**Basics of Blockchain Without The Hype**

By Alan Graham (@agraham999)

The blockchain is the underpinning technology that makes bitcoin work. You don’t have to understand bitcoin to get a grasp of what it does or could do, however. Let’s just break it down to some basic ideas. The blockchain is essentially an immutable (unchangeable) decentralized (no one owns it) public ledger or record of transactional data. Basically an expression that something happened. That data is distributed around the world to multiple servers that allow this transactional data to be written into a permanent record. Each copy of this data is designed to contain the same data as the others. Essentially, you can trust that if you write a transaction into the blockchain, all copies will have the exact same transactional information. To boil it down to a very basic level, if you put something in it, it is there permanently, impossible to tamper or change. For the music industry this could be a record as to who is entitled to be paid for each recording.This has both good and bad implications depending on your point of view.

Some look at the blockchain as a panacea for solving issues of transparency or inefficiencies in the music industry, with the idea that simply recording records into the blockchain or by using it to store business logic, somehow “transparency” issues and other complications will be solved, since essentially everyone can read the blockchain. It is also thought that using blockchain technology and software robots running something called “smart contracts" would be able to solve issues surrounding the lack of a working global rights database, for example being able to know what something is and how it can be used. These robots could execute transactional details without the need of humans. There are vast technical and methodological issues around whether you can or should do any of this, which we can table at the moment. Regardless, the blockchain and even bitcoin have some very compelling technology that could certainly revolutionize some aspects of the music industry, if executed properly. However, currently there is such a “me too” rush to fund and develop these solutions, that there hasn’t been enough discussion as to “why" and “how" which could only further exacerbate rights issues. As is often the case, the rush to cash in on the next big thing often takes a back seat to properly planning how to create the next big thing. People looking to disrupt the status quo often don’t think about what comes after.

*"I didn't like my house, so I just burn it down to build another. Now where should I sleep tonight?"*

**Truth and Trust**

Knowing the above, you can extrapolate one of the major issues surrounding the current approach to using blockchain in the music industry, which is if anyone can write to the blockchain, *what is true*, *who do you trust to express that truth, and what does that truth look like?*

When you write anything to the blockchain you are writing an immutable truth. This does not mean you are writing something that *is* true, but software doesn’t judge upon the validity of a claim. It is the truth of the transaction. For example, if you charge something on your credit card, the truth is that there was a charge and that charge was "X" amount. However the truth might be you were overcharged, or possibly charged twice. These issues that pop up are issues that are often better handled by humans who understand issues of nuance, and of course while those transactional records exist, they can in fact be changed to reflect the new “truth".

If two people write a claim to an immutable ledger, the software simply regards it as true, because it doesn’t have the cognitive ability to understand truth from lie, only register a possible conflict. And when we’re dealing with the music business, we’re dealing not so much with truth and lies, but grey areas whereby you have differing truth that represents the views of multiple parties. So who gets to say what is true and whose version of the truth gets to be written into an immutable record of “fact”? The truth, for example, in one part of the world isn’t necessarily the truth in another. These are issues that need to be addressed and worked out, and until then, putting more “transparent” data into an immutable record is an added complexity that won’t disrupt current systems for a better alternative, but in fact likely just make the current system worse.

*[Example: If you changed your sub-publisher in Australia on July 1st 2015 from X Songs to Y Rights but failed to tell some relevant parties. Two different artists recording a cover version of your song in August 2015 could put X Songs or Y Rights down as the publisher in Australia and both be correct with the information they had at hand]*

In closing, the blockchain has some very promising ideas and technology built into its core architecture. It is a tried and true technology that’s been running for many years, and it has remarkable possibilities, that if properly recognized, could in fact reduce cost overhead, create new opportunities never seen before, and even improve the process of accounting and record keeping. But for any of that to become a reality, there has to be a concerted effort by those in music to find answers to some of the above questions and others I didn’t even touch on.

I’m critical of the rush to use blockchain for every solution because I actually work with blockchain/bitcoin each day and we’ve had to ask these and other tough questions. The creative class has had an awful lot of promises in the past about reducing gatekeepers and a coming golden age, and yet what often occurs is one empire is simply replaced for another. So caution is the word of the day where private corporations and idealism often take the place of common sense.

I don’t have to tell anyone in the music business that hype is an easy thing to sell, but this is one area where a little more caution, a bit more discussion, and a lot more long term planning would perhaps temper the excitement of blockchain, but give it and us a better foundation for the future.

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