

House Small Business Committee Hearing
“Breaking the Chain: The Benefits of Blockchain Technology for Small Businesses”
March 4, 2020
Testimony of Marvin Ammori, Protocol Labs

Thank you, Chairwoman Velázquez, Ranking Member Chabot, and members of the committee, for inviting me here today.

I’m Marvin Ammori, testifying on behalf of the Blockchain Association, a trade association for organizations responsibly building and investing in the next generation of digital services. I am the General Counsel of Protocol Labs. This year, my company plans to launch the Filecoin network, which is software designed to create a vibrant marketplace for online data storage. And blockchain technology is an enabler of that marketplace.

Protocol Labs was founded in 2015, and now has more than 117 employees and contractors across 36 states and 16 countries. We are a fully remote, distributed team, just like the internet we’re working to improve. Investors in our projects include some of the most respected venture capitalists in the nation.

Before we dive into what we’re building, I want to take a moment to discuss blockchain technology itself.

Blockchains have a lot of hype, but they are essentially data structures. So think of a database, a ledger, or a spreadsheet, but better for some purposes. Why is there so much hype for a better spreadsheet? Because a blockchain stays updated and in sync based on software rules and community agreement. One person, or one company, does not choose how to update the entries in the spreadsheet; rather all (or a specified number) of the computers in a network *agree* to make the update together. You might prefer a blockchain to a traditional database or ledger when you would rather trust the consensus of multiple players rather than having to trust a single record-keeper.

The invention of blockchain technology can affect industries far beyond money listed in a ledger, including health care, supply chain, law, and enabling investment and competition in internet infrastructure services such as cloud storage.

This year, Protocol Labs will help launch the Filecoin network, a marketplace for buying and selling cloud data storage. For decades, computer scientists and even law professors have written about the resilience benefits of a programmable, efficient market for storage, where people with extra hard drive space on their phone or in their data center could rent that storage, securely and

efficiently, to others who wanted access to that storage. Our software will be open source, and anyone will be able to download it to broadcast the desire to buy or sell hard drive space.

We may succeed in our ambitious, difficult project where for years others have failed, partly because we benefit from the invention of blockchains. In the Filecoin network, a blockchain will record the storage market's transactions. Nobody will need to trust a central party to manage the marketplace. They can rely on software rules and underlying that, mathematics.

Let's dive deeper into how Filecoin may benefit small businesses.

First, creating a marketplace in online storage may drive down the cost of data storage, a real cost for almost every business in every sector. Businesses need reliable and secure places to store data as much as they need electricity, and many of them pay cloud storage providers to hold and serve that data from their data centers. Cloud storage is a multi-billion dollar market with high margins. If the cost of storage falls, small businesses will save money – money that they can invest in hiring, or R&D, or office space. Some businesses will save money on their cloud computing costs and others will be able to move to the cloud for the first time through lower costs and added convenience. This transition to the cloud would benefit small businesses, most of whom have not yet transitioned their data storage to the cloud. They still rely on anachronistic corporate IT closets that are single-points of failure, with high capital and operating costs.

And if we drive down the cost of storage, more small businesses and innovators can create entirely new business models and technologies in emerging, data-hungry areas such as virtual reality, healthcare imaging, artificial intelligence, or other research involving giant data sets.

Second, and just as importantly, Filecoin will enable small businesses to compete directly in the cloud storage space. Today, Amazon is the largest provider of cloud computing. Amazon's cloud services, called AWS, is Amazon's biggest business, accounting for [more than two-thirds](#) of Amazon's operating income. Five companies control the vast majority of the global cloud computing market. We hope that an open, software-based storage marketplace can help all the smaller and mid-sized players in the market to compete more effectively not based on brand recognition, large sales teams, or spending more in marketing, but by competing on cost, speed, reliability, and security. If a smart, young entrepreneur has a cost-saving way to connect more storage to the Internet, she can immediately profit from that breakthrough based on merit rather than existing market share.

We are not the only company using blockchains to try to create open marketplaces for Internet infrastructure or to reduce the control of today's central Internet platforms. People sometimes

call these tools for a “decentralized web.” They include new browsers, privacy-protective advertising exchanges, video encoding, and distributed computing.

In sum, blockchains are novel data structures. They may be useful in many industries beyond digital money particularly when multiple players prefer collectively updating records. One of those industries is Internet infrastructure, including our project, the Filecoin network, targeting a market in online data storage to hopefully drive down the costs of storage and increase the quality for all small businesses.

Thank you. I look forward to your questions.