

Bitcoin study reveals false beliefs on ease of use and privacy

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Bitcoin is a popular digital currency that was introduced in 2009

People who have used Bitcoin, and those who don't have any experience with it, have something in common: Both groups share misconceptions about how the controversial digital currency actually works.

People who have never used Bitcoin – an internet-based form of money – don't think they ever could. Even Bitcoin users are not well-versed in how it works and overestimate, for example, the privacy of transactions, according to a study by Janne Lindqvist, assistant professor of electrical and computer engineering and member of Rutgers' WINLAB (Wireless Information Network Laboratory), and two graduate students, Xianyi Gao and Gradeigh D. Clark.

Still, study participants overall viewed Bitcoin as an ideal payment system.

The [peer-reviewed study](#) – the first-of-its-kind – will be formally published in May at the annual Association for Computing Machinery's Conference on Human Factors in Computing Systems, more commonly known as [CHI 2016](#), in San Jose, California. CHI is the premier international conference on human-computer interaction.

Bitcoin is a new type of money that relies on a decentralized peer-to-peer network with a public ledger that tracks transactions. Two people can make transactions, with degrees of anonymity, across continents, at any denomination, and without any transaction fees going to a third party, according to the Rutgers study. The study's results illustrate Bitcoin's tradeoffs, uses and barriers to entry.

According to [coinmarketcap.com](#), the Bitcoin market totaled about \$6 billion as of January 22, 2016.

On January 14, Mike Hearn, a high-profile Bitcoin developer who worked on it for more than five years, declared that Bitcoin had failed because it was controlled by a handful of people and was "on the brink of technical collapse." In an internet post headlined "[The resolution of the Bitcoin experiment](#)," Hearn wrote that he will no longer participate in its development and had sold all of his Bitcoin "coins."

Lindqvist said the Rutgers interviews for the study were done a year before Hearn's announcement and there has "always been some turmoil with Bitcoin." Though one developer feels that Bitcoin has failed, "there's obviously still a lot of people who disagree with this," Lindqvist said.

In their study, Rutgers researchers interviewed 10 Bitcoin users and 10

nonusers (including some recruited on the Rutgers campus) about how they perceive the virtual currency.

The researchers found that:

- People who had no experience with Bitcoin thought that it would be too hard or "too scary to use," according to Lindqvist.
- People who actively use Bitcoin are not necessarily well-versed in how it works.
- Bitcoin users also had misconceptions about Bitcoin's ability to protect their anonymity because transactions are recorded in a public ledger and are traceable with some effort, Lindqvist said. The users in the study trust the security and privacy mechanisms of Bitcoin more than they actually should.
- Bitcoin users want government insurance of Bitcoin deposits, despite being largely anti-government and anti-regulation.
- Study participants' ideas of an ideal payment system generally matched features that Bitcoin already provides.

Lindqvist said Rutgers researchers are doing follow-up studies to measure changes in perceptions in the wake of the current Bitcoin controversy.

He speculated that even if Bitcoin failed, many different stakeholders are interested in using digital currencies. He believes that with the advent of Bitcoin, "we'll get more cryptocurrencies (secured digital currencies) or more use of Bitcoin or various currencies."

In the future, it's possible that we'll eventually have a cash-free society, he said. But he doesn't know if people would be willing to let go of cash.

Cash has many good features and is "quite convenient for a lot of purposes," he said. "What I personally like is the anonymity. You can't

track at all what I'm buying from the supermarket if I don't use a loyalty card with my purchases when I pay in cash."

Provided by Rutgers University

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