Stanford eCorner

How Bitcoin Came to Be

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BTCC Co-Founder and CEO Bobby Lee recounts the origins of Bitcoin and how its inventor decided it should be issued. Lee explains the "lottery" for acquiring the digital currency, which anyone can enter through a practice known as "Bitcoin mining." He also talks about the mathematically-derived amount of 21 million Bitcoins to be released over a pre-determined timespan.

Transcript

- Here's what it is, okay? Think about, if you're the secret creator of Bitcoin and you said let's only have 21 million bitcoins, how do you decide who should have the 21 million bitcoins? Is there a good answer? They should all give it to me. Or they should give it to all the poor people in Africa. Or maybe only give it to Americans. Or give it just to the men or the women. Or just the children. Or just the internet-enabled people. Or just people who have driver's license. How do you do that? For something that's digital and internet global, how do you decide who to give the 21 million bitcoins? It was a big, big question and there was no easy answer. However, what he thought was, this guy, Satoshi Nakamoto, he thought that the best way is to give it out for free. For free for everyone who wants to get bitcoin.

I'll talk about that. Bitcoin is really popular in China. It turns out a lot of Chinese people love bitcoin, so a lot of Chinese people are participating in this process of getting bitcoin for free. I think over, clearly over 60%, even 70% of global share for mining for bitcoin. How does it work? It's actually a free lottery. What the inventor decided was, Satoshi said that we can give bitcoin for free. All you have to do is come on over, run the software, click on a button, and do one simple math calculation. It turns out it's a hashing algorithm on the computer. And if you do one hashing algorithm, one run, you run one hash, then we give you one lottery ticket. That's why all these dozen of lottery tickets, right? In the beginning, he was the only one doing it, so he would press a button, he gets one lottery ticket.

Now, if there's only one lottery ticket in the bowl, guess what? He wins the first lottery ticket, right? This process, when more people participate, then you could each get lottery tickets, and it turns out he's giving out these bitcoin prizes at every 10 minutes. Every 10 minutes, there's a free bitcoin, 50 bitcoins per lottery winner, and then every hour there's six winners, and every day there's 144, and each day there was 7,200 bitcoins being given away for free. For the first four years, he gave away about 10 million bitcoins like that. If you do 7,200 bitcoins a day times four years of 365 days, that's about 10 million bitcoins. That's how bitcoins came into the world, through this free lottery. I put an asterisk there, free. Is it really free? Why not? Is this ETL lecture free? Is it free? It's not? Did you guys pay an entrance fee? Did I collect something from you? You should give me some bitcoins. Well, it's free with an asterisk, because you have to expend the energy to come here. Or if you're viewing online, you have to expend the energy to download the video to watch it. Same thing with bitcoin, you could get these lottery tickets for free as long as you expend the energy, the computation, to do these math hashes.

Mathematical hashes. What happens is, we're not talking about just doing a few hashes. Afterwards, people realized it's so good deal, you could just keep doing more. People started doing 100 hashes per second. A thousand hashes per second. They'd hook up multiple computers to do it and they'd use graphics cards and specialized chips. Now these days, there are special computers, I'm sorry, special companies that make specialized ASIC chips, Application Specific ICs, that does bitcoin mining. These chips don't do thousands of hashes per second, not even millions, not even billions. They do trillions of hashes

per second. The whole world today has what is it? Two hundred, I think it's over 1,400 petahashes per second.

A petahash is like a quadrillion hashes per second. Anyway, it's huge.