

Blockchain.

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In this project, I will be looking at and analysing blockchain and the way that it is impacting and changing the modern music industry. I will discuss the history and general uses of blockchain, its commercial uses, the legal implications of the use of blockchain in the music industry, the consequential impact of these on the music industry and the wider entertainment industry. I will also discuss where myself and other music industry professionals along with blockchain experts believe that blockchain will go in the future. Along with this analysis of what blockchain does, I will discuss the way that different businesses can incorporate blockchain into their daily business functions.

Blockchain is a relatively new form of information storage. Most people, even if they do not know exactly what it is, will at least be familiar with the term 'Bitcoin'. Bitcoin is a cryptocurrency that uses the blockchain storage methods to act as a fully digital currency. The Author Melanie Swan says in her book *Blockchain: Blueprint for a New Economy* "We may be at the dawn of a new revolution. This revolution started with a new fringe economy on the internet, an alternative currency called Bitcoin that was issued and backed not by a central authority but by automated consensus among networked users. It's true uniqueness, however, lay in the fact that it did not require the users to trust each other. Through

algorithmic self-policing, any malicious attempt to defraud the system would be rejected.”¹

This algorithmic way of controlling the money on the Internet would have a reduced amount of fraud and work well for streaming services providing online content.

Melanie Swan also states that: “The potential benefits of the blockchain are more than just economic - they extend into political, humanitarian, social and scientific domains - and the technological capacity of the blockchain is already being harnessed by specific groups to address real world problems. For example, to counter repressive political regimes, blockchain technology can be used to enact in a decentralized cloud functions that previously needed administration by jurisdictionally bound organisations.”²

Those are the uses for blockchain, but what it actually is, is a way of storing information in digital blocks. By doing this, it makes it much harder for a hacker to access the information stored in a blockchain file. This is particularly useful for websites such as Wikileaks as they can get information out to the public and make it increasingly difficult for people get hold of the information of the original poster.

While many people are concerned that because of the amount of data that is moved online, blockchain may provide a much more comprehensive and safe way of storing and protecting the important information that we put on the internet, there “are features that could be as fundamental for forward progress in society as the Magna Carter or the Rosetta Stone. In

¹ Swan, M P. VII

² Swan, M P. VIII

this case, the blockchain can serve as the public records repository for whole societies, including the registry of all documents, events, identities, and assets...the notion of encoding every asset to the blockchain with a unique identifier such that the asset can be tracked, controlled and exchanged on the blockchain.”³

This storing of data on the blockchain would also keep them much safer from being accessed by unauthorised people. Blockchain stores information in a 64 character and number code, known as a hash which is unique to the file that has been stored. The safety aspect comes in where the hash cannot be computed backwards. If you do not know the hash, you cannot access the file.

As I have already stated, blockchain is, at its core, simply a way of storing digital information and while it has a huge benefit for crypto currencies such as bitcoin, also has many benefits within its commercial uses.

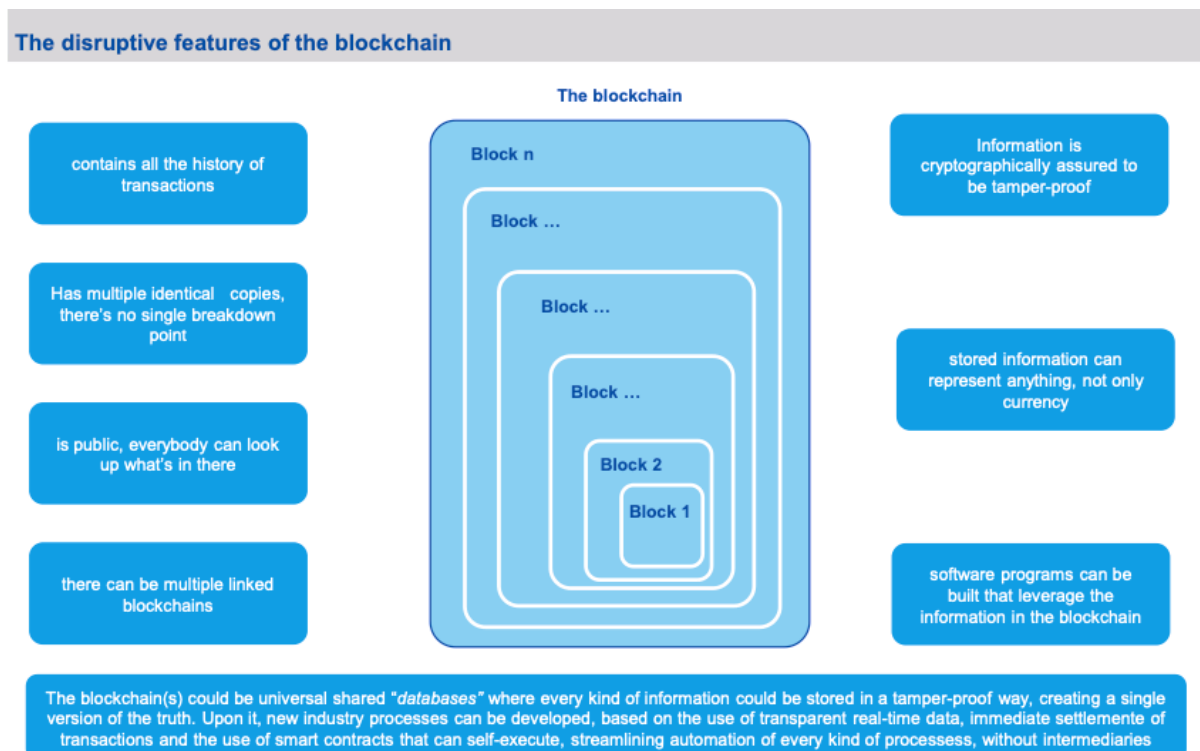


Fig. A

Fig. A⁴ shows the structure of a blockchain and as Cermeño says about this diagram, “One of the most promising features is depicted in the lower right box of [Fig. A]: software programs can be built to leverage the information in the blockchain: these programs are called “smart contracts” and are basically computer code uploaded to a ledger, rather than basic passive data entries. Smart contracts are programmed to generate instructions for downstream processes (such as payment instructions or moving collateral) if reference conditions are met. Like passive data, they become immutable once accepted onto the ledger.”⁵ This would have a significant impact on the commercial world, and more specifically the music industry. The secure storing of data and being able to access an indisputable truth of the data would allow protections for both artists and companies. It would mean that disputes that are often brought up with no clear answer would be able to be traced back to the source material and not be open for debate from either party.

It can also act as a way of proving/confirming someone’s identity which in terms of commercial uses is invaluable. It is incredibly easy to create a fake identity online which leaves people open to fraud. In the music industry, it is very easy for newer people in the industry to be scammed by people pretending to be from one of the major music labels. Blockchain would act as a strong barrier against this kind of fraud. “IBM has also released a blockchain-enabled identity management tool called IBM Verify Credentials. The

⁴ Cermeño, JS P. 5

⁵ Cermeño, JS P. 5

decentralised system allows certain trusted organisations to issue credentials to users, who can then use the credentials to prove their identities to other organisations, enhancing personal privacy and streamlining the verification process.”⁶

While there are many benefits of blockchain, a completely new method of storing, distributing, and managing information and cryptocurrencies also brings up new and not previously thought about legal implications. While working with a new technology, it may seem that the legal implications are also completely new. However, some of the issues that are being discussed in relation to blockchain, have been discussed for many decades already.

As Philippa Ryan explains, “Stewart Macaulay’s seminal 1963 article “Non-Contractual Relations in Business” explored why merchants and manufacturers often fail to plan their commercial relationships and why they seldom resort to legal sanctions to settle disputes. Macaulay found that, in many business exchanges, detailed planning and legal sanctions play only a small role. His tentative explanation was that businesses prefer to deal with people or organisations they trust based on their prior dealings or their reputation.

According to Macaulay, a manifestation of trust might be a brief conversation followed by a hand- shake. The rationale is that, if parties cannot rely on promises as being made in good faith, and plan for the future accordingly, the cost of uncertainty would make conducting business impossible. However, this approach to contracting frustrates lawyers, who advise their clients to plan for contingencies and formalise their business arrangements.”⁷

⁶ CB Insights Web Page

⁷ Ryan, P P.10

This reliance on trust in making business decisions and transactions has suffered (for the better or worse is up for debate) due to the rise of the internet over the last 30 years. The inability to see the person you are interacting with makes people automatically more suspicious and for the most part they are right, it is much easier to scam someone online than it is face-to-face. This has caused people to be more cautious in making sure that their business dealings are all documented and that there is a tangible chain of communication throughout the transactions.

Blockchain creates a thread of all the information that cannot be accessed without the hash and creates an indisputable truth. This means that it will be much harder to dispute a contract and while this may be a good thing overall, often in business verbal contracts are made for smaller extra amounts of work. If people start to rely to heavily on the blockchain traces to track a contract, it may well have implications for people making verbal agreements as an addition or change to a contract that has otherwise been documented through blockchain.

The music industry is one that over the last 20 years has leaned increasingly heavily on digital technology. With blockchain becoming so widely discussed over recent years, many people have started to wonder what this new technology means for the music and entertainment industries. There are concerns that the introduction of blockchain to the music industry and streaming services may make it more difficult for people to make money from their music due to the volatile nature of cryptocurrencies and the fact that to make it work,

people would have to use a universally agreed upon cryptocurrency to prevent the distribution of money from slowing down massively.

Kenneth Chi Ho Kim argues against these worries however, “Fair distribution of revenues is not the only anticipated problem of the music industry which is hoped to be resolved using blockchain technology. The lack of transactional information when music is traded through online services is another big issue, while the piracy of digital records continues to be a global problem as well. Some believe that the blockchain may cut out the middlemen and distribute bigger shares to the artists, keep transparent records of rights using smart contracts, and stop piracy when record blocks are shared among the stakeholders. Other potential benefits are the access to alternative sources of capital, diversified revenue streams and the involvement of the fans. However, there are also criticisms that it would take over 5 to 10 years if not at all for the technology to have any meaningful effect in the music industry.”⁸

These are just some of the ways in which blockchain can benefit the music industry. One of the largest problems that artists face with the continuing digitisation of the music industry and distribution of music is that getting hold of their money can take several months due to the processes that it has to go through and is often times depleted because of the processing of the money. Cutting out the middle man in this case allows the process to become more streamlined and using the cryptocurrencies that blockchain allows us to, means that there is even less processing of the money and as a consequence will benefit the artist. However

⁸ Kim, K P.197

cutting out the middleman will inevitably have a negative impact on the companies processing the money going from the consumer to the artist, although it is very possible that they will be able to move into other aspects of the digital music industry.

Ultimately, very little will change for the consumer, however, it will have a very positive impact on the other end of the chain and will allow a more streamlined and beneficial system for the artists and the music companies in accessing their royalties through the digital music platforms.

Many people have theorised and predicted where they think that blockchain technology will take us in the future. One of the most notable is the effect that it will have on banking and finances. Banks will probably adopt blockchain technology for storing information and in the slightly further future for cryptocurrencies. There will also be an increased use of cryptocurrencies as blockchain becomes more widely used and accepted, many forms of money use and transference will be streamlined and made much easier for online and digital transactions.

We may well also see a movement of countries developing their own cryptocurrencies:

“Russian President Vladimir Putin was the first who proposed to issue “Crypto Rouble,” a national cryptocurrency. Obviously, it’s inevitable that governments will have to recognise the benefits of blockchain-derived currencies. At the rise of Bitcoin, governments expressed their skepticism regarding the particular application of cryptocurrencies. However, they had to worry when Bitcoin became a tradable currency that couldn’t be controlled by any government. Although, some countries like China still ban Bitcoin exchanges, we should

expect that governments will finally accept the blockchain-based currency in 2018 because of its potential advantages for public and potential services.”⁹

My prediction is that in the future, we will see blockchain becoming something that is fully integrated into our everyday lives however not in an overt way. We will be using technology that utilises blockchains but with very little visible change for the average home user.

In conclusion, I believe that blockchain technology is here to stay, it has many benefits for people from all walks of life. It can be used for large scale businesses such as banks where they not only store huge amounts of money but also huge amounts of personal data from their customers which blockchain would be able to keep safe. Blockchain would also benefit hospitals in the same way of securing the large amounts of personal data that is stored. In the same vein of securing huge amounts of data it can also help keep governmental information safe from spies and hackers.

While blockchain has many benefits for keeping the information of large organisations safe it can also help to keep individuals safe from being identified when leaking information to sites such as Wikileaks.

Of course while blockchain brings many benefits, it also brings some concerns along with it. As this new technology pulls the world closer to the normalised use of cryptocurrencies it

⁹ Gogan, M Web Page

also pulls us closer to a cashless society which does not benefit everyone. It will cause problems particularly for homeless people or people working in low wage jobs who benefit heavily from cash tips. There is no easy way to solve this but it will be incredibly important for the companies and organisations that implement the use of blockchain cryptocurrencies make sure that accessibility is a top priority and that the use of cash is not wholly eliminated as we are seeing happen due to the current climate with the corona virus.

I believe that blockchain will have a continued impact over the next few years and that many of the impacts of this technology have yet to be seen.

2,312 Words

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