NEWS & TECHNOLOGY 7 February 2018

Dark web users are easy to unmask through their bitcoin use

By **Chris Stokel-Walker**

YOU can surf the dark web, but you can't always hide. People who want to keep their online activities secret will often use both bitcoin, which is tied to pseudonyms, and the Tor browser, which obscures their real movements. But unless they are careful, all that hassle could be for naught.

By linking bitcoin wallets with transactions on the dark web, a portion of the World Wide Web that isn't indexed by search engines like Google and requires specific software to access, Husam Al Jawaheri of Qatar University in Doha and his colleagues were able to unmask 125 Tor users.

Supposedly secret activity on sites like The Pirate Bay – which hosts pirated films, for example – and the now-closed Silk Road – a kind of black market Amazon for illegal products, such as drugs and guns – could then be linked to individuals' social media accounts on the normal web.

The weak link in the chain between the normal websites we use every day and the dark web was bitcoin. Users may have employed pseudonyms on sites on the dark web, but their bitcoin addresses were shared on public websites, giving them away.

"People don't know that paying from the same addresses they've posted publicly can be linked to accounts on the dark web," says Al Jawaheri.

The researchers trawled through five billion tweets and a million posts on cryptocurrency message board site bitcointalk.org. They found more than 45,000 unique bitcoin addresses posted by users. The team identified certain individuals behind some of the purchases by looking up transactions and cross-checking the addresses (arxiv.org/abs/1801.07501).

"It was overly simple to link identities to hidden services," says team member Yazan Boshmaf.

The researchers contacted the 125 users they had identified to warn them about their security misstep, but didn't receive a reply from any of them.

This article appeared in print under the headline "Bitcoin blows your cover on the dark web"