

Hal Finney, Cryptographer and Bitcoin Pioneer, Dies at 58

By Nathaniel Popper

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Hal Finney in an undated photo.

Hal Finney, a cryptographer and one of the earliest users and developers of the virtual currency Bitcoin, died on Thursday in Phoenix. He was 58.

Mr. Finney had been paralyzed by amyotrophic lateral sclerosis, or A.L.S., and was taken off life support at Paradise Valley Hospital, his wife, Fran Finney, said. She said his body was immediately prepared for cryonic preservation by the Alcor Life Extension Foundation in Scottsdale, Ariz., according to his wishes.

A graduate of the California Institute of Technology, Mr. Finney was a longtime futurist who put his programming skills to work in the service of his ideals, particularly his desire to see the privacy of individuals protected.

In 1991, he began doing volunteer work for a new software project known as Pretty Good Privacy, or P.G.P., and immediately became one of the central players in developing the program. P.G.P. aimed to make it possible for people everywhere to encrypt electronic communication in a way that could not be read by anyone other than the intended recipient. The program used relatively new innovations in encryption that are still thought to be invulnerable to code breakers.

Mr. Finney wrote in 1992 that cryptographic technology appealed to him because he worried about the ability of corporations and governments to snoop on citizens.

“The work we are doing here, broadly speaking, is dedicated to this goal of making Big Brother obsolete,” he wrote to an online group of fellow privacy activists.



The original author of P.G.P., Philip R. Zimmermann, quickly became the target of federal prosecutors, who believed that the software broke United States laws against exporting military-grade encryption software.

While the investigation went on and became a major cause for civil libertarians, Mr. Finney played a more quiet role in P.G.P. to avoid becoming a target himself. Mr. Zimmermann said in an interview that this decision meant Mr. Finney did not get proper credit for some of the important innovations he had made in the development of P.G.P.

When the investigation concluded in 1996 without any charges being filed, P.G.P. became a company, and Mr. Zimmermann set out to hire Mr. Finney as his first employee.

Mr. Zimmermann, in an interview before Mr. Finney died, said Mr. Finney was unusual in the field because he had none of the asocial tendencies and physical awkwardness that are commonly associated with people in the programming world. Rather, he said, Mr. Finney was a gregarious man who loved skiing and long-distance running.

“Sometimes people pay some price for being extremely smart — they are deficient in some emotional quality,” Mr. Zimmermann said. “Hal was not like that.”

While working on P.G.P., Mr. Finney was a regular participant in a number of futurist mailing lists, the most famous of which gave birth to the Cypherpunk movement, dedicated to privacy-enhancing cryptography.

Following these lists, Mr. Finney became fascinated by the concept of digital currencies that could not be tracked by governments and banks.

He was involved in many experiments aimed at creating an anonymous form of digital money, including his own invention, in 2004, of reusable proofs of work. Though that system never took off, he quickly saw the promise of the Bitcoin project when it was announced on an obscure email list in 2008 by a creator with the pseudonym Satoshi Nakamoto.

Bitcoin used some of the same cryptographic tools harnessed by P.G.P. and held out the promise that participants could choose to be anonymous when spending money online.

When the project drew criticism from other cryptographers, Mr. Finney was among the first people to defend it. He downloaded the Bitcoin software the day it was released. The day after that, he took part in the first transaction on the network when Satoshi Nakamoto sent him 10 Bitcoins.

His early work on Bitcoin and his programming background led to frequent speculation in the Bitcoin community that Mr. Finney was Satoshi Nakamoto, a claim he always denied.

Soon after getting started with Bitcoin, Mr. Finney learned in 2009 that he had A.L.S., and he withdrew, for a time, from active participation in the project.

Harold Thomas Finney II was born on May 4, 1956, in Coalinga, Calif., to Virginia and Harold Thomas Finney. His father was a petroleum engineer.

After graduating from Caltech in 1979 with a degree in engineering, he worked for a company that developed video games like Astroblast and Space Attack.

As a young man, Mr. Finney developed an interest in preserving life through cryonic freezing until better, life-enhancing technologies were invented, said a college roommate, Yin Shih. In 1992, Mr. Finney visited the Alcor facility with his wife to determine whether he wanted to sign up his family to be preserved in Alcor's "containment vessels."

"In my personal opinion, anyone born today has a better than 50-50 chance of living effectively forever," he wrote at the time.

Mr. Finney remained an employee of the P.G.P. Corporation until his retirement in 2011, working from his home in Santa Barbara, Calif.

In the last few years, Mr. Finney was able to move only his facial muscles, but he communicated and wrote Bitcoin-related software using a computer that tracked his eye movement.

"I'm pretty lucky over all," Mr. Finney wrote on a Bitcoin website in 2013. "Even with the A.L.S., my life is very satisfying."

As the price of Bitcoins rose, his family, to pay for his medical care, was able to sell some of the coins he secured in the early days.

Besides his wife, Mr. Finney is survived by a son, Jason; a daughter, Erin Finney; two sisters, Kathleen Finney and Patricia Wolf; and a brother, Michael. His wife, a physical therapist whom he met at Caltech, spent most of her days caring for him in his final years.

After Mr. Finney's death, the freezing of his remains was announced by another futurist, Max More. "Hal," he wrote in a statement online. "I know I speak for many when I say that I look forward to speaking to you again sometime in the future and to throwing a party in honor of your revival."

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