

# RADION

VERSION 1.7

ENGLISH

Official Website: [www.radion.fm](http://www.radion.fm)

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May 1, 2018

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# RADION

## WHITE PAPER

### ABSTRACT

RADION is an Independent Record Label platform for audio content creators, including but not limited to: singers, musicians, bands, DJs, songwriters, podcasters, producers, composers, among others. The open source web-based system works as a music discovery and streaming platform, it has its own Network Distribution arbitrated by users.

The platform can decrease the disparity in exposure between corporate music and new music by conducting talent scouting, nurturing upcoming artists to help them navigate their way through the field with different options and tools. RADION offers two different approaches to create commonwealth. One of them is oriented to work with Creative Commons Licensing and Blockchain Registry, while the other one is oriented to comply with the traditional business model with Copyright Registry from the U.S. Copyright Office. Both methods have their own benefits, however, we bridge these two different business models with a single (no custodian) method of payment.

RADION empowers people to discover, vote, share, circulate music and audio content with cryptocurrency incentives. Moreover, the platform allows the participation of investors who are willing to invest in new digital assets (songs). The system establishes 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, and enforcement of copyright for sound recordings.



## MUSIC INDUSTRY ISSUES

Currently, vast mechanisms for licensing music have emerged from the opposing forces of the recording and the broadcasting industry ever since music was first broadcasted on the radio. Today, licensing published music is almost exclusively done 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 at the end, this intervention only reduces the revenue of the artist, and even though if you can reach them, your rate of success to walk 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 costs are paid), unless that marketing, manufacturing, and distribution cost are reduced or eliminated. Almost 95% of artists/labels are submitted to this business model, that is why some artists look 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, affecting directly in their profits margins.

On the other hand, we have young talents that pursue their music career without record labels and use social media, and other channels, such as; YouTube, iTunes, or 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 balance between expanding their fan base and getting the net value of their creation in full potential, ending up with many fans but no revenue.



iTunes and Spotify gives 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 album, people will not get there, and it would become just another song using hard drive space from an iTunes or Spotify Server. On the other hand; the artist needs to set up a method of payment in order to get paid, however, most of these entities require a minimum amount to release the funds, not to mention that; the user needs to check their account on a regular basis in order to see if there is revenue and claim it.

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 way far monopolized, but if the industry is touched by decentralized tools, musicians will have a better chance to grow their career without centralized entities.



## **SOLUTION**

The solution is a WEB based system with a decentralized arbitrated network runned by active users. The system will allow; creative commons licensing and blockchain registry basis, where users can also choose the traditional business model with a copyright registry from the U.S. copyright office. In anycase; the system allows content creators to make revenue in a matter of minutes. A legal contract is created every time that a new asset is submitted to the platform. These contracts have no custodian, which allows a true decentralized experience between users and musicians.

KYC is an important aspect of the process to protect music creators, therefore, RADION's platform will provide enforcement for legal affairs to protect 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. These ID3 Tags will allow us to distribute music in a matter of minutes, with a direct method of payment to the creator. In other words; if a user likes a song and downloads it, the creator will receive their revenue instantly to their cryptocurrency wallet. If the contract was made with investors, they will also receive their share instantly for every download.

Music licensing with Unique fingerprint IDs will not only help the ecosystem to protect digital assets from plagiarism or unauthorized use, but also, will motivate others to create and own digital assets that last forever.

RADION will operate as a radio station and its live streaming would be distributed over its network, which is composed of: the website and native mobile apps. Its programming and "broadcasting" will be populated by dynamic content from the marketplace / music lab, where the artist will be reviewed by users and potential investors.



Legal contracts are created by the UI, however, KYC is needed prior to any submission. This is an important aspect of the process to protect music creators. Once the legal contract is made; multiple smart contracts are required to ensure that your legal contract works accordingly. Some of these smart contracts are responsible for funds allocation, while others are responsible to hold and release collateral for security purposes, and others for revenue distribution. However, all these contracts work together as one.

Legal contracts will be created in two phases, 1) User Complete a submission form with its corresponding mp3 file through the user interface. 2) System will split the submission into two; a) uploading the information (only) to the blockchain, b) uploading the mp3 to the server. The end result is a legal contract that contains information about the asset. The mp3 file is modified by the system to identify the asset with a unique ID #. Double redundancy will be applied as a security feature for every transaction in order to confirm that the funds will be sent to the correct asset every time there is a download/purchase.



## PRODUCT INTRODUCTION

RADION is an open source project that will manage Music and Song Compositions as digital assets, thanks to the collaboration of users and smart contracts.

Its front-end is composed by an intuitive and friendly user interface which allows full interaction with the ecosystem. Its back-end is composed by a music engine to compute and manage real-time events and programming. Some of the features are; UI with Real-Time events, Music Fingerprinting Engine, Smart Contracts, Arbitrary System, Distribution Network, Dynamic Marketplace, Music Lab, Public Ledger, and Multi-language support.

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. Neither wait for marketing strategies to take place so that they can profit their music. The system is intended to simplify and speed the process of any musician who wants to promote and distribute their music to profit their work in an instant!

The platform will target the most consumed music genres in the U.S, including but not limited to; Hip-hop and R&B, Rock, POP, Country, Latin, in addition, we included: DJ Mixed, Podcast shows and Top Hits. Each genre will have its own channel in order to work simultaneously but independently from each other.





## **ECOSYSTEM**

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

Musicians will benefit from the platform with network distribution, introducing them to media outlets, simplify legal affairs, and help them to achieve their music career goals 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, potential payouts, and earnings.

Non-musicians (users/audience), also play a vital role in the ecosystem; therefore, the audience will not only be limited to listening to the music uploaded, but also arbitrating them. In addition, they will be able to provide feedback to their favorite Artists in Real-time thanks to integrated vote features. Users will be compensated with Tezzies units (XTZ), which would be applied to participation, interaction and for discovering hits.

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

The platform will show values, such as; potential payouts and revenue 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 Tezzies (XTZ).



## ECONOMY AND PERSPECTIVE

RADION economy will be governed by Tezzies (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 the protocol and 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 Tezzies to use some of the features that are connected to Blockchain. He/she will be able to participate in the music lab/marketplace by voting for assets, including; songs, commercials, radio shows and DJs mixed. The user will be compensated for his/her participation with tezzies. His/her earnings can also be invested in assets, purchase ads, or 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 exceeds 90% 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 Tezzies for your submission. This payment would cover; all the expenses required to create your digital assets, including; all the



service and 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 channel with the right audience, there is a possibility that your cover song is not satisfying the expectations of the audience (AT THE MOMENT), but don't get discouraged too easily! Remember; music has waves of trends and so if your song doesn't have it's own trend, the system encourages it's 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 % of your payment was allocated for votes and sharing. So, once you submit your song and the system converts this song into an asset, you are all set! It is just a matter of time to see earnings.

Now, let's pretend that you upload your cover song with; creative commons features. You still have to pay for your submission in order to start the procedure in blockchain and be exposed to the music lab/marketplace, but your payment will be minimal, enough to cover just the network fees of the blockchain and start the process, which is approx \$1 USD worth of tezzies. 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. During the submission, the user will be asked about investors' participation and funds! A single amount will do the trick, 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, however, once the artist establishes the amount, you cannot change it, (smart contract take over). If your offer is attractive for investors, it is more than likely that investors will invest in your asset, but if your request is too high or your music is not very appealing to their criteria you may not have a deal, therefore, there is no stream and revenue.



**Case 3:** User uploads a song (solo) with a copyright registry service, 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 tezzies. This fee covers not only the processing fees associated with the legal process but also there is a small percentage allocated to users who vote and share for the song in the system. In this case; user keep / receive over 85% of the profit for every download made in the system.

## **ONLINE STREAMING**

While every channel would be programmed by arbitrary vote and submissions, the mainstream channel would be made from the best of the best. The system would combine the best of each channel 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 copyrights enforcement. Nevertheless, one of the most prominent smart contracts in this project are oriented 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 Millions, 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 the following:

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 different 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.

## **DIGITAL ASSET (Audio format)**

When users upload their audio content in our platform and ask for copyright registry, our system will modify the file in order to attach additional ID3 tags with time-stamp, transaction hash, blockchain name, and public key (wallet address) of the owner. The user will also be able to modify these tags if he/she wants, as long as he/she has the private keys.



## MARKETPLACE

The marketplace will be shown in one of the pages of the user interface. In this page, users will be able to see submissions along with its details, such as the artists' name, the title of the song, music genre, popularity, price, potential investors (artists' sponsor), potential payout among others. A user can take action and participate in these entries to earn tokens. This interaction will influence the dynamic of the radio directly.

Users can find all the channels in the marketplace! Channels are named but not limited to music genres, we also include talk show and DJ mix.



## FINAL NOTES

It is estimated that by 2021, the music industry revenue in the U.S. will overpass the 22.6 billion dollars. 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 that is already established, helping the music industry with innovation and decentralization. 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 music and lyrics can increase significantly if musicians, songwriters, singers, composers and producers can truly make a living of what they love.

