

**Senate Committee on Banking, Housing, and Urban Affairs**  
**Cryptocurrencies: What Are They Good For?**  
**July 27, 2021**

**Testimony of Marta Belcher, Chair, Filecoin Foundation**

Thank you, Chairman Brown, Ranking Member Toomey, and Committee members, for inviting me to testify today.

I'm Marta Belcher. I serve as Chair of the Filecoin Foundation, one of many companies working on a cryptocurrency called Filecoin. The question posed by this hearing is, "What are cryptocurrencies good for?" Our answer to that question is that cryptocurrency can be the foundation for a better Internet — an alternative to big tech that puts people in control of their own data, protects user privacy and security, and permanently preserves humanity's most important information. Today, I would like to explain how.

Cryptocurrency makes it possible to send monetary value across the globe instantly and securely — just as easily as you can send information over the Internet by attaching a file to an email. That is to say, cryptocurrency does for monetary value what the Internet did for information.

For me, the most important thing about cryptocurrency is that it creates the ability to program money. In other words, you can write computer code that automatically transfers value upon a condition being met. For example, you could write a computer program that says, for every second of a song that I play, automatically transfer the equivalent of a millionth of a cent from me to the songwriter. This can happen instantly and automatically, with no intermediary between us, even across borders. This kind of transaction would be untenable using traditional payment systems.

The cryptocurrency technology I work on — Filecoin — uses that same programmable money concept to create a decentralized file storage network. If you have extra storage space on your computer hardware, you can "rent it out" to others who will pay you to store their files (or pieces of their files, so that only the file owner can put the pieces back together). A computer program will regularly check that the files are still being stored on your computer and, if so, automatically compensate you with cryptocurrency. It's like Airbnb for file storage: storage providers rent out their extra storage space to earn Filecoin, and users spend Filecoin to store their files on other people's computers.

That may sound like a niche use case, but we believe this could be a foundational technology for the next generation of the Internet. Today's Internet is centralized. The vast majority of data making up the many websites Americans use every day sits in data warehouses owned by just

three companies: Amazon Web Services, Microsoft Azure, and Google Cloud. We have repeatedly seen these companies suffer blackouts, and vast swaths of the Web go down for hours, including websites that are massive contributors to the American economy. That's the problem with having single points of failure.

We believe you can create a better version of the Web if you combine the storage capacity and computing power on all of our individual devices into a supercomputer-like network, and store multiple copies of data across those devices. On this decentralized version of the Internet, websites will stay up even if some nodes fail, and the availability of information is not dependent on any one server or company. This provides a more robust platform for humanity's most important information.

Filecoin provides the incentive for people to contribute storage to that decentralized Internet. And these incentives work. Since launching last October, nearly 3,000 Filecoin storage providers have contributed nearly 8 exabytes of storage capacity. To put that in perspective, that could store all of the written works of mankind in all languages from the beginning of recorded history to today, 10 times over. And that storage space is being used to preserve humanity's most important information. As just one example, the Starling Lab — a project of Stanford and USC — uses the Filecoin network to permanently preserve the USC Shoah Foundation's archive of 55,000 video testimonies of genocide survivors.

Filecoin is just one use of cryptocurrency, but it demonstrates how being able to program money — to instantly, automatically send microtransactions across the world — can create economic incentives that enable entirely new technologies.

There are already thousands of projects building other cryptocurrency applications, from automatically paying music royalties, to compensating people when their data is used, to paying journalists for each view of an article, to incentivizing consumers to use renewable energy. Many of these projects will fail, but some may move technology forward in ways we cannot yet begin to imagine.

This technology is in its early days, and this stage of development for cryptocurrency is often compared to the Internet of the early '90s. It would have been a mistake, in 1995, to believe that we understood then what the Internet was good for. I would urge the Committee to embrace the possibility that cryptocurrency's uses might be just as expansive, and to ensure that innovation in this space can continue to thrive.

I look forward to your questions. Thank you.