Tech responds to growing calls for Internet anonymity

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Before Edward Snowden, the National Security Agency and Prism made headlines, a group of technologists was dedicated to making the Internet more anonymous.

They were viewed mostly as paranoid, weird and potentially criminal.

Now, more than a year after revelations of the government's mass electronic surveillance program, they are leaders in a movement heating up in Silicon Valley and abroad to create more ways for people to use the Internet while keeping private who and where they are, and what they're doing on the Web. These include email accounts that cannot be spied on, file-sharing services that the government cannot trace, and message services that cannot be recorded and stored.

"That idea used to sound far-fetched. It doesn't sound so crazy anymore, does it?" asked Andrew Lewman, executive director of the Tor Project, an international group of researchers and technologists who maintain an Internet network in which all users are anonymous and their locations are hidden.

Joining the effort are tech giants such as Google, Apple and Yahoo, responding to a backlash from their users over data collection; niche tech companies such as San Francisco-based BitTorrent, which builds software so Internet users can keep their identities and data hidden; and ad hoc collections of technologists from Silicon Valley to Europe. While total anonymity on the highly commercialized Internet, powered by advertising revenue and big data sales, is probably impossible, security experts and tech leaders say that, one way or another, anonymity will be a bigger part of our digital future.

"Users are more aware that what they are doing online may not be private, and they are taking steps to combat that, and they are looking to technology companies for solutions," said Daniel Castro, a senior analyst with the Washington, D.C.-based Information Technology and Innovation Foundation.

But some question people's conviction that they have a right to online anonymity.

"If you really want to be anonymous, stay off the Internet, pay cash and homestead in Montana," said Paul Santinelli, a venture capitalist with Palo Alto firm North Bridge Venture Partners. "From the day that you buy a computer with a credit card and log onto the Internet, people know who you are."

The backbone of the Internet was created through the federally funded Defense Advanced Research Projects Agency, so "Big Brother was watching from the get-go," Santinelli said. "You sign up for tracking when you use (the Internet)."

Yet in the past year, companies such as BitTorrent and Guerrilla Mail -- a Chicago-based service founded in 2006 that offers anonymous, disposable email accounts -- have won over mainstream customers after once mainly serving tech geeks and cyber rabble-rousers. BitTorrent is on the cusp of tremendous growth, with a surge in users -- and, after years of stunted revenue, the promise of more cash from two new products that target consumers worried about government spying.

"A lot of these things like Prism, I wish they weren't true, but they are, and that's driving demand for BitTorrent's products, no question about it," said Eric Klinker, BitTorrent's president and CEO.

Tech giants -- blamed by many for the loss of privacy because of their aggressive data collection, which then was handed over to the NSA -- also have pitched in. Google recently announced new encryption tools

to protect email, and Apple's new operating system changes the way smartphone data is encrypted, making it tougher for law enforcement to collect. Yahoo also has added encryption to email services.

BitTorrent has more than 170 million monthly active users across every country and has added millions more users through two new services: Bleep, a messaging and phone call app launched publicly this month, keeps all personal information private and safe from NSA's mass data collections, according to the company. Sync, released last year, is a file-sharing program that looks much like Dropbox, but it doesn't use servers or third parties to store or move the data, so it's inaccessible to everyone but the sender and receiver.

Guerrilla Mail, which gives users an email address without any registration or login and deletes emails permanently after one hour, has done nearly half of its business in the past year. And Tor grew from 75 million users in 2012 to 150 million in 2013, after the NSA operation was revealed. In May, Micah Lee, a Berkeley-based technologist with media site The Intercept, who helped protect the Snowden documents from being hacked after they were released to the media, created OnionShare, an anonymous file-sharing service that uses fake domain names to protect data.

"It's the pendulum swinging back again," Castro said. "People are saying that there was something of value in the anonymity that we lost."

Jon Jones said the only way he can do his job these days is through anonymous and secure Internet programs. He runs art teams whose members are all over the world -- in Russia, Malaysia and China -- and collaborate to build video games. BitTorrent's secure file sharing program, Sync, allows him to "poke through" China's firewall and assure artists that their content is secure.

"Even if someone steals my phone or my laptop gets dropped, I can still keep (their) data safe," said New York-based Jones, who started his art production management company, SmArtist, in 2009.

But since the NSA revelations in summer 2013, Jones also has turned to BitTorrent for his personal life.

"It changed absolutely everything for me," he said. "I suddenly realized I have no idea how anything works."

But some of the same services that offer a safe haven from government snooping or Facebook data mining also have been a breeding ground for drug rings and child pornography, which could stay largely hidden in the protected networks, Internet experts say.

"Drug abusers and pornographers and criminals figured out the technology," Lewman said.

A Harvard student last year used Tor to send a bomb threat to avoid taking a final exam, although he was caught by law enforcement because he accessed Tor using Harvard's wireless network, which authorities could trace. And BitTorrent has long had the reputation as the go-to service to illegally download music and movies, Castro said, and security experts maintain that it was used in the recent leak of female celebrities' nude photos.

BitTorrent and Tor say nefarious activity is one downfall of not keeping information on their users, but that they cooperate with law enforcement to help find criminals, who are far outnumbered by law-abiding users who simply don't want to share their online business with the world.

"Google controls email and takes all that information to sell ads," Klinker said. "We built these products for a reason. ... We want there to be as many options for doing things on the Internet as possible. We'll never reach the utopia, but with every application, we make it better. And with or without the world coming around

to us, which they finally are, we'd still be here, because we believe in it."

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tools to be anonymous online

BitTorrent
Founded: San Francisco, 2004
What it is: A service for peer-to-peer file sharing and distribution that does not use centralized servers, but instead distributes large amounts of data over the Internet in small chunks. Users download and upload files from each other simultaneously, offering a quick way to move very large files such as video games from one computer to another, and to distribute files to an unlimited number of people. It's been a popular service to illegally download movies and music. In addition to file sharing, BitTorrent offers file-sync service, a messaging and voice call app, which is safe from data leaks or mass data collection.
Tor
Founded: Cambridge, Massachusetts, 2003
What it is: Run by a nonprofit, this hidden Internet network allows users to stay private online, without websites or search companies tracking them, and access messaging services and news sites that may be blocked by their Internet provider or government. Users can chat online and publish websites without revealing their location or identity. Programs built on the Tor network include Orbot, which lets users access Tor on an Android smartphone and is often used to access Twitter in countries where the social media app is blocked.
OnionShare
Founded: Berkeley, May 2014
What it is: An open source tool that lets users anonymously share a file of any size by using untraceable domain names that end in .onion, making the data untraceable. OnionShare works through the Tor network.
Guerrilla Mail
Founded: Chicago, 2006
What it is: An email service that provides temporary, disposable emails without requiring user login and registration. The main purpose is to defend against spam, and it also makes the email user untraceable. Emails automatically delete an hour after they are received, whether or not they are viewed.