

Is bitcoin the wave of the future or a dangerous fad?

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As customers ate lunch at a popular restaurant in Washington's Adams Morgan neighborhood, few had any inkling they were on the front lines of an international monetary war that's featured FBI raids, the Deep Web, allegations of money laundering and millions vanishing in a nanosecond.

Not to mention predictions of the demise of cash.

The Diner, as the Adams Morgan eatery is aptly named, recently installed Washington's first ATM for [bitcoin](#), a controversial [digital currency](#) with fierce advocates and ferocious critics.

Bitcoin fans, who tend to have a libertarian bent, say it's a revolutionary way to move money quickly and anonymously from one point to another - whether around the corner or across international borders - with no middlemen, no fees, no central banks, little regulation, no collection of personal data and almost impenetrable computer security.

Former Republican Rep. Ron Paul, who first ran for president in 1988 as a Libertarian Party candidate, said the bitcoin was a welcome newcomer in "the terrible monetary system" that held sway in the United States.

"We have a government that purposely counterfeits and debases the currencies, and I believe that the alternative would be a competition," Paul told the Quora online-interview website last spring. "Anything that wants to substitute for the American dollar should be permitted. There should be no prohibitions; there should not be a monopoly and a cartel running our monetary system because it so often benefits the privileged few. ... Bitcoin is an introduction to that."

Because bitcoin is an encrypted "cryptocurrency," with each transaction tied to a unique 32-digit code of randomly generated numbers and letters, it can't be stolen from a gas pump the way thieves use a simple device to lift credit card account numbers.

Six "core developers" - some of the world's best software engineers - oversee the bitcoin's international network, tied to 100,000 computers.

Helped by hundreds of anonymous "miners," they maintain a public "blockchain," a digital ledger that records every bitcoin transaction with a 32-digit code. Each public code, in turn, is linked to a 32-digit private

code known only to the bitcoin owner. The miners use mathematical equations and algorithms that bounce around the globe instantaneously to verify the authenticity of each transaction.

"Before I got into bitcoin in July 2010, I thought it was impossible," Jeff Garzik, an Atlanta-based software engineer who's one of the core developers, told McClatchy. "They proved me wrong."

MYSTERIOUS BEGINNINGS

True to its enigmatic status, the bitcoin's origins are shrouded in mystery.

In 2008, someone using the alias Satoshi Nakamoto posted a white paper outlining the bitcoin in concept to an e-group of computer geeks. The following year, the anonymous genius uploaded open-source software to the Internet to implement it.

Garzik and the other core developers emailed with Nakamoto for two years as they expanded the digital currency Nakamoto had invented and learned how to run it. Despite their skill at tracking all things digital, however, they never learned Nakamoto's real name, gender, nationality or location. Then, circa 2011, Nakamoto went silent. No one has heard from him or her since.

"Basically, he signed off a few years ago," Garzik said.

Using the kind of understatement brilliant software engineers are prone to employ, Garzik added: "He was above average at protecting his anonymity. He didn't leave any data points."

By now, bitcoin has attracted an intense, if limited, following.

"I'll tell you why the bitcoin is one of the best things ever invented,"

Andy Mahoney, an ATM scout who finds merchants willing to accept the machines, told McClatchy. "For the first time, a person can send another person money anywhere on the planet instantaneously with virtually no costs. It's completely safe and secure and encrypted, which means you're sending your money anonymously."

Detractors counter that these purported strengths of the bitcoin, which is currently trading for about \$298 apiece - it varies slightly on different exchanges - are really weaknesses.

"The underlying technology has great potential, but I'm skeptical of the raw, unregulated, anonymous form of bitcoin," said Mark Williams, a former Federal Reserve examiner who teaches finance at Boston University. "It avoids the controls that have been created by our banking system, and it's void of consumer protections. If your 'bitcoin wallet' gets picked digitally, there's no way to trace it back to the culprit. You've lost everything."

Williams has earned the ire of bitcoin enthusiasts, who've taken to superimposing pictures of Dr. Evil on his Internet photos. He delivered critical testimony to Congress last year and made a skeptical presentation to the World Bank. He also went toe-to-toe with Netscape founder Marc Andreessen, a big bitcoin investor, in dueling opinion columns.

"I call these bitcoin ATMs 'automatic betting machines,'" Williams quipped to McClatchy. "It's the only machine where you can put in real money and get out fake money."

HARD-TO-TRACE TRANSACTIONS

Most people who use a BTM - insider lingo for a bitcoin ATM - have an app-like "bitcoin wallet" downloaded to their smartphones, which has an embedded bar code that they hold up to the BTM screen during an

exchange.

Bitcoins, or digital fractions of them, flow into or out of the virtual wallet depending on whether they're being bought or sold. Ninety percent of the transactions at the 310 or so BTMs worldwide, with about 60 in the United States, involve people exchanging dollars for bitcoins.

There's thought to be about \$4 billion worth of bitcoin in circulation, but only a portion of that is being used - partly because speculators are hoarding it, partly because few merchants accept it.

Most bitcoin transactions don't involve BTMs or purchases, but are instead direct person-to-person transfers. Want to send your college daughter some money? Open your phone's bitcoin wallet, enter the amount and punch in her wallet's unique code. She'll have the money moments after you hit the SEND icon.

Williams and other critics, however, think the bitcoin is tailor-made for Internet pornography, gambling, money laundering and other illicit activities because it's hard to trace and operates outside long-standing fiscal institutions.

In one bust, on Oct. 21, 2013, FBI agents raided the San Francisco offices of the Silk Road, a bitcoin-based online black market. They shut down its operations and arrested its proprietor, Ross William Ulbricht.

Under the pseudonym Dread Pirate Roberts, Ulbricht is accused of selling illegal drugs via a hidden Internet service called Tor on what's called the Deep Web, or Deepnet, because it's configured to elude standard search engines. His trial begins Jan. 13.

For BU's Williams, the bitcoin's wildly fluctuating value - which spiked to almost \$1,200 a year ago but has dropped to its current rate of about

\$298 - makes it much riskier than standard currency and even gold or stocks.

"In its current form, the bitcoin is extremely dangerous," Williams said. "It needs to be amply tested before it's allowed to be unleashed in our global economy."

Williams acknowledges that Andreessen, venture capitalist Tim Draper and other Silicon Valley heavyweights are investing heavily in bitcoin-related firms.

"You have a lot of smart money behind bitcoins, but smart money can make bad decisions," Williams said.

BITCOIN BOULEVARD

Even Garzik, as big a bitcoin booster as they come and more knowledgeable about it than virtually anyone else on the planet, said its future might not be as a widely used currency but rather one that saw its technology adapted toward other useful and profitable ends.

Garzik foresees the day when the underlying software and related technology will be used to move other things of value securely among people, almost instantaneously and with full transparency.

"There are various projects to try to use that technology not for currency purposes but to repurpose it to track ownership of stocks, cars and houses," he said. "You could take one-thousandth of a penny worth of bitcoin and attach it to a property deed, a car contract or a stock certificate and transfer ownership using the blockchain. In that case, the bitcoin itself would be just a token. Its monetary value would be functionally worthless."

Along those lines, Cameron and Tyler Winklevoss, 2008 U.S. Olympic rowers who've become major Internet entrepreneurs, place the value of the overall bitcoin system at \$400 billion - 100 times greater than the value of all the bitcoins in circulation.

Whatever its eventual fate, bitcoin as currency has relatively few users so far - whether consumers or merchants - except for some hotspots in Portland, Ore., New York, Las Vegas, British Columbia, Canada, Europe, Hong Kong and a handful of other locales.

Last month, financial services regulators in New York, the first state to craft rules for digital currencies, said start-ups and other small business that wanted to use bitcoin could get two-year BitLicenses.

In The Hague, the Dutch seat of government, which aspires to become the bitcoin capital of the world, 100 BTMs are being installed in the central district. In March, nine restaurants and an art gallery on two facing canal streets began accepting bitcoins as payment on what they pegged Bitcoin Boulevard.

Evan Rose is the chief executive officer of Genesis Coin in San Diego. His firm wrote the software used on the BTM in the Adams Morgan diner and in scores of other bitcoin ATMs elsewhere in the world.

While Rose is uncertain whether bitcoins will become widely used currency, he thinks that more consumers are spending them now than meets the eye.

An online firm called coinforcoffee.com, for example, allows Starbucks drinkers to use bitcoins by converting them into digital Starbucks cards. More broadly, gyft.com converts bitcoins in selling virtual smartphone gift cards to dozens of the country's biggest retail outlets.

"There are a lot of third-party services that integrate bitcoins with merchants," Rose said. "Starbucks, Best Buy, Wal-Mart and other stores may be accepting bitcoins without knowing it."

'We're going to wait and see'

Despite bitcoin's slowly growing popularity, Germany is the only country known to have classified it as a currency.

Many nations place heavy restrictions on bitcoin's use, while China and Russia are among those that have outlawed it as legal tender.

The U.S. government regulated bitcoin commerce for several years through the Financial Crimes Enforcement Network at the Treasury Department - not exactly a show of confidence in the digital currency.

Eleven years ago, Mahoney convinced Constantine Stavropoulos, owner of The Diner, to put an ATM in the restaurant. Earlier this year he persuaded the Greek-American entrepreneur, who has six eateries and coffeehouses in Washington, to host a BTM.

The BTM, near The Diner's entrance, has done 74 transactions since it was installed Nov. 24.

John McKee, who owns and operates both machines, had to jump through endless regulatory hoops to install his BTM. It took eight months of wrangling before officials with the Department of Insurance, Securities and Banking in the District of Columbia signed off on the plan.

"They had a lot of questions," McKee recalled. "It wasn't on their priority list; let's put it that way. This is a new technology. The lawyers were trying to figure it out, the regulators were trying to figure it out,

everyone was trying to figure it out. There were a lot of hands in the pot trying to make a yes-or-no decision."

McKee must carry tens of thousands of dollars in cash as he restocks dozens of traditional ATMS in the greater Washington region. By contrast, the BTM at The Diner, his first and only so far, requires only a few thousand dollars because it's seeing less action.

Part of the reason may be Stavropoulos himself, whose contradictory approach to bitcoin symbolizes the broader debate around the digital currency.

Despite being excited about hosting the city's first BTM, Stavropoulos doesn't accept bitcoin for payment at his six establishments.

"We are going to discover whether or not this thing is going to be the wave of the future or just a fad," Stavropoulos said recently as he nursed a cup of coffee at The Diner's counter. "We're going to wait and see. If it turns out that a lot of people use bitcoins in the city, we would probably considering accepting them."

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HOW BITCOIN WORKS

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