

Blockchain 101 for Visual Artists: Future of Rights Management & the Promise of Web 4.0

By Aaron Tucker, January 2019



Brief description of the event

The presentation took place on November 28th 2018 in Toronto, ON and was hosted by Access Copyright, Prescient & CARFAC Ontario; emissaries from those organizations included Roanie Levy (Access Copyright/Prescient), Sapan Narang (Access Copyright/Prescient), Stephen Sawyer (Access Copyright/Prescient) and Elissa Pendergast (CARFAC).

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It is easier to start with what blockchain is not: it is not an app; it is not a social media or virtual world; it, itself, is not a currency; it is not a creation tool. Instead, very simply, blockchain is a tool to track virtual transactions and/or potentially facilitate exchanges of resources; in application, blockchain is being used to track food as it moves from farm to store; as a way to keep track of government spending in Dubai; and to establish ownership over a particular artist's work(s) to then track the reproduction/distribution rights attached to said work(s).

Blockchain operates like a giant spreadsheet that is shared by all the users that are on the blockchain's network. This sharing creates a peer-to-peer distributed network, with no centralized hub of control, a feature that is essential to the security and transparency that are its core benefits. Each item on the "spreadsheet" is a token: using an artist as an example, they may upload a work to the system; that work is then given a virtual ID called a token and that token becomes an entry in the "spreadsheet." When another user enacts some form of transaction with that token, that information is recorded as a hash (a number that represents the transactions but does not contain the actual private details), representing the exchange as a "smart contract." That smart contract is shared with every other node on the network. Once there is a consensus that the encrypted transaction has taken place, or the smart contract has been fulfilled, (i.e. 51% of the users agree on the parameters of the transactions and "record" it in their spreadsheet), the transaction is closed, then bundled with other exchanges into a "block" that is kept as permanent and public record of the transactions; multiple "blocks" are put together to form a chain.

As an example, an artist may want to sell access to a virtual copy of one of their works; alternatively, they may want to sell a physical copy of their works. In the case of a virtual work, an artist, after creating a token for their work, can choose to give varying amounts of access to that work, with access and its record of that access being recorded using blockchain; the artist is then paid, peer-to-peer, for that access within that blockchain. For those selling physical copies of the work, blockchain

can be used to keep track of the information of that sale; again, the currency involved in the sale is shared peer-to-peer with no intermediary.

Proponents of the technology point to how both secure and publicly transparent the technology is: because blockchain requires 51% of its users to agree on all the information in its system, it becomes extremely difficult (though not impossible) for a bad actor to change information; as well, because each “block” is shared across the whole network, each transaction is auditable. Further, when considered virtual distribution and permissions, blockchain makes it very easy to track who has access to what particular artwork, with further control being given to how public or private the interaction on the blockchain can be. This leads to 3 “A”s that are important for those artists considering blockchain: attribution, authentication and automation. First, blockchain makes it much easier to control attribution to a work as once the work is attributed to an artist, it can’t be changed, or exchanged, without a consensus record. Second, blockchain, through its encrypted managing of all its transactions, makes authenticated access to works as restrictive or open as the generator of the token (i.e. the artist) wishes. Lastly, all of the transactions, and “record keeping” of the transactions are automated and currency goes directly to the artists.

Given all of this, it is worth remembering that while blockchain holds vast potential, the technology is still relatively immature and will require more time to grow. Currently, individual blockchains are not interoperable, meaning that information stored in one blockchain is isolated from information in another blockchain. At this stage, an artist would have to potentially subscribe to multiple blockchains; while it is true that in the perfect version of blockchain there are no third parties taking royalties on transactions, there may be a subscription fee for artists to allow access to each blockchain’s services.

However, the main issue that I can see at this point, and why it may be worth talking about and implementing blockchain now as opposed to when it is fully mature with a large database, is that, for artists, digital control over the works needs to start well before it is entered into a blockchain: if a digital version of the work exists outside the blockchain, it exists in our current digital world that, by its very nature, makes it such that any piece of information can be easily copied and distributed. Therefore, for blockchain to be effective, digital versions of the work need to be processed as if they are going to be entered into blockchain from the earliest stages of their conception. More, there is also nothing to say that someone who does not own the work cannot create a token for a work and sell access to it. To this end, Access Copyright used the event to talk at length about their new company, and service, Prescient, as an extension of Access Copyright’s mandate to help artists to be fairly compensated for the rights to their work(s). As such, Prescient adds a layer of digital rights management for artists, encouraging artists to begin to register their works with them so that they might better licence and distribute the works.

Overall, blockchain is in the early stages of popular adoption, with larger infrastructures for its use starting to be built. It is important for artist, and artist run collectives, to know the basics of the technology and its potential uses, in particular the developments at Prescient. I’m not certain that

rushing in as individual artists make sense, but considering entering into blockchains as larger groups/collectives, or even as a group of collectives, may make more sense at this stage, with individual adoption being more viable in the coming years.

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Aaron Tucker is the author of the novel *Y: Oppenheimer, Horseman of Los Alamos* (Coach House Books) as well as two books of poetry and two scholarly cinema studies monographs. His current collaborative project, *Loss Sets*, translates poems into sculptures which are then 3D printed (<http://aarontucker.ca/3-d-poems/>); he is also the co-creator of *The ChessBard*, an app that transforms chess games into poems (<http://chesspoetry.com>). Currently, he is a lecturer in the English department at Ryerson University (Toronto), teaching creative and academic writing. He began his doctorate as an Elia Scholar in the Cinema and Media Studies Department at York University in the Fall of 2018.