

A critical overview:

BLOCKCHAIN APPLICATIONS IN THE MUSIC INDUSTRY

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1. Introduction

The cryptic Satoshi Nakamoto, an anonymous individual (or group of persons), introduced the first successful application of the Blockchain, Bitcoin to the world in the wake of the financial crisis in 2008/9.

Since the appearance of Bitcoin, the technology has been developed to a different extent and has been implemented in many sectors. In the Music Industry, Blockchain is promised to decipher many gray areas that exist. The Internet is in constant movement; It grows as new innovations inherently sprout on the Web.

This paper provides a review of the applications of blockchain technology in the Music industry. Much great advancement has been and is expected to be made in Copyright and Data Management, fans engagement and Digital Ownership.

2. Web3.0 ... Read - Write - Own

The music industry is always at the mercy of the ever changing technological innovations. The shift from physical formats to digital formats to consume music happened gradually. The internet has completely altered the way we experience Music and is now the main medium.

To put this into context, it is necessary to review the evolution of the internet/web.

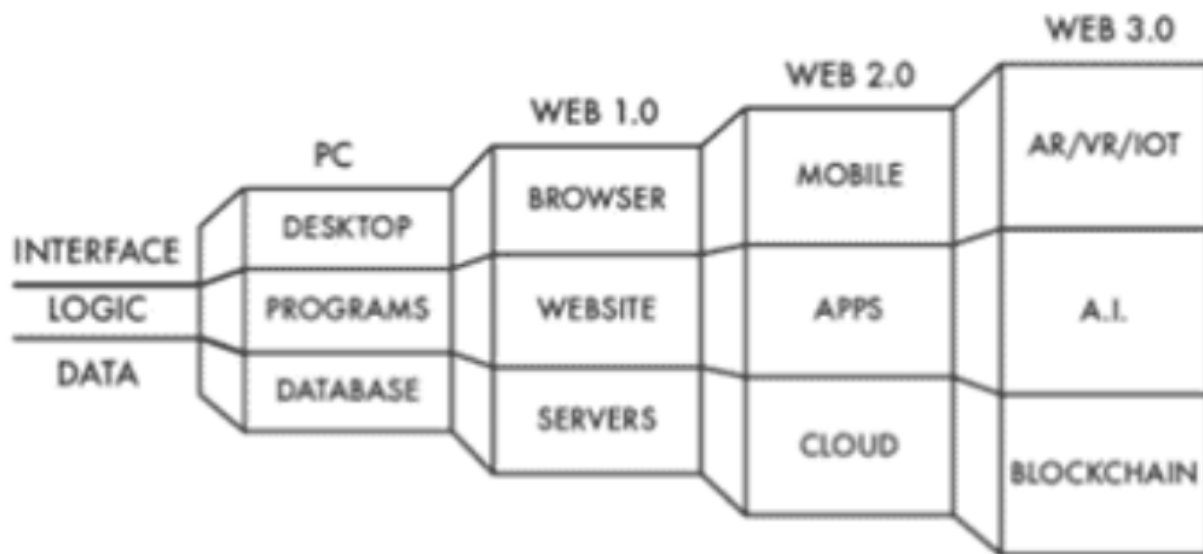
Since the first coming of the web, the internet space has experienced a substantial metamorphosis. The first generation of the web, [Web 1.0], was the ***read-only*** era. Users could only access static content posted on websites without the ability to share it.

The second generation of the web, [Web2.0], ***read-write space appeared in 2005 and*** has perpetually transformed human interaction with technology. Websites enable users to write, comment and share online content, and exchange information in a new way, which led to the emergence of social media networks, user generated content, cloud computing and interconnectivity between devices. The rise of platforms like MySpace, Google, YouTube, Facebook, Twitter changed the way people use the internet. The impact of Web 2.0 made an indelible mark on the Music Industry. The P2P file sharing networks appeared and opened a door to music piracy that remains a challenge in the industry to this day.

Streaming changed how music is accessed. One of the fundamental characteristics of Web 2.0 is that it makes the applications and services available for more than one device. Increasing amount of devices can

connect to the web, meaning that applications must be able to sync between different devices. (Ingólfsson, 2015)

The next generation of the Web, [Web3.0], **Read-Write-Own** (aka Read Write Execute) space is currently in the phase of development and is believed to be a reaction to the way web companies have been using data... to sell or rent data for profits.



Espousers describe Web 3.0, as a future extension of the world wide web, bringing forth pragmatic solutions to a centralized web with different functionality that would solve current Datafication challenges.

3. Smart contracts replacing Intermediaries?

Gavin Wood, one of founders of the platform Ethereum, used the term Web 3.0 for the first time, to refer to a decentralized online ecosystem based on blockchain.

The underlying technology, Blockchain, can be described as a “distributed ledger” — a database hosted by a network of computers instead of a single server — that offers users an immutable and transparent way to store information (Stackpole, 2022).

The growing Web 3.0 industry is revolutionizing business models and posing to be the answer to the Data collection, bringing new perspectives to different aspects.

According to critics, blockchain technology will give back power, a sense of ownership to the end-user, by giving them control over their personal data, providing transparency and eliminating the role of intermediaries such as banks and more.

Multifarious intermediaries are operating in the Music Industry: streaming services, Record Labels, Publishers controlling the contracts deals signed by rights holders. They are essential to the Music ecosystem as it is known today, in remunerating signed and unsigned music artists. Nonetheless, the affairs of royalties payments can be costly and flawed sometimes due to human errors and the high volume of data that needs to be processed. Blockchain technology is protected to offer huge

potential for the music industry landscape to overcome a lot of challenges faced by music fans and artists.

The agreement format, Smart contracts, causes disruptions to the industry ecosystem while solving recurring issues for stakeholders. A smart contract is a digital transaction protocol that utilizes the blockchain to enforce an automatic agreement without the involvement of any third parties.

Smart contracts are statements that are written into code on a blockchain. The network of computers executed the actions when the predetermined conditions were met and verified. The actions that the smart contracts can unlock, include releasing funds to the parties, sending notifications, or issuing a ticket. The completed transaction will update the blockchain, cannot be changed, and consequently only parties who have been granted permission will see the Data. (IBM, 2023)

Blockchain and the use of smart contracts could revolutionize and change the music industry by removing third party middlemen from music sales and centralized music streaming platforms. This also puts the power and control back into the creators' hands from an economic and creative perspective by keeping the intermediaries out of the process, music artists using platforms powered by blockchains can verify the copyright of their songs, and consequently streamline their royalty

payment (De Meijer, 2022).

For instance, emusic is a blockchain based music distribution and royalty management platform that rewards artists and fans. Use a system of smart contracts that can track rights holders, manage metadata logging sales and streams. Artists just have to upload their music to the service, complete the Metadata to inform the platform of the rights holders and finally choose where fans can stream their music.

This is revolutionary, and could eliminate the mission of distribution service providers, such as Distrokid, Ditto or Tune core. Royalty payments will be split accordingly and artists can choose when to access their payments.

The absence of a third party makes this technology completely decentralized—and groundbreaking. (JPMorgan Chase, 2022)

4. Blockchain Developments

Historically, electronic technologies dictated the format music is consumed, disrupting the economy of the music industry and affecting music copyright owners. To protect their commercial assets, the major stakeholders would start legal litigations while the unsigned artists would suffer powerlessly the consequences of these changes. Music piracy has

always been the center of technological changes in the music industry, an irreversible bane which has a major impact on the economy of the global music market. Online piracy became an imminent issue with the emergence of peer 2 peer file sharing platforms such as Napster, Kazaa or Limewire. Music industry bodies and companies from several countries sued the platforms and compelled them to halt their activities (McIntyre, 2018). Afterwards the streaming platform Spotify had a tough start after its launch in 2011; it accumulated several lawsuits for copyright infringement in the UK and the US. After settling down on many of these lawsuits, Spotify finally made an agreement with the major players of the industry. It fought its way through and defended its vision of solving the music online piracy issues (Capitalism.com, 2021).

Blockchain technology could be the first major technological evolution that is beneficial to music artists, stakeholders and the economy of the industry. As it stands, Blockchain is still being developed and, in some cases, implemented.

Jesse Walden, founder of Mediachain Labs, stated in an article published on the mediachain blog in 2016 that during his career as manager of independent artists, he became entangled with loads of issues with Music Data.

He identified the problem as being:

“ simply that no central database exists to keep track of information about music. Specifically, there are two types of information about a piece of music that are critically important: who made it and who owns the rights to it. Right now, this information is fiendishly difficult to track down, to the great detriment of artists, music services and consumers alike (Walden, 2016).”

Mediachain Labs, is leading the open source development of Mediachain (acquired by Spotify in 2017 (McIntyre, 2017)), a decentralized data network that aims to make it simple for organizations, creators, and developers to share and reuse information about creative works (Walden, 2016).

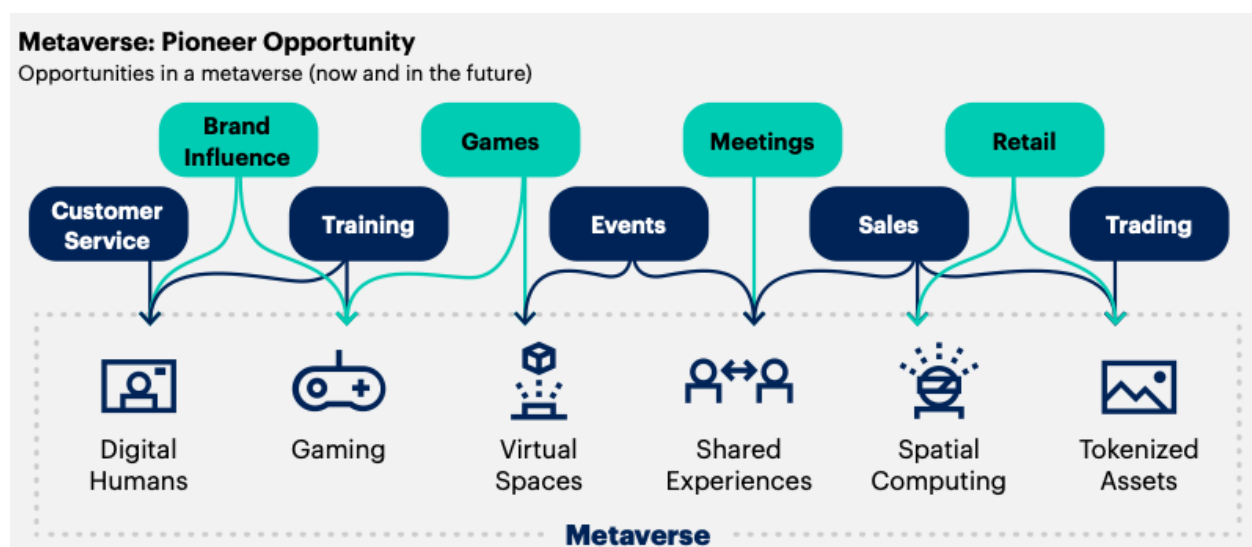
Many are touting platforms similar to Mediachain as they are the Music Industry’s problem solver for royalty payout issues and transparency (McIntyre, 2017).

Gough (2018) explains in his Blockchain: A New Opportunity For Record Labels review, that Blockchain Development of an ownership and rights database could provide many benefits to the recorded music industry, including risk mitigation and cost reduction. Using this technology could increase the money that businesses receive and improve their financial performances. Ownership and rights information is currently fragmented in the global music industry, creating an attribution gap that effects

credits to the contributors to music and payments to rights hold (Gough, 2018).

Blockchain and smart contracts allow artists to create an immutable record listing, incorporating all the contributors who created the project. The blockchain prevents them from altering the data stored within the file when they transfer it (De Meijer, 2022). It also gives artists direct access to ledger with Data about fans engagement, instead of having to ask a third party for permission.

5. NFT's and the Industry



One particular aspect of the Metaverse is that it is a playing field and provides an immersive online digital experience. It is also a space for

collaboration that opens up opportunities for musicians to team-up with digital artists to complete the audiovisual circle. The trading currency for musical assets in the Metaverse is NFTs (Non Fungible Tokens). To Buy NFTs, users would have to set up an Ethereum Compatible Crypto wallet, register to an NFTs Marketplace and place a bid on digital assets they want to gain. After the transaction is finalized, the person becomes the owner of the assets.



Tokenisation is a revolutionary technology that uses blockchain, digital assets, and cryptocurrency to revolutionize how musicians and fans interact (Galileo Protocol, 2022).

The focus of the Tokenisation technology (NFTs) is to bring value to digital assets and assign ownership to the token holder and is a way to engage fans and give them ownership of the content they like.

CONTENT (Video - Music - Images...) is powering the Internet, User Generated Content is the fuel of the internet. Internet users would be a Creator of content and/or Viewer of content. Therefore monetizing the content is judicious as internet users spend a lot of time online.

These tokens prove ownership of digital or physical assets, including but are not limited to video, images, music, or any other media file. They have a unique digital signature that proves ownership that certifies ownership of the asset.

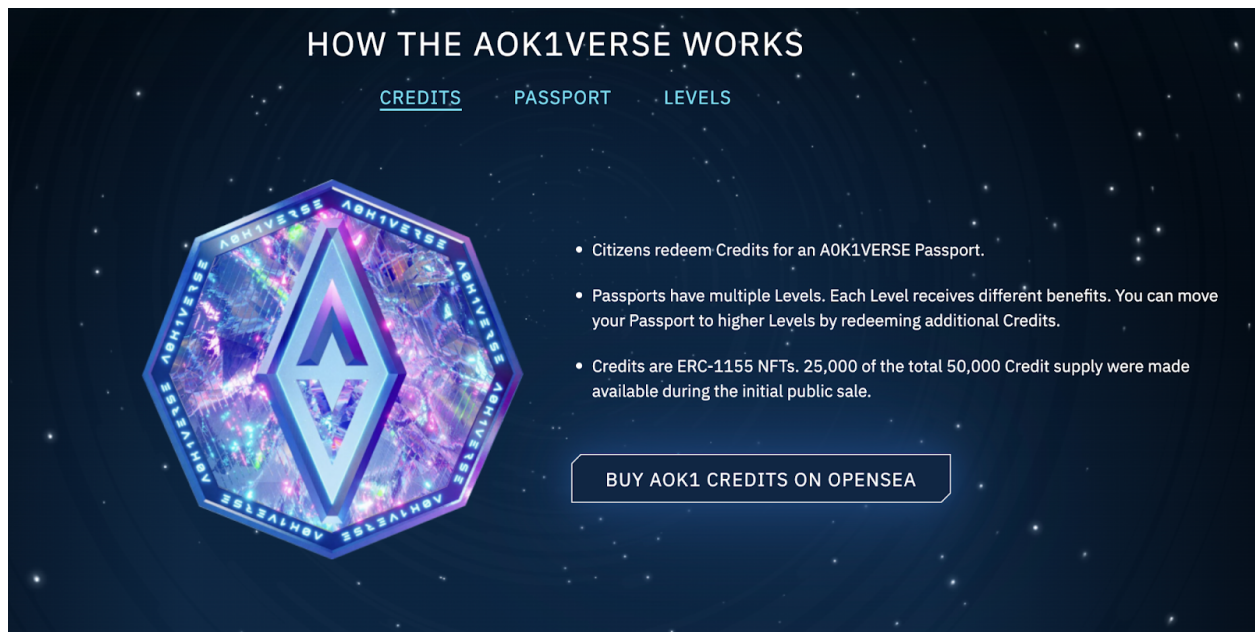
The market for NFTs has exploded within the last year, and it's now a multi-billion-dollar industry.

The American Dj Steve Aoki is well established in the Metaverse, where he built a tokenized community.

He stated in an interview in 2022, “In the 10 years he has been making music, he has made more money in one drop in NFTs (Irwin & Nelson, 2022).

In 2022, he launched the Steve Aoki NFT project, Aok1verse, an NFT membership and metaverse platform aimed at rewarding fans and owners of Aoki’s NFTs (MusicTech, 2022) { <https://a0k1verse.xyz> }.

Shannon Herber Managing Director for Steve Aoki’s “AOK1VERSE” NFT project, stated recently at the AIM connected conference in London, that The Aoki NFT project is very profitable for the American DJ while being a total immersive experience for his fans. In the past year, 4 people have between \$500,000 to \$1M to have access to the artist. Aoki’s fans can create merchandise lines and get a cut on the royalty on the merchandise line. They can get discounts on products, special access for Live shows and VIP areas to meet the entertainer in return of NFT’s with the artist (Herber, 2023).

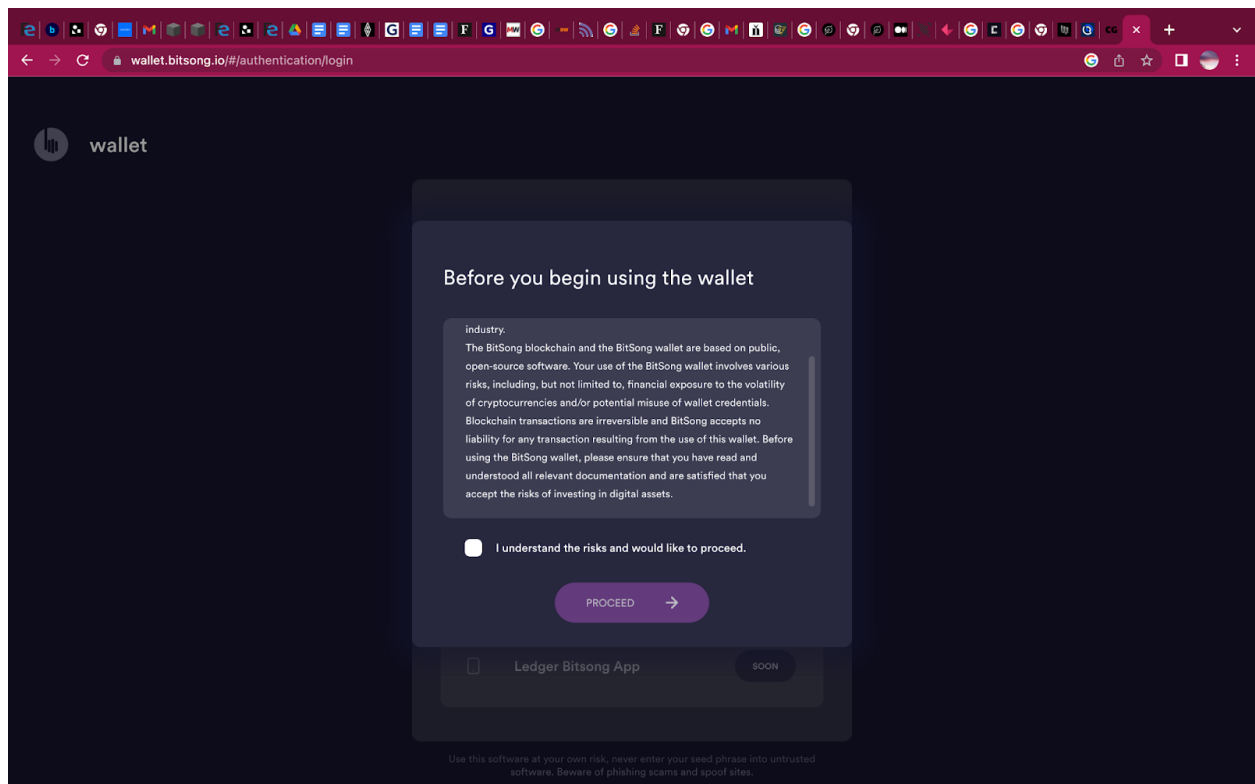


6. The disadvantages of Blockchain

Blockchain makes the roles of intermediaries obsolete, and this leads to a loss of jobs in many sectors. Spotify acquired the startup Mediachain in 2017 and Facebook rebranded as META, which should be regarded as the attempt of the big players to conquer the market. Music streaming giant Spotify is currently testing token-enabled playlists that will be offered only to holders of specific non-fungible tokens (NFTs) (Kaaru, 2023).

The concept of owner for music artists and the fan base is very appealing and sometimes works well, for example, The Aoki NFT project, however, music will always need to grow a loyal fanbase.

Cryptocurrency is a concept that is still growing in the masses. The Crypto world is a complex field, and it is taking time for it to gain popularity. The market instability makes it unappealing. For example, when attempting to sign up to create crypto wallet on the platform Bitsong users are met with this message displayed below:



Here is the message:

BitSong is a decentralized blockchain ecosystem built for the music industry. The BitSong blockchain and the BitSong wallet are based on public, open-source software. Your use of the BitSong wallet involves various risks, including, but not limited to, financial exposure to the volatility of cryptocurrencies and/or potential misuse of wallet credentials. Blockchain transactions are irreversible and BitSong accepts no liability for any transaction resulting from the use of this wallet. Before using the BitSong wallet, please ensure that you have read and understood all relevant documentation and are satisfied that you accept the risks of investing in digital assets (Bitsong, 2023).

They are informing users that using a Bitsong wallet involves various risks, including financial exposure to the volatility of cryptocurrency, and they are satisfied to accept the risks of investing in digital assets (Bitsong, 2023).

This might act as a deterrent and is off-putting for customers that read the small print.

As the Cryptocurrency and NFTs evolve, the volatility of the market has some speculating that 98% of the NFTs in today's market will be worthless in the near future (Gomez, 2022).

7. Conclusion

The prospects of the Blockchain in the music industry on a large scale are very appealing to solve many gray areas that affect copyright owners and stakeholders of the industry, such as Royalty mis-payments, Copyright infringement, and some could argue the issues of low royalty rates from streaming. By removing the intermediaries, the technology simplifies administrative labor, which consequently speeds up payment transactions, makes the process more transparent and gives ownership to the user. However it is clear that this technology will bring forth Job losses in many sectors and change the Global Economy. The revolutionary Blockchain technology introduces the Human race to: Universal basic Income, Micro labor and Consumer accessibility and creativity. There is a lot more to come!

(Word count: 2439 words)

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