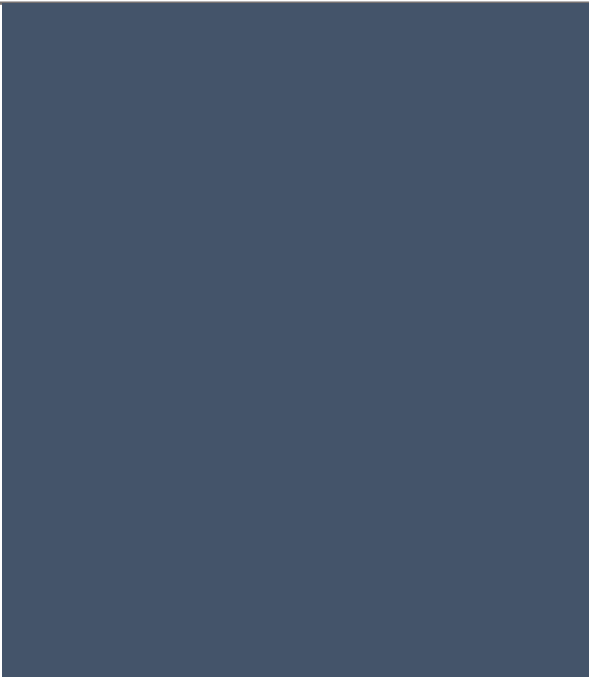




Legal & Business Affairs Assignment

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Intro - Definition of the blockchain

A blockchain is a decentralized protocol for creating, running, and making certain ledgers that make it possible to keep track of items that people might own. Examples include land, tomatoes, bitcoin, and intellectual property which can include music, without the central governing body having authority over them. The blockchain is a remarkable technological advancement because it has the promise of trustworthy ways of recording the asset, ownership, and transfers within countries, that might be seen to be corrupt, or not as developed. Even the countries with developed institutions can use blockchain for an advantage, to provide methods and recording of transfers that are not cost efficient with the current models (Wallsten, 2018).

Blockchain works by having blocks which are a representative of transactions. Therefore, if a person wants to send another person money, this would be represented as a block. There are then multiple parties that are within the network to approve the transaction, and if approved will then become valid. This block would be added to the chain and have a transaction record of the sharing of money. Finally, the money would be moved to the receiver of the money.

Why is blockchain attractive?

There are many reasons blockchain technology is attractive. This can range from immutability to security, with transparency being one of the main points that can help a business track every aspect of their money, and where it is going more easily (Iredale, G., 2021).

How can the blockchain technology help transform the music industry?

The main area where blockchain can assist is receiving equitable royalty payments, identifying counterfeit tickets, and record companies can find out the streams an artist makes, and pay them the correct amount they deserve (Built In, 2021).

The current royalty distribution system through the Performing Right Society (PRS) and the Phonographic Performance Limited (PPL) in the UK, is outdated and unreliable, with no prioritisation of the artist. With streaming platforms, they set a pay rate per play, with them ranging from £0.00051 on the YouTube platform to £0.0030 per stream on Spotify, with royalties then split with artists receiving a small amount of the total royalties. It can take years however for artists to receive their royalties with a simple problem for them being that if one person is not credited then can lead to the royalties in the music to be held elsewhere until the issue is resolved. With the blockchain it can give artists more direct and efficient ways receive their royalties. This chain can visibly show the copyright ownership of a variety of different music, which could address the lack of verified universal databases, and aid with lowering the number of illegal downloads and piracy (Chan, 2020).

While this could damage record labels in the future, it is anticipated that the open-minded and forward-thinking music companies, would get on board with change. Some have already done this, with Warner Music Group having joined investors in Silicon Valley, to invest into Flow, a project using blockchain to validate non-fungible Tokens (NFT), such as music that is signed officially (Chan, 2020).

Non fungible tokens (NFT's) are Part of the Ethereum blockchain, which helps store extra information onto digital assets. This information can confirm the owner of an NFT which is anything that is digital such as drawings, music, and pictures which they can sell on for more on the NFT marketplaces throughout the web (Regner et al., 2019).

There are currently issues with copyright within the music industry, that the blockchain network could assist in addressing with. There are two types of copyrights, the sound recording itself, and the underlying words and music (Baym et al., 2019) These can be easily authorised and managed on a public ledger without the need for intermediaries, which means that rights holders can have a greater share of royalty payments, nearly instantaneously. The way that this would be used is that users would be able to access the systems through a node in the blockchain. There is then an Interplanetary File System which can hold and store the music, with each file having a fingerprint hash as an identifier. The way around piracy and illegal streaming would be through encryption and watermarking methods. The watermarking helps to add copyright ownership to the audio file, and can track the ownership, even off-line (Zhao, and O'Mahony, 2018).

Low costs of crypto currencies

Crypto currencies have low transaction costs, which means that the average daily transactions for an artist can increase without losing single digit numbers of fees on their royalties (Chepurnoy et al., 2018). An example of this is the Cardano token, which has a transaction fee of roughly 0.16 to 0.17 ada or \$0.27 in every transaction (Williams, 2021).

Current recorded music chain

With the current recorded music chain, the writer of songs gets the rights of the song first, but then getting the flow of revenue or profit last in the chain. This can lead to some parties paid the wrong amount, with the writers/artists getting the remainder of the money of the music. Also unallocated royalties, known as black box royalties, occur where the writer/artists cannot be found. This can be because artists weren't registered, weren't registered correctly or data problems along the way (Help.songtrust.com, 2021). There are many song writers who do not have global publishing, so can become "lost" writers and lose their royalties, as they are only in their local market. With the blockchain this can be eliminated, as the work will have metadata and automatically show who is the rights holder, and which will eliminate the Black box entirely (Jorge, and Agurto, 2021).

Non-disclosure agreements (NDA's)

NDA's make it difficult for artists to know where the royalties from their songs are going, because these are set up between the labels and streaming platforms (Cooke, 2015).

With this, it means that specific data is hidden from the artist, they do not know how well their music might be performing and which can affect the contracts that they are offered in the future. There is a lack of transparency within the industry, which can hinder an artist's ability to get appropriate contracts for them (Rethink Music, 2015).

With the blockchain, it can help to increase this lack of transparency. However, it would be unlikely to be adopted by record labels because they benefit from the lack of transparency, and have no obligation to give artists and managers information about royalties. Therefore, the artists and managers should know about the royalty payments and how they work (Wishnia, 2019).

With the blockchain, it can help the artist, as it is private or public, with their choice being the deciding factor. Yang et al., 2020).

As this is an area that the major labels do not want to change, then this would have to be through government initiatives and policies to change transparency throughout the industry.

Companies utilising Blockchain for Music

Opus

This is a decentralized music sharing platform that uses the Blockchain technology to guarantee money to artist, with transparent and up to date payment rules, and a large library of music content that is stored within the community. They have introduced their own token, the Opus token (OPT), for payments and revenue for the artists and fans. These tokens can help the music industry as they can help the artist with their revenues, how to split them between the people within a band, and each song separately. This can also aid fans, by sharing their own revenues with fans, who can then support their favourite artist and also purchase extra content. The smart contract that Opus has implemented collects hashes of statistics of played songs, which are then turned into the revenue calculations (Opus.audio, 2021).

Ujo Music

Ujo Music are trying to set up a platform that can help artists and songwriters make more money so that they can support themselves and make the world a more culturally richer place for music. They are aiming to reduce the cost of how businesses are currently run and create economies where fans can support their favourite artists in different ways (De la Rouviere, 2018). The hope with their platform is to:

- Create a platform where musicians can upload and sell their music for crypto currency keeping 100% of the funds. UJO do not take a cut with the artists retaining control of rights and no cryptocurrency is not required to register.
- A band on the platform can automatically create split between band members and money be equally spit between each member.
- Fans can also tip their artists directly or buying specific collectables, non-fungible tokens indicating their support for an artist.

Illegal downloads and blockchain

The music industry has suffered from lots of damages because of people pirating and illegally downloading an artist's music and possibly making money off it. There is no type of technology that could stop someone from pirating the content, and no regulating authority. This can be shown in places, such as YouTube, where someone can change the video into a music format, and pirate them, by putting them on different websites. With the blockchain this would help to end this, as well as ticket scalping, where large number of tickets are bought by a few individuals and sold at a higher price. With the blockchain it would track ownership of tickets and music, with the music being verifiable then, letting fans know they are buying from the legitimate source (Medium.com, 2021).

Spotify and Blockchain

Spotify, in 2017, acquired the blockchain start-up Media Chain Labs who will be developing better technology for artists, other rights holders, and their tracks on Spotify servers. The start-up has created different technology developments that can help with decentralized, peer to peer databases that would connect to applications that have information about it. They have also created an attribution engine for creators, and a specific cryptocurrency that can reward creators on the platform for their work.

Spotify has acquired this business because of royalty payments, and how to address this issue in a different way compared to what the current models are set at. Spotify has had a lot of royalties not paid out to artists in the past with them agreeing to pay publishers over \$20 million. However, they did claim they did not have the necessary data to do this, with these claims being legitimate.

With Media Chain, Spotify can get their hands on the data they need with the decentralised database that Media Chain provides. Media Chain have mentioned that their vision for the problem with attribution is a shared data layer, that can solve the problem and help create an efficient and sustainable model for online creativity (Techcrunch.com, 2021).

Blockchain - the issues with it

Crypto currencies

With crypto-currencies, theoretically and legally, they are not money, even if some people might believe it to be.

With crypto currencies there are not many, if any, goods and services settled by them. They are not seen as a unit of account, and a way of paying someone. Cryptos are also priced in united states dollars (USD) so are no different from any goods priced in USD. In recent studies, 80% of the worlds central banks do not allow digital currency under their existing laws, or do not permit them within their country. This would be a problem within the music and entertainment industry because the industry relies on money to pay for services, that are required in day-to-day work. Also, if labels pay artists with crypto the currency could fluctuate a large amount and be worth a lot less possibly a year or two on (Lo, 2021).

Cryptocurrency is also seen as an asset, but they do not have an income stream nor a practical use, so the most important part of crypto is speculation, which leads to random movements in the market. This would impact the Music and entertainment industry by not having a set amount of money to pay artists royalties, with this money increasing or decreasing rapidly (Investopedia, 2021).

The cryptocurrency market can also be manipulated by owners who own a lot of that currency called "whale wallets". These manipulations can have huge price volatility and cause a big price move. This can affect the music and entertainment industry by possibly damaging a business's structure, such as Opus, where if you have a certain amount of their cryptocurrency, you can earn some of the artists revenue. However, if someone was to buy a lot of that cryptocurrency and take all of the extra revenue, then it could lead to problems such as a few people having the extra revenue that the artist has given out (Banton, 2021).

Another challenge for implementation of the blockchain into the music industry is changing the music industry's 'status quo'. The industry accepts the imperfect system created over the years by different groups and organisations. This is possibly because they are connected politically, with many

of the music royalty allocations being built into existing laws. It is hard for an unfamiliar technology to be implemented into a long-lasting system (Nast, 2021).

Another challenge is for the artists adopting this new method. There is a learning curve for artists to understand with this new technology, with them learning about the proactive, and not just the passive, ways to make money through distribution technology, and the other opportunities available to them with them being early adopters of this.

This is going to be particularly difficult to convince major labels who in total had a control of 68.6% of the music industry in 2020, who will try to stick to the old music supply chain (Statista, 2021).

Will blockchain help songwriters?

The Blockchain would help to distinguish the rights of all people involved and how much they need to have in percentages. A single block on the database can represent a song and help to contain the rights of everyone on that song (Arcos, 2018). This would help to update the technology that is already on sites such as YouTube and Spotify and would prevent them from uploading a song without all the accounting rights of that song. This would help the songwriter receive their royalties from a song and not have the interference of labels, that could take more money from the other rights holders (Billboard.com, 2021).

Large companies already adopting blockchain technology

Some of the largest companies in the world are now implementing ways to use crypto and the blockchain in their ways of work (Walsh, 2021).

Music Industry based:

- Veze
- Rocki
- Open Music Initiative

Non music industry based

- Microsoft
- Amazon
- Visa

This could lead to some of these companies having a monopoly over this sector of blockchain payments.

The advantages to a monopoly can be:

- Innovation, the industry that the monopoly business is set within, such as google, investing significantly in technological improvements.
- Efficiency and dynamic, better products than competitors

The disadvantages to a monopoly can be:

- There is a higher price than competitive markets. This affects the blockchain payments by making the fees higher to withdraw money, or multiple deposits, onto the network.
- A decline in the consumer using the product/services. This affects the blockchain network by making it difficult for artists to use this service and make them change back to the current music chain methods.
- A decline in incentives. If there is no competition, then there could be some organisational 'slack' leading to businesses in the blockchain market feeling they can relax and not work as hard as they did at the beginning of the business (Pettinger, 2021).

Conclusion

This analysis of the blockchain illustrates that the technology can be used within the industry to help with some of the most problematic areas. These areas such as the speed, transparency and growth are all areas that are problematic for the music industry but can be helped by the blockchain technology. The technology for blockchain is still in its early days, and more information needs to come out before being fully implemented into any business. With larger businesses also deciding to investigate blockchain technology, it could be seen as a positive or negative stance, depending on implementation steps. To have this fully implemented into these large businesses, there are areas that need to be addressed first before it is initially implemented. The education of artists and managers, with copyright, and acknowledging that transparency with different sectors of the industry is still going to be a problem even if the blockchain is implemented. This will have to be changed through legislations and policies.

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