

# Online passwords are insecure: study

April 3 2012

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Online passwords are so insecure that one per cent can be cracked within 10 guesses, according to the largest ever sample analysis.

The research was carried out by Gates Cambridge scholar Joseph Bonneau and will be presented at a [security](#) conference held under the auspices of the Institute of Electrical and Electronics Engineers in May.

Bonneau was given access to 70 million anonymous passwords through [Yahoo!](#) – the biggest sample to date – and, using statistical guessing metrics, trawled them for information, including demographic information and site usage characteristics.

He found that for all demographic groups password security was low, even where people had to register to pay by a debit or credit card. Proactive measures to prompt people to consider more secure passwords

did not make any significant difference.

There was some variation, however. Older users tended to have stronger online passwords than their younger counterparts. German and Korean speakers also had passwords which were more difficult to crack, while Indonesian-speaking users' passwords were the least secure.

Even people who had had their accounts hacked did not opt for passwords which were significantly more secure.

The main finding, however, was that passwords in general only contain between 10 and 20 bits of security against an online or offline attack.

Bonneau, whose research was featured in *The Economist*, concludes that there is no evidence that people, however motivated, will choose passwords that a capable attacker cannot crack. "This may indicate an underlying problem with passwords that users aren't willing or able to manage how difficult their [passwords](#) are to guess," he says.

Provided by University of Cambridge

Citation: Online passwords are insecure: study (2012, April 3) retrieved 26 April 2024 from <https://phys.org/news/2012-04-online-passwords-insecure.html>

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