

Blockchain

Essay

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Module: Legal and Business Affairs
Assignment: Essay
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Introduction

Blockchain is a new digital record of transactions. Introduced in October 2008 as the technology behind Bitcoin, blockchain has continuously been appointed as the biggest foundational technology since the internet, with the potential to transform our operational economic systems (Iansiti and Lakhani 2017). The name comes from the structure – each individual record, called a ‘block’, is linked together to form a ‘chain’ – a single list. New blocks are added and linked with the previous ones in an unbreakable chain. Each user (‘node’) remains anonymous, every transaction is validated by numerous computers, and are permanently recorded and accessible to everyone. The structure and the transparency of these transactions makes it safe.

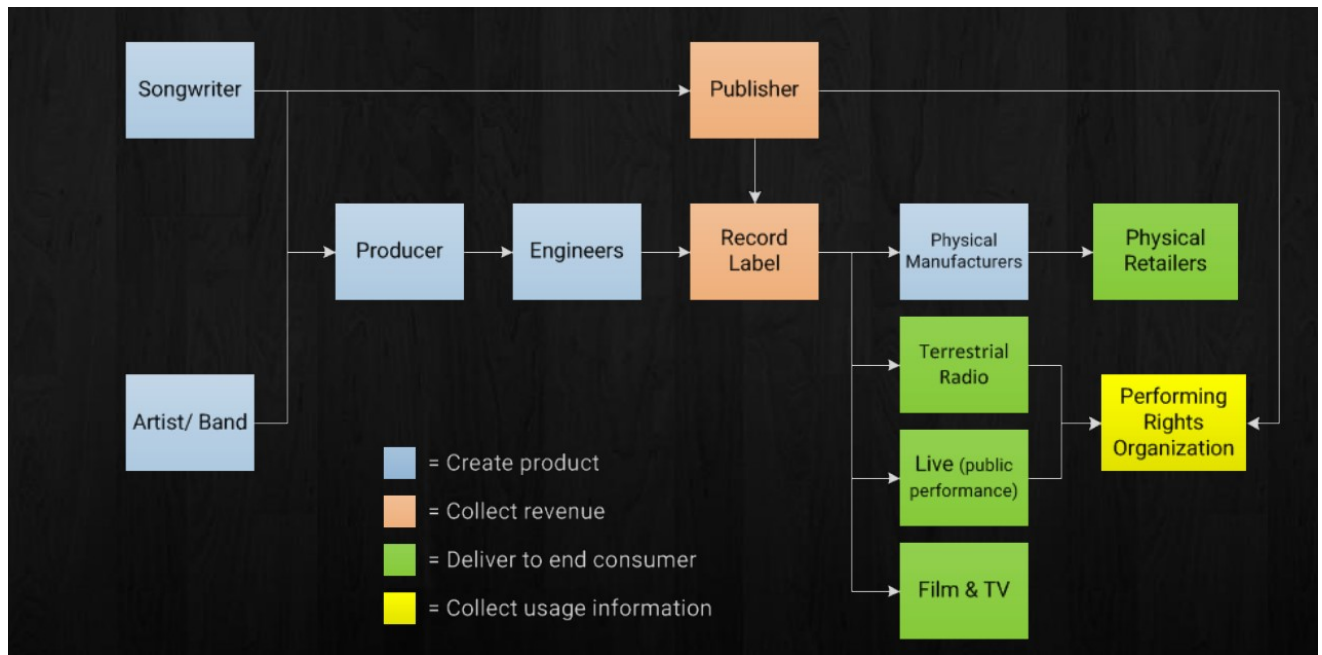
One of the industries still trying to find the best usage to the implementation of blockchain technology on a global level is the music industry. Artists and musicians now have an opportunity to ‘cut out the middlemen’, to sell their music / merch directly to their fans and have a structured and a transparent system to receive royalties. However, this would leave the publishers, labels and collecting societies without their share and would subsequently potentially shift the power of the music industry as we know. Although music streaming has changed the way we consume music and music has never been more accessible to people than during the digital age - the number of streams, website visits, video views has never been higher, artists are receiving less money than ever and it is still difficult to make a living as an artist. Could Blockchain finally change and revolutionise the way artists get paid for their work, and create a universal system for registering ownership and royalties, or does the industry as a whole not know enough about it yet and feel threatened by this new technology?

This paper will investigate the history of the supply chain in the recorded music industry, through looking at various supply chains over the years and analysing how it has changed over the years, introduce and review the challenges the industry is currently facing and how blockchain could improve the situation, discuss the potential impact on consumers, look at some of the new music companies that have come to the market, and explore the implications with intellectual property regarding blockchain. I believe that if the blockchain technology is globally introduced and implied, it can help with prioritising the artists and making sure they get paid what they deserve.

1. Music Industry's Supply Chain

Even though the way we consume music has changed, the work division within the industry remained roughly the same: artists create music, fans consume it, and the intermediaries, such as the record labels and distributors, act as the powerful middlemen (Graham, et al. 2004).

Figure 1. Recorded Music Supply Chain (Pre-Digital)

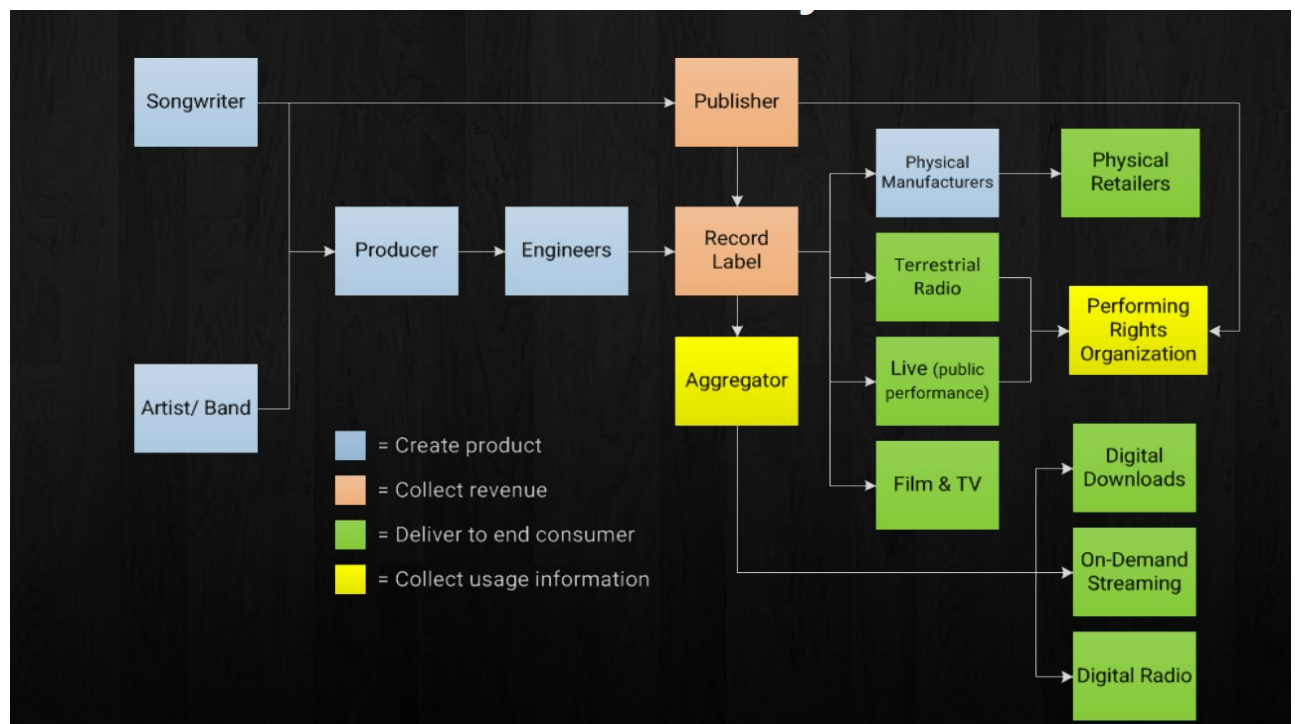


Hosoi, et al. (2015)

The chain starts with the artist/band and the songwriter (also can be the same person) creating a song with a producer/engineer. The record label and the publisher, or 'the middlemen' would support the artist's release by being responsible for manufacturing the physical product and finding opportunities for promotion through radio, live performance, film & TV. Due to the physical copy of the product being the main form of consumption, the label added value to the chain and helped the artists accomplish goals and reach audiences that may not have been possible as independent artists. The 'middlemen' also collect revenues and pay for the artist/songwriters based on the agreement they have in place.

This chain has gone through multiple different configurations over the years - this is what it looks like during the digital era (based on a major artist example):

Figure 2. Recorded Music Supply Chain (Digital)



Hosoi, et al. (2015)

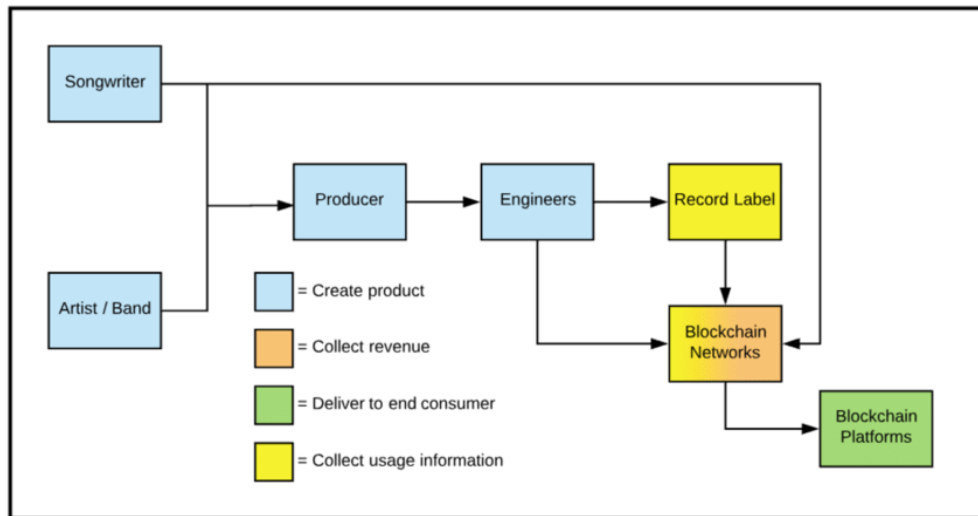
As seen on the chain above, the creation phase of a song has remained the same, but there is an addition of an aggregator (distributor) as one of the intermediaries, which has created a completely new way of delivering music - digital downloads, on-demand streaming, and digital radio. The addition of these digital channels has created more confusion when it comes to royalties.

One of the significant issues in the music supply chain today is the lack of consistent, complete and authoritative information or metadata regarding the creation of a given musical work. Many industry professionals agree that the issue is the complexity of the system and often royalties go missing due to human errors, confusion and the lack of a universal structure. To me, it seems that the way we consume music and new technologies have changed so quickly over the years (from records to digital channels) that the infrastructure and legal implications around copyright, licensing and royalties have not been able to keep up with it and therefore cannot work in conjunction with each other. Different parts of the industry have had to figure it out their own way, which has caused even more uncertainty.

Musician and Grammy-award winning artist Imogen Heap (2017), who has been supporting Blockchain since 2015 and has been exploring new ways to create more opportunities for artists to get paid in a fair way, points out in her article for Harvard Business Review: "A major pain point for creatives in the music industry - such as songwriters, producers and musicians - is that they are the first to put in any of the work, and the last to ever see any profit." She feels that musicians have almost no data about the way royalty payments are calculated, and they have very little reliable information about where and how much people are listening to their work.

2. Cutting Out the Middlemen

Figure 3. Recorded Music Supply Chain (Blockchain)



Sitonio and Nucciarelli (2018)

This is what the chain looks like if blockchain technology was implemented. As seen, the chain looks even simpler than the original chain (Figure 1). Songwriters could get paid their share directly, without any middlemen. Similarly, with songwriters, once the artists have been through the creative process (with the assistance of producers, engineers), their work would be uploaded to blockchain networks, where the information and revenues would be collected, before sharing it with the consumers through blockchain platforms. If the artist is signed with a record label, the label would be responsible for submitting the work to blockchain networks.

Artists such as Pitbull, Lupe Fiasco and Gramatik (2019) have expressed that they can see blockchain as a possibility to eliminate all the 'middlemen' and prioritise artists in the chain. They also believe that decentralised technologies in the music industry could make it easier to track ownership and royalty payments.

The way blockchain is designed makes registering ownership, licensing music and keeping track of royalties substantially more transparent, and because every transaction is visible for the public, it is safe and does not need any human interference, it eliminates the risk of a fraud and unfair deals, and together with the inefficient licensing or a human error, could potentially make a significant change to the music industry.

It is not only the artists who are interested in Blockchain. Other 'blocks' of the industry have started to conduct research and invest in ideas and new companies that use Blockchain to impact in the music industry. Berklee Institute for Creative Entrepreneurship has started a project called Rethink Music, which aims to advocate for transparency and fairness of payments in the music industry.

In their report (2015) they identify the so-called 'black-box' issue as one of the key problems the industry is currently facing. Because the ownership has not registered correctly, artists are missing out on royalty revenues that should belong to them but cannot access. A similar problem exists with PRO-payments and mechanical royalty payments.

A potential solution to this is Blockchain's smart contracts. Smart contracts can include which percentage of the revenue goes to each member of the band, the music label, the manager, etc., and pay artists immediately (IEEE, 2018). This would eliminate all the human interpretations of contracts, confusing deals, as well as uncertainty regarding royalty splits, should the artist change their label and/or publisher during their career. This example is only one of many ways Blockchain could clarify the system of rights and royalties, making it more transparent and understandable, and less reliant on manually writing down the correct number each time. Artists have come up with even more creative ideas.

Artists have started minting their own cryptocurrencies. For example, Dance artist Gramatik created the GRMTK token and raised just under \$2.5 million by releasing 25 percent of them for the community to buy. His royalties will be shared with anyone who is holding GRMTK tokens (Dredge, 2018). However, the problem lies yet again within the same rights and knowing exactly who owns what. This kind of royalty system can only work if the artist owns 100% of their own rights - the moment there are other people involved (different people collecting royalties in different countries), the artists will have to start splitting the payments of tokens and will end up with the same problem again.

Another way of using Blockchain is creating online profiles for artists - a Creative Passport, which would include all the relevant information, from their tour dates to songwriting splits. This initiative is led by Imogen Heap.

Figure 4. Example of a Creative Passport

PREFERENCES

CLOSED DATA

Calendar: Availability

Commercial Rates: Commissioned works, teaching, speaking, private performances

Payment details: Bank accounts, digital wallets

PERMISSIONS / PREFERENCES

Creative Passport profile:

Gender	YES / NO
Age	YES / NO
Education	YES / NO
Place of birth	YES / NO
Biography	WRITE, CHANGE
Lead image	IMAGE 1

Give permissions to entities to read / write / share / verify certain CP data:

ACCEPT / DECLINE

Notifications:

ACCEPT / DECLINE

Payment mechanism:

DIGITAL WALLETS

Levels of service:

TIER 3

Apps:

MAKE, MODIFY

Manage CP data:

VISIBLE / NON VISIBLE

CP income stream:

INVEST / NON INVEST

Donate to charity:

Hide And Seek to Drake Music for 1 week, share with DSPs

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DATA SHARING, VISIBILITY

Mpal: Calendar, commercial rates, edit, delegate, verify, accept notifications, pay monthly.

Streamliner: Accept notifications, pay Monthly, SELECT Image 2, biog 3 FROM CP

Downtown, PRS, PPL: Payment details, verify song data, access to song data feedback

Viberate: Calendar, commercial rates, accept notifications, tour dates.

Supapass: Newsfeed, accept notifications, receive payments to CP wallet, 6 month free licence for development, video log, tour dates, photo feed.

Musicoin: Send newsfeed, accept notifications, receive payments to CP wallet.

Twitter: Send newsfeed, profile picture, new release alerts, biog 1, photo feed.

Trackd: Access to stems, receive payments to CP wallet, biog 2.

Recordbird: New release alerts, newsfeed, biog 1, image 1.

Auddly: Creative Passport New Work registration app default.

▶ All data in other Creative Passport pages visible to Creative Passport holders. Apps charged to connect to Creative Passports. Income split between CP holders and Mycellia for R&D and investment in future services.

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Dredge, Stuart (2018)

The Creative Passport concept could be another way of making the music industry more transparent and information from song credits to tour dates more accessible to anyone. Imogen Heap (2017) explains that it could also include artists' biography, skillsets, organisations, where and when a song was recorded, what equipment was used, to begin with.

I believe this kind of approach would not only be incredibly valuable from a transparency perspective but could also be the start of so many new musical collaborations. Artists, who are signed to a specific label often have got restrictions of who they can collaborate with, the terms of the deal and how would the ownership and royalties be split. This could potentially be the start of an era where artists do not have to worry about any of the above and just create. Having a database with the 'keyword' option would enable artists to find the people with the appropriate skill sets needed for a project. In addition, people and companies could obtain a license for a song within seconds, rather than waiting for someone's response (potentially) for years or even asking the wrong person.

Creative Passports could also be of interest for the fans - it is a great way to find out about the artists and songs you like and connect with artists. From an educational point of view – music students could also get a valuable insight of the people in the industry, the instruments and technology that has been used to record some of their favourite songs, how to achieve a similar sound, and even directly engage with conversations with the artists themselves.

3. New Companies

Unsurprisingly, the new technology has initiated some new innovative companies who use blockchain technology as their USP.

MediaChain

MediaChain is a decentralised database – its main function is to share information across organisations and apps. MediaChain also creates Smart Contracts for musicians to who can then receive royalties directly without any middlemen. In 2017, Spotify acquired MediaChain, whose team is now working in conjunction with Spotify to create better systems for royalties (Perez, 2017).

Resonate

Resonate is a music streaming platform. Resonate claims to be more affordable for listeners and to pay artists over twice the rate of their competitors. (Resonate 2021). Similar to MediaChain, Resonate also uses Smart Contracts to pay the artists. Musicians pay a membership fee of \$5 when they join the platform. New customers will receive 3 hours of free streaming when joining, after that, the platform uses 'pay for what you listen' model. The company claims that 2 hours of streaming per day would cost less than \$5 per month. Interestingly, if a user listens to a song more than 10 times, it will become free to access.

Mycelia

Mycelia is led by Imogen Heap. The concept of Mycelia is very similar to MediaChain's – creating an entire database on blockchain to secure fair payments for creatives. The company is mostly known for their Creative Passport initiative.

4. Intellectual Property

Blockchain could change the way we register royalties and help us improve the way we look at intellectual property. George Howard has written in his book:

The moment Art is digitized— for instance, in the form of an MP3— this intellectual property becomes a type of code. The same issues and challenges with respect to cryptocurrency thus layer so neatly atop of those of the music industry that they are nearly indistinguishable from one another. (Howard, 2018, p 189)

Sometimes, copyright infringement in the music industry can happen accidentally or by not being able to get in touch with the work's owner to ask permission, but if everyone's work was registered in one database and exactly the same way, it would make it almost impossible to infringe any copyrights or trademarks. However, one major challenge is that it is still not clear who could authorise that the person who registers the copyright is actually the owner of the work. It could also be that whoever registers their ownership first will qualify to be the owner of the work. One of the solutions could be digital signatures as a way of authorising the person, but it would still have to be verified by a third party.

5. Conclusion

I believe blockchain technology could substantially change and improve the way we currently register and check the ownership of our work, the way we collect royalties, the way we handle transactions, and the way we interact with the consumers. It could stop the 'middlemen' offering unfair deals or hide figures from the artists. Unfortunately, it is still a confusing concept for many people and not everyone fully understands it, therefore it is challenging to utilise it for every aspect of the industry. However, in recent years there has been a lot of research and funding invested in the subject and more consumers are becoming aware of the problems artists are facing and wanting to change the situation.

It is likely that any intermediaries who add value to the chain will remain even with the value created being redistributed and favouring artists and songwriters (O'Dair, 2016). I think it is time to prioritise artists and give them their fair share of their worth in the industry. The music industry cannot exist without artists/musicians and blockchain could be the technology that gives back the control to the first block of the supply chain.

"If recording music cannot make money, it will cease to be an occupation, it will become a hobby." (Ebert, 2015) [link](#)

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