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Tor can handle Aphex Twin – but could it deal with Taylor Swift, like, ever?

The anonymous browser is making a push for mainstream acceptability. But to hit the mainstream scale, it may need help

Alex Hern
theguardian.com, Thursday 21 August 2014 13.18 BST

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Musician Taylor Swift performs during the 2013 CMA Music Festival 2013 in Nashville, Tennessee. Photograph: Christopher Polk/Getty Images

When electronic music artist Aphex Twin announced the details of his new album on a site only accessible through the anonymous browser Tor, the page accumulated 133,000 views in little over a day.

That's comfortably within the realm of what the service, which works to keep users anonymous by bouncing encrypted requests for content through a series of relays, before releasing them back onto the open web through an "exit node", can handle. According to Tor's executive director, Andrew Lewman, it has around 2.5

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million users at any one time, and the software itself has been downloaded 150m times.

But Aphex Twin is probably the biggest artist Tor could handle today. "If tomorrow, Taylor Swift said 'to all my hundreds of millions of fans, go to this [Tor] address', it would not work well," Lewman told the Guardian. "We're into the millions now, and we have a few companies saying 'we want to put Tor as a privacy mode in our premiere products, can you handle the scale of 75-100m devices of users', and right now the answer is no, we can't. Not daily."

The question might seem silly, but it hides a real concern for Tor. By default, the service lets users hide where they're browsing, but doesn't hide the fact that they are browsing using Tor. That can end up putting a target on their backs if they live in an area where simply using an anonymous browser is seen as a sign of someone up to no good.

That's seemingly the attitude that the NSA and GCHQ take towards the service. As the Guardian reported in October, the two agencies have been working to de-anonymise users of Tor by attacking the network itself, as well as the version of Mozilla's Firefox browser which ships with the software.

"It's been co-opted by GCHQ and the NSA that if you're using Tor, you must be a criminal," says Lewman. "I know the NSA and GCHQ want you to believe that Tor users are already suspect, because, you know, god forbid who would want their privacy online, they must be terrorists."

Lewman argues that the majority of people using Tor are not only not doing anything that ought to place them on GCHQ's radar, they are merely being responsible internet users. That's part of what he'll be talking about in his keynote speech at this year's Broadband World Forum.

"Tor is a technology that's used by millions if not hundreds of millions of normal, average everyday people who just want to protect their privacy online," he says. "Of course criminals will use it, and as the Snowden disclosures have made clear, GCHQ and NSA and probably others are spying on the internet as a whole, down to every bit and byte you send, who you talk to, how often you talk to them.

"All this stuff is being recorded, stored in some big data store somewhere, and this rightly freaks out a lot of people, even though before Snowden people used to
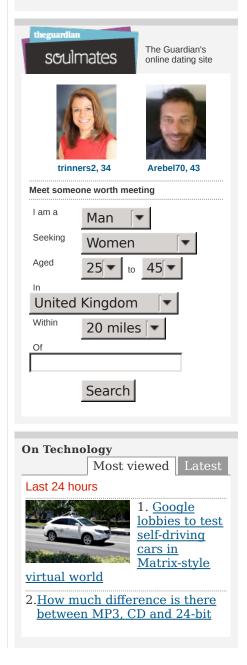
It has been 25 years since the invention of the world wide web and more than 2 billion people are now connected. How does this information revolution affect us personally, socially and morally? Find out what pride, lust, greed, gluttony, envy, wrath and sloth mean in the digital world – and cast judgment on the guilty. Will you absolve or condemn them? **Explore our interactive**

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say 'I have nothing to hide, who cares?'. Since Snowden, you can ask the average person on the street, and they will tell you, they'll have an opinion on privacy and they will be able to talk about what they do and do not like that their governments are doing."

Which brings us back to the Taylor Swift issue. If Tor wants to stop putting targets on its users' backs, it needs to convince intelligence agencies that normal people use the service too – and it needs to convince normal people to do so.

Aphex Twin did some of the hard work for it. "It's sort of the normalisation of Tor. You have artists and musicians who for the most part are told 'fear the dark web, because people can steal your content' and now they're saying 'hey, here's a really cool way to get some attention'. And if you look at Twitter and Facebook and all this other stuff, people who've never heard of Aphex Twin or don't know what his music is are fascinated."

But as mainstream popularity grows, and publicity stunts attract hundreds of thousands more people on the network, Tor will inevitably become strained. The foundation, a not-for-profit organisation which oversees the open-source standard, can only stave off that moment for a certain length of time; eventually, it will have to hand responsibility for building out the infrastructure to a bigger company.
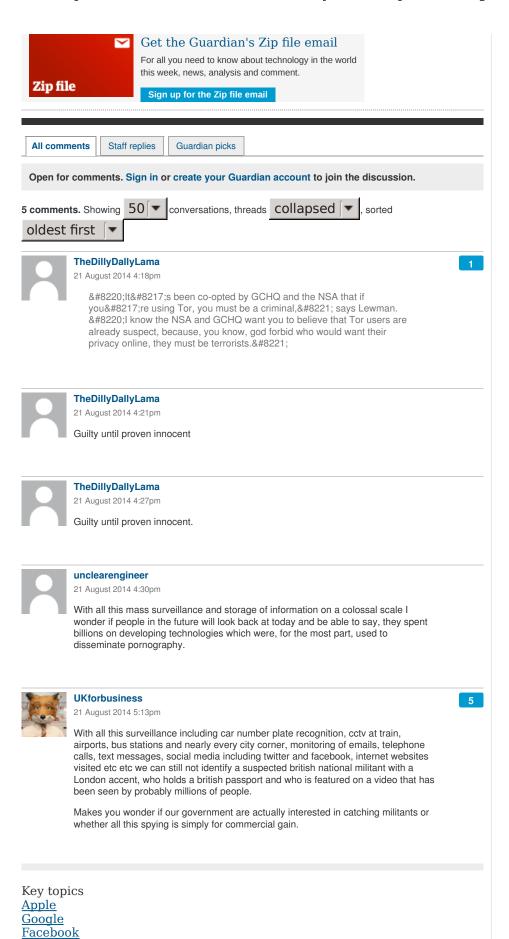
Lewman compares Tor's position now to "the people who wrote TCP/IP, the basic IP stacks you rely on to get on the internet." They came up with the idea, but it was "the networking companies [who] figured it out" and managed to come up with the internet as we know it. Tor exists "to do research and development of online privacy.

"And if Google or Facebook or Twitter or [Russian social network] VKontakte or [Chinese social network] QQ or one of these massive internet companies said "hey let's look at Tor, what could we do to deploy Tor on our own networks, integrated into our own products", they've got a lot of really smart people. They'll figure it out."

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privacy online, they must be terrorists.”

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Guilty until proven innocent

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With all this mass surveillance and storage of information on a colossal scale I
wonder if people in the future will look back at today and be able to say, they spent
billions on developing technologies which were, for the most part, used to
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UKforbusiness   **5**
21 August 2014 5:13pm

With all this surveillance including car number plate recognition, cctv at train,
airports, bus stations and nearly every city corner, monitoring of emails, telephone
calls, text messages, social media including twitter and facebook, internet websites
visited etc etc we can still not identify a suspected british national militant with a
London accent, who holds a british passport and who is featured on a video that has
been seen by probably millions of people.

Makes you wonder if our government are actually interested in catching militants or
whether all this spying is simply for commercial gain.

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