

# Metronome (MTN)

## Management Interview

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*Becker Goldstein and Taotao He from Strategic Coin conducted an exclusive interview with Jeff Garzik, the founder of Metronome and co-founder of Bloq, which is incubating the project. Garzik discussed the reasoning behind creating Metronome and how it compares with Bitcoin and Ethereum. He also explained the economic structuring of Metronome's unique token sale and provided opinions on the future of the token/ICO market.*

*The following interview transcript was edited for clarity.*

**Goldstein:** Jeff would you mind giving us a background of how you guys came up with the idea of Metronome and what brought you to the concept itself?

**Garzik:** I was one of the third or fourth Bitcoin developers – depending on how you count – one of the very, very, earliest Bitcoin developers that Satoshi Nakamoto the Bitcoin inventor started accepting changes from. It was a very, very, exciting innovative time to be there at the birth of Bitcoin and to see it grow as it has. We had a party when Bitcoin hit one dollar. We called it Dollar Parity day. So, it has been an amazing journey. Along the way, certainly when Bitcoin starts [them], many of the changes are set in stone and you don't really have an opportunity to change it.

Fast forward many years, there are a lot of lessons learned, primarily about the economics and sustainability of the cryptocurrency. As you probably know Bitcoin has an inflation rate that halves every 4 years, it started out at 50 Bitcoins, then after 4 years 25 Bitcoins every ten minutes, then after 4 years, 12.5 Bitcoins every ten minutes and so on. And so that just keeps declining ad infinitum until it's basically dust you know tiny, tiny, bits of money. So, it is the hope that people take this on faith, that the transaction fees will be enough to sustain the currency during that time when the new money supply is no longer introduced. So, this declining inflation rate is something that was very much an issue we felt and if you could go back to the white board, as we did with Metronome's start, with a clean sheet of paper and take all of the lessons we have learned over the past 8 or so years with Bitcoin, Ethereum and the other currencies, what would it look like? What attributes would that cryptocurrency have?

That was really the genesis of Metronome. We looked at the initial supply. These days you call it an ICO; we call it an initial distribution. There are some problems that aren't apparent to many people that we solved with Metronome. One of the most amusingly named descriptions of problems is named after the inventor of Zcash (Zooko Wilcox). [Called] the Zooko, it is a trillionaire problem. And what I mean by this is that on day zero, Zcash started with a mining supply – just like Bitcoin – and the very first day, the very first block, you just had 50 Zcash in the entire ecosystem, and from that the founder was sitting on a pre-mine, some paper wealth, or electronic wealth as it were, that if you count it out

he was a trillionaire based on current market prices. There was so little liquidity that based on the current trading price on day zero for Zcash, Zooko was a trillionaire. Of course, this did not last; this lasted about 12-24 hours until more liquidity was pumped into the system, but that was one of the many problems that Metronome solved. We solved that; we solved the stable inflation rate. All the other cryptos, they either have a constant rate, or they decline, and we matched that against what economists think is an efficient long-term inflation rate of 2% and some other problems. So, ultimately it was that clean slate, which every engineer loves, an opportunity to start from a clean slate, and that's what we did with Metronome.

**Goldstein:** Speaking of the inflation, you just simply decided to go with the mainstream 2% of the inflation rate that is commonly accepted by all of the economists and central banks. Is that the reason behind the number? Or something else?

**Garzik:** Yeah that's exactly it, is we started out with a constant inflation rate of 2 MTR per minute and that gets you in the first year. We didn't want to go with too big dilution; we didn't want to go with too small dilution so in the first year that's around 10%, the second year 5%, and on down, down, down, until about Year 30 at which it has a constant floor of 2%. And that's exactly right, it is what economists and central banks think is what's efficient and necessary to keep the economy stimulated.

**Goldstein:** That makes sense, and I have another question for you. Why did you decide to go with a descending price auction (DPA) rather than Vickrey auction or just regular mainstream bidding?

**Garzik:** As far as we can tell, based on internal simulations as well as academic research, is that that is the least likely to produce a pop. That gives you an efficient price discovery on day zero, at the initial auction. Even if – as some of the other cryptos have done – they go with a standard sort of reverse Dutch auction where the closing price, the minimum price is what everyone pays in the auction, this gives you real time settlement and real-time price discovery and so this appears to be the most efficient way to fairly distribute tokens at market price. We didn't want to advantage any insiders, we don't have a presale, we don't have a discount for the rich and famous, we just wanted a fair public distribution at market price.

**Goldstein:** Wow, now it makes sense to me. Also, what does Metronome solve for institutions?

**Garzik:** Well it's, in my opinion it's sort of the best of all worlds in that it creates that probably scarce supply that most cryptocurrencies have while being able to risk adjust across multiple blockchains. My background – I came from Bitcoin – there was a recent Bitcoin fork or not fork type of event – Segwit2x – there's been a lot of competition or et cetera within the Bitcoin community – are you going to upgrade, are you no. At a high level, if you are looking at it from an institutional perspective, that's just plain uncertainty and risk.

Similarly, you see the same thing in Ethereum – the big number two out there in the market – that is about to undergo a major upgrade from proof-of-work to proof-of-stake, and this is going to change the money supply per block reward in that case. And so, if you are trying to project what the Ethereum money supply going to be two years from now you literally don't know. Nobody has an idea right now because that block reward is changing, and we don't know what it is going to change to when Ethereum switches to proof-of-stake. Again, there is a level of uncertainty there. So, we took a step back and said what if you can risk adjust across blockchains? What if each blockchain is a railroad and you can switch between railroads? You wouldn't have to go through a 4x asset swap or asset exchange

at an exchange. What if you could move your gold bar from one warehouse to the other. Your gold bar doesn't have to be exchanged, or taxed or liquidated. You are basically just moving it from one security parameter to another security parameter. And so that's what Metronome does. It takes a step back and it says a currency doesn't have to be locked to a single blockchain.

**Goldstein:** Okay, this makes a lot of sense. And now we have Taotao, Co-director of Advisory, with a question regarding the platforms you decided to go with for metronome.

**He:** After reading your whitepaper and also news about it, it seems that first you would be issued on the ETH network, and then later on would be supported with ETC Rootstock, Bitcoin and [inaudible]. So why did you choose these blockchains as opposed to the other 1,000 blockchains out there?

**Garzik:** So, basically Metronome is implemented as a set of Ethereum compatible smart contracts and so as a result you have the compatibility with Ethereum, Ethereum Classic, Qtum, and Rootstock on Bitcoin. So, Bitcoin, Bitcoin Cash, they are not natively compatible with Ethereum and Ethereum virtual machines, so using the Rootstock side chain, which will be launched next month, you get an interesting combination of Rootstock pegged to the Bitcoin token – so it has exactly the same value – and you can exchange one-for-one Rootstock for Bitcoin. So, we can deploy smart contracts on that network or any other network that is Ethereum compatible. So, some of the other developments, those will be compatible with metronome as well. And so that's why we use the blockchain railroad analogy. The blockchain is what secures Metronome, and Metronome is kind of like a box car that rides on the railroad, and you can switch railroads any time you want. This is what kind of gives you that same asset, multiple blockchains type picture. It's a single global supply across any number of blockchains.

**He:** Regarding the whole scalability issue within the blockchain, especially amongst Ethereum, once Metronome is implemented, if Ethereum cannot fix its scalability issues, how do you think this will affect Metronome?

**Garzik:** That's part of the value propositions of Metronome quite frankly. If you take for example, Ethereum and Ethereum Classic. To me, they're basically the same. You have more people and more market cap on Ethereum, but to me as an engineer, they're completely compatible. It's sort of like you know you have a different color box car but it's the same railroad underneath. So Ethereum wallets also work on Ethereum Classic. Ethereum explorers also work on Ethereum Classic. The network compatibility is 98%-99%. And so, if you have a blockchain, which is suddenly clogged with transactions or transaction fees are too high, then Metronome users can port their Metronome from a clogged blockchain to a blockchain that is less clogged or has lower fees. And so that introduces this interesting market dynamic whereby you can seek out the most secure chain the chain with the least amount of fees, etc. Metronome lets you do that. That lets you risk adjust whether its blockchain drama, blockchain congestion blockchain fees, you can basically port Metronome to what chain fits you best, and so we consciously designed it. Sort of what we call self-governance is that Bloq has no special control over where you put your Metronome, you and you alone choose where to move it. And so that is very unique in the market and I think a very powerful concept.

**Goldstein:** And it is definitely a unique concept and speaking of self-governance, why is self-governance structure significant and how is it different from other cryptocurrencies that are self-governed?

**Garzik:** I'm personally a big fan of autonomous systems I really think that the in state of many of these blockchain developments are cars that own themselves, cars that drives themselves, property that owns

other property, that's called smart property. Really, really, advanced AI automation type of subjects and so I've for years performed research into autonomous systems and I think that the best systems are the ones that allow the market's users to decide all of the variables related to their assets and the variables in this case are you cannot only choose what blockchain that you are on, but this import/export feature is also a mechanism for upgrading contracts. And so essentially you can vote with your stake your Metronome assets choosing to move from a Metronome – we'll call it version 1.0, to a version 1.1 of Metronome. Or interestingly enough if a competitor [in audible] creates a better Metronome.

You can port your Metronome to that so like in all good open source projects there's no vendor lock in, and so that autonomous nature combined with the self-governance is really what makes it interesting. Specifically, on autonomy, we felt that the daily auction, that daily mintage again using a DPA for fair distribution at market price, no insider advantage type of shape, that needed to be autonomous that needed to be out of Bloq's hands and purely in smart contract code. And so, what you see with many other tokens it's a static distribution; it's a manual distribution to insiders with a little crowd sale on the tail end of it. We really wanted to do it right the first time.

**He:** Segwit2x, if it had happened, would have brought more stability to the whole Bitcoin scene. Right now, I see Metronome playing a much bigger part within the crypto-scene. What are your thoughts on that?

**Garzik:** Absolutely, so obviously I'm definitely disappointed. I think that with Bitcoin specifically it's an interesting governance picture. The way Bitcoin consensus currently works is basically anyone can veto a change. You can't make a change to Bitcoin, but if you throw enough mud, and confusion and chaos et cetera into the mix, you can veto or block a change. And the natural consequence in blocking an increase in block size, since the way transactions fees work, every block is an auction for block space. In the case of congestion, you bid in front of everyone else with transaction fees to get in the next block. When there are full blocks, the bidding gets very heavy and transaction fees on the network, right now they can be \$10, \$25, \$50 a transaction.

To me, a Bitcoin originalist, someone who has been around almost since day one, that isn't really the vision for Bitcoin, when the vast majority of the developing world lives on \$2 a day, a \$25 transaction basically makes it unusable for basically everyone but the top 2% or 3%. And that's not why I got into Bitcoin. I got into Bitcoin to spread freedom throughout the world to enable greater control over your own money. And higher transaction fees economically price out most of the world. And so, from an economic standpoint, the failure to upgrade was absolutely a great disappointment to me. That's what we were trying to do with Segwit2x and its definitely disappointing that it was cancelled. The mining support – in the end – wasn't going to last more than 24 hours after the fork point, and so from a technical perspective you wouldn't have essentially an upgrade. And it wasn't going to bring the community together; it was just going to cause more chaos. I think given that lack of consensus, cancelling it was the right thing, but for the reason why I and many people got into Bitcoin, it's absolutely a disappointment that its moving into the realm of only being affordable for a few people.

**Goldstein:** This makes a lot of sense. Going back again to Metronome and you mentioning its sort of a way to get to any blockchain you want or personally need. Do you think it would be a fair comparison to say in regular and orthodox capital markets, an ETF would be something similar to Metronome?

**Garzik:** I would say no, in that an ETF is a basket of mini stocks. From that perspective, Metronome is just one asset. It's the same asset. The asset doesn't change prices. You aren't doing a swap. You aren't doing

an exchange, and as such you are just moving from one sort of secure warehouse to another. And so, the value is that you don't have to go to an exchange to move from one blockchain to another, which was the picture before Metronome. If you want change from Bitcoin to Bitcoin Cash, from Bitcoin to a Litecoin, Bitcoin to an Ethereum, that is changing blockchains and changing assets at the same time. What Metronome offers for the first time is that you can change blockchains without having to change assets. You can keep your assets in cold storage in a hardware wallet. You don't have to unseal or spend or move the coins to a different account. It stays in the same account under the same keys. It just changes rails. So, it's different from a basket ETF in that it's just one asset, one asset price, and you are just moving the asset from point A to point B.

**Goldstein:** How do you feel about the overall token launch space and how companies are doing massive raises by using token launches?

**Garzik:** Well my stock soundbite is that the cost of digital asset creation is zero and therefore economically – when everyone, your neighbor and their dog, can launch their own token – you can in some ERC20 wallets simply point click and create your own token inside of 5 minutes. And that costs literally zero. And so economically, the vast majority of those are going to be worthless. 99% of the tokens out there are going to be worthless long term. But, the flipside of that is an amazing amount of innovation, an amazing amount of liquidity an amazing amount of value creation. We absolutely want to be a part of that; we want to be on the forefront, and so is it a bubble? Absolutely!

I think there is a lot of froth out there, a lot of projects that are scams and other things of that nature. There are a lot of people that are just naïve, and they are creating tokens that are “wink wink” not really a security but kind of are.

On the other side of this, there are really interesting projects, the project that mesh was renamed to, I forget the new name, several others, these are decentralizing compute, decentralizing storage, decentralizing network access. That's essentially going to turn Amazon AWS – cloud computing – turn it on its head. That's interesting and exciting.

The venture capitalists are looking at this from a radically different perspective. It's an ICO in the context of let's say, Facebook. If you had an opportunity to buy Facebook stock in the early days, obviously you would. But what if you had the opportunity to directly invest in Facebook's network effect? So not buying Facebook's equity but having a share of Facebook's network itself. That would be even more value than Facebook's equity. So that is what the Union Square Ventures, the Sequoia Capitals, the Andreessen Horowitz's of the world see – the opportunity to not invest in equity, which is ultimately a proxy for that company's success, but directly invest in the network itself.

When you buy Bitcoin, you are investing in every single Bitcoin business on that network just by buying Bitcoin. If you buy some Ethereum you are investing in every single business that is building on Ethereum. If you buy Metronome, you are investing in every business that builds on Metronome. Metronome's mass pay features, subscription features, quick settlement times, you are investing in that entire network just by buying one token. And, so the venture capitalists see that they have a lot of due diligence, a lot of garbage to sort through, and in 6-12 months, maybe sooner, we'll see a crypto winter where everyone gets tired of ICOs. But you have people being funded that would never have been funded if not for ICOs and that's both bad and good. We need alternate methods of finance; we need to make venture capital and financing more egalitarian and more open to the average individual. Again, there will be a lot of garbage out there but there are a lot of hidden gems too.

**Goldstein:** And that is exactly the thought we have been talking about over here. I've been telling the team that tokens [are about] trying to get the exposure to work for the growth of the network itself rather than the equity of the company. So, we've been working and developing this mathematical model to be looking at tokens and networks as two-sided economies. The ones who have the ability to build a two-sided economy will be that 1% of the companies that will be innovators and bring in the new world in creating a more efficient space. What do you think about it?

**Garzik:** I absolutely agree, and I think this is really causing everyone from entrepreneurs to venture capitalists to consumers to rethink how they invest how they buy and how they build companies.

**He:** Based on your own expertise, how do you value a token launch? What factors do you look at before you would want to buy into a token launch? Our main criteria would be management pedigree, use case, adoption feasibility, technology, mode and so forth.

**Garzik:** We're looking at similar metrics ourselves and so the quality of the team, the experience of the team, the quality of the tech, the consumer interest, the adoption ramp, who is backing it, who is buying in, what's the momentum. In my experience as a CEO and someone who in the past was pitching to venture capitalists, a lot of the same shapes are becoming apparent. You have to do due diligence on similar things, but you have this added due diligence of the network. What is the network going to look like? How is the network going to grow? What are the growth hindrances? What are the growth accelerators? And ultimately in a market full of tokens, is the buyer going to see some immediate returns, some medium returns, some long-term returns? How is that valuation? Is the team selling 10% and retaining 90%? What is the distribution in terms of fairness how widely is the token distributed? Is the vast majority of the tokens held by five individuals or 50,000? Those are just some of the many aspects that we look at.

**He:** Do you have any further points about Metronome that have not been covered by the media that you feel are actually quite important towards the project?

**Garzik:** We think that Metronome is going to be the best of all worlds when it comes to cryptocurrency and payments. You have on the Ethereum side quick settlement time, so 15-second block times means 15- to 30-second settlement. That is much friendlier and much more conducive to payment than the Bitcoin or Litecoin 10 minutes or 2.5 minutes. You're certainly never going to have somebody at Target or Home Depot or another retail outlet sitting at a payment terminal waiting for a block to confirm your payment. So, you have got the quick settlement times of Ethereum, but Metronome also adds unique features from Bitcoin. Ethereum does not have mass pay feature you cannot send a single transaction that pays out to 50 or 100 parties in one transaction. You have to send out 50 individual transactions and you pay a lot higher fees in Ethereum. Bitcoin on the other hand has always had this mass pay feature, but it has slow settlement times. So, we've really taken the cream of the crop from Bitcoin and Ethereum and put it together.

We've also created what is, as far as we can tell, the world's first for blockchain which is subscriptions. Heretofore you've never been able to have an approved withdrawal on a weekly, monthly or yearly basis much like magazine subscriptions, website subscriptions. Metronome for the first time brings that to the platform. So, we feel that it has the strongest payment story. Low fees, and if the fees get high you can just move Metronome to another chain with lower fees. This mass pay subscription feature, and of course all the standard transfer payment freedom type features that both Bitcoin and

Ethereum compatibles have. So again, if you start from a clean sheet of paper what would you have for a cryptocurrency that's used as a payment mechanism and a store of value. We believe that we need both and we believe that metronome provides that.

**He:** So I guess Metronome sounds like the perfect token? If you have to make one prediction for what might happen in the cryptocurrency space in 2018 what would your guess be? Do you think Bitcoin will go through a second fork? Do you think something will happen with Ethereum, ELS and so forth?

**Garzik:** My prediction is that my predictions suck **[laughs]**. What I mean by that is that so far my two projected paths on the Bitcoin side were the most likely scenario, which did not happen, is that Segwit2x succeeds and it pulls the community together, etc. The second prediction that I made many months ago is that if Segwit2x fails then you are going through a period of chaos, what I call a messy divorce scenario. This is where people that were not served by the upgrade because the upgrade did not happen are currently looking for a new home. And whether that's Bitcoin Cash or Ethereum or Metronome or Qtum or any other scenario, you currently have just a period of market chaos and uncertainty and I think that's going to continue for the next 4-6 weeks as people see where the hash power is going. There was a large permanent movement of hash power from Bitcoin to Bitcoin Cash. There was also an additional temporary movement of hash power from profit switching mining pools that bounces back and forth from Bitcoin and Bitcoin Cash. The result in terms of user experience is that Bitcoin not only has high fees, but it creates blocks much more slowly. And so, there's this period of uncertainty where people are trying to figure out, "okay, there wasn't an upgrade, what's next?" and you know the only prediction you can confidently make is that you cannot confidently make predictions.

## Relevant Articles on Strategic Coin's Website

*[The Thousand Year Coin: How Metronome Will Change the Face of Digital Currency](#)*

*[Bloq Launches Metronome, an Institution-Friendly Cryptocurrency](#)*

*[SegWit2x Suspension Enables Bitcoin to Avoid Blockchain Fracture](#)*

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