no custodian" crypto wallets.

KYC is an important aspect of the process to protect music creators, and RADION's platform will therefore provide enforcement for legal affairs to protect artists from copyright infringements and simplify music distribution with KYC. Artists/Musicians can stream their music in a matter of minutes by completing an intuitive and friendly form. This form places an important role in the creation of every digital asset because from this information, the system will create and host an mp3 file with unique ID3 Tags, including a wallet.

New uploads will be reviewed by audio fingerprint technology in order to protect current digital assets from plagiarism or unauthorized use. In this upload, the system will also create a unique fingerprint ID to identify the asset in other media players or streaming feed platforms.

PRODUCT INTRODUCTION

RADION is an open-source project that will manage songs and audio content as a digital asset, thanks to the collaboration of users and blockchain technology.

Its front-end is composed of an intuitive and user-friendly interface, which allows full interaction with the ecosystem. Its back-end is composed of an engine selector that separates liked music from a marketplace run by users. It also has a music engine player to create the streaming feed and a local node to create wallets and allow transactions.

Artists will no longer need to look for a talented finder company to be introduced to a reputable record label so their music can reach the masses. Nor will they need to wait for marketing strategies to take place so that they can profit from their music. The system is intended to simplify and speed up the process of any musician who wants to promote and distribute their music to profit almost instantly!

The platform will target the most consumed music genres in the U.S, including hip-hop and R&B, rock, pop, country, and Latin. In addition, we've included: DJ mixes and podcast shows. Each genre will have its own station in order to provide a unique url streaming feed for other media players.

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ECOSYSTEM

The WEB based system/dapp (RADION) will allow musicians and non-musicians to benefit from each other through collaboration, music, and smart contracts.

Musicians will benefit from the platform via network distribution, which will introduce them to media outlets, simplify legal affairs, and help them to fund their music career with blockchain technology. In addition, they will be able to interact with the audience and get instant feedback from the ecosystem in real-time. Moreover, they will be able to see their audience support, potential investors, and earnings instantly.

Non-musicians (users/audience members) will also play a vital role in the ecosystem. Therefore, the audience will not be limited to listening to the music uploaded, but also arbitrating the direction of content. In addition, they will be able to provide feedback to their favorite artists in real-time thanks to an integrated marketplace that allows votes. Users will be compensated with Tez units (XTZ), which would be applied to participation, interaction, and discovering hits.

Musicians and non-musicians can unlock features in our system to invest in songs of their choice. This particular practice will benefit users who want to earn extra revenue. However, the artist will also benefit from this practice by way of extra revenue and more exposure over the network.

The platform will show values in fiat currency (USD). This practice is fundamental in the transition of adoption, especially for people that are not familiar with cryptocurrency. However, all the technical transactions will be made in the background with Tez (XTZ).

ECONOMY AND PERSPECTIVE

RADION economy will be governed by Tez (XTZ). XTZ is the official cryptocurrency symbol from the Tezos Blockchain. New users that are not familiar with cryptocurrency will be guided with audio and visual material to introduce them to the protocol and help them to become familiar with the UI and its economy.

CASE OF USE

Case 1: Let us pretend that a user registers in RADION and holds enough Tez to use some of the features that require blockchain transaction. He/she will be able to participate in the marketplace page and vote for assets, including songs, commercials, radio podcasts, and DJs playlists. The user will be compensated for his/her participation with Tez. His/her earnings can also be invested in assets, applied to the purchase of ads, or used to download songs.

Case 2: Let's pretend that a musician wants to submit a cover song to be distributed in the network and earn profits from the downloads. In order to upload a song, the user needs to select between two types of submissions: a) Creative Commons or b) copyright registry. The difference between these two options are essentially subject to the cost of the service and the percentage of earnings.

You may wonder, why a musician would be interested in the copyright registry if the revenue in Creative Commons is 100% of revenue for downloads. The best way to explain this feature is with the following example:

If you are a musician and you want to submit a song to the platform as a copyright registry, you have to pay 99 USD worth of Tez for your submission. This payment would cover all the expenses required to create your digital assets, including all the service fees associated with the U.S copyright office registry, registry in blockchain, promotion,

and network distribution. However, be aware that there are no guarantees about the user's taste; even though your upload is going to be placed in the correct station with the right audience, there is a possibility that your cover song won't satisfy the expectations of the audience (AT THE MOMENT), but don't get discouraged too easily! Remember, music trends come in waves, so if your song doesn't have its own trend, the system encourages its users to start one for you. But how do you ask for help? You don't. Users know that by sharing your song, they earn Tezzies because a percentage of your payment was allocated to votes and sharing. So, once you submit your song and the system converts this song into an asset, you're all set! It's just a matter of time before you start seeing earnings.

Now, let's pretend that you upload your cover song and use Creative Commons features. You still have to pay for your upload in order to let investors know that you are open to do business with your song in the marketplace, but your payment will be minimal—enough so to cover the network fees of the blockchain and start the process, which is less than 1 USD worth of Tez. This option opens the doors to potential investors who are willing to invest in a digital asset in exchange for a percentage of your profit created by downloads. During the upload, the user will be asked about investors' participation and funds! They have to provide a single amount to do the trick, and the rest will be handled by a smart contract. This contract represents and manages your offer. It opens a position for a minimum of 6 investors and a maximum of 48. The funds of this contract are dictated by the artist or musician; however, once the artist establishes the amount, it is done, and the smart contract takes over. If your offer is attractive to investors, it is more than likely that investors will invest in your asset, but if your request is too high or your music fails to appeal to their criteria, you may not have a deal. In such a case, there is no revenue stream.

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Case 3: User uploads a song (solo) with a copyright registry service, and there is a fee associated with this service in order to start the legal process with the copyright registry office. The fee is equal to 300 USD worth of Tez. This fee covers the processing fees associated with the legal process, and there is a small percentage allocated to users who vote and share for the song in the system. In this case, users keep/receive 100% of the profit for every download made in the system.

ONLINE STREAMING

While every station would be programmed by arbitrary votes and uploads, the mainstream station would be made from the best of the best. The system would combine the best of each station to expose talented artists and musicians, as well as radio hosts, to create the mainstream of the day.

SMART CONTRACTS

RADION will work with multiple smart contracts in its background. Some of these smart contracts are oriented to specific purposes, such as earning distributions and consensus, while others will support voting and copyright enforcement. Nevertheless, one of the most prominent smart contracts in this project relates to Mint Tokens and Curation Market.

- **MINTING TOKENS**

This smart contract will be responsible for the fungible tokens on the Tezos Blockchain. The name of the token will be known as RADION, and its symbol will be RADIO. The total supply of the token is limited to 3 Million, and a single unit will have up to 8 decimals. RADIO can be acquired from our "internal exchange", which is governed by another smart contract responsible for the Curation Market.

- **CURATION MARKET**

Our Curation Market smart contract will adopt a continuous token bonding curve. The essential premise of our curved bonding is as follows:

1. Users can buy RADIO tokens with XTZ through a smart contract. The XTZ is kept as a deposit within the smart contract. It is not disbursed to any particular individual or group.

2. The purchase price is determined by the current supply of the new (RADIO) token. The price is hardcoded according to the algorithmic curve:

$$y = \frac{P_s}{s^{\left(\frac{1}{r}-1\right)}} \cdot x^{\left(\frac{1}{r}-1\right)}$$

3. At any point in time, someone can sell back their RADIO tokens in our internal exchange and receive the corresponding XTZ with the appropriate value that is set by our sell curve.

$$P_s = 3 \cdot \left(1 - \left(1 - \frac{1}{s}\right)^{\left(\frac{1}{r}\right)}\right)$$

This method will allow us to comply with regulations because RADIO tokens will form and dissolve as necessary. In other words, if everybody leaves the system, all the XTZ will be refunded and all RADIO tokens will cease to exist.

ADS & AUDIO COMMERCIALS

Perhaps, advertisement places have a significant role in any media channel. RADION is not an exception. However, our platform will conduct this service a bit differently from conventional practice. Although the system will have the capability to place visual ads and distribute audio commercials, users will be the ones to decide if RADION runs the ads or not at the live streaming. Nevertheless, it is crucial to mention that the system provides a very attractive compensation form for ads engagement. In fact, a greater percentage of the ads' revenue will be split and distributed among the users.

NETWORK DISTRIBUTION

Our Network Distribution is not limited to our website and mobile APPs users, but also to those who want to use our open-source web-platform as their own platform. Moreover, the url stream is open for any online radio website or music player that supports an url feed.

DIGITAL ASSET (Audio format)
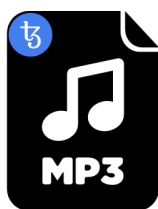
When users upload their audio content on our platform and ask for a copyright registry or Creative Commons licensing, our system will modify the file in order to embed the public wallet key of the user in the file.

MARKETPLACE

The marketplace will be shown on one of the pages of the user interface. On this page, users will be able to see submissions along with corresponding details, such as the artist's name, the title of the song, the music genre, popularity, price, potential investors (artist sponsors), and potential payout amounts. A user can take action and participate in these entries to earn Tez. This interaction will influence the dynamic of the radio directly.

Users can find all the stations in the marketplace! Stations are named but not limited to music genres (including podcasts).

FINAL NOTES

It is estimated that by 2021, music industry revenue in the U.S. will surpass the 22.6 billion dollar mark. These numbers make many people excited. However, for many years the music industry has been governed by centralized entities. We can coexist with the conventional system, helping the music industry with innovation and decentralization along the way. However, the true potential of great music arises when people are incentivized to collaborate and interact directly with the artist. Users don't need a third-party entity to pre-select music for them! The quality of the music will increase significantly in a world where musicians are free to make a living off what they love—with ease!