

Pass-thoughts to replace passwords

12th April, 2013



Researchers from the University of California, Berkeley's School of Information have come up with an ingenious device that might, one day soon, replace the need for passwords. A

press release explains: "Instead of typing your password, in the future you may only have to think your password." Their research explored the feasibility of brainwave-based computer authentication as a substitute for passwords. This resulted in the creation of the Neurosky MindSet headset - a \$100 device that can read brainwaves. The team believes this new technology is secure, accurate, and user-friendly. They also believe people would be willing to replace using passwords with pass-thoughts.

The project's findings were unveiled at the 2013 Workshop on Usable Security at the Seventeenth International Conference on Financial Cryptography and Data Security. Team leader Professor John Chuang explained his new technique provides a more fail-safe and cheaper solution than things like fingerprint scans, retina scans, or facial or voice recognition. He said his team's inexpensive headset connects to a computer wirelessly using Bluetooth and is little different to headsets used with mobile phones, music players, and other computing devices. However, security experts expressed concern regarding the ability of software that can "hack" people's minds to extract things like ATM PINs.

Sources: Berkeley.edu / techcrunch.com

Writing

Pass-thoughts may be a good replacement for passwords, but they will never make information totally secure. Discuss this and the advantages and disadvantages of pass-thoughts.

Chat

Talk about these words from the article.

information / ingenious device / passwords / the future / headset / brainwaves / secure / project / cryptography / data security / fingerprint scans / wirelessly / hack / PINs

True / False

- Researchers said pass-thoughts would replace passwords next year. T / F
- A device requires you to think instead of type a password. T / F
- The headset to use pass-thoughts is currently priced at around \$100. T / F
- The scientists doubted whether people would switch to pass-thoughts. T / F
- The researchers talked about their invention at a finance conference. T / F
- A researcher said passthought technology is safer than retina scans. T / F
- The technology only works on wifi and not Bluetooth. T / F
- Experts are worried about the possibility of mind-hacking. T / F

Synonym Match

- | | |
|-----------------|----------------|
| 1. come up with | a. remove |
| 2. ingenious | b. substitute |
| 3. replace | c. revealed |
| 4. explored | d. precise |
| 5. accurate | e. clever |
| 6. unveiled | f. specialists |
| 7. technique | g. looked into |
| 8. solution | h. procedure |
| 9. experts | i. invented |
| 10. extract | j. answer |

Discussion - Student A

- How might hackers get round a pass-thought?
- Is the concept of pass-thoughts like real science fiction?
- What do you think of fingerprint scan security?
- Do you think we will open doors and change TV channels with our thoughts in the future?
- What do you think of the idea of having silent thought-chats with people?
- How dangerous might pass-thoughts be?
- What do you think of the name Neurosky MindSet?
- What questions would you like to ask the inventor of the MindSet?

Phrase Match

- | | |
|---|------------------------------|
| 1. an ingenious | a. and user-friendly |
| 2. press | b. scans |
| 3. the feasibility of brainwave- based | c. like ATM PINs |
| 4. this new technology is secure, accurate, | d. recognition |
| 5. people would be willing | e. computer authentication |
| 6. The project's findings | f. can "hack" people's minds |
| 7. retina | g. device |
| 8. voice | h. were unveiled |
| 9. the ability of software that | i. to replace passwords |
| 10. extract things | j. release |

Discussion – Student B

- How secure do you think your passwords are?
- Would you prefer the pass-thought idea to passwords?
- Do you have a special system of making and remembering passwords?
- What happens when you forget a password?
- How safe do you think the things that require a password are?
- Will you buy the MindSet?
- Do you think the end is near for passwords?
- What other things could thoughts control?

Spelling

- come up with an insenigou device
- explored the fstlbiyaiei of
- computer uoetaihtnctani
- a tetbustusi for passwords
- the octraine of the Neurosky MindSet headset
- secure, ccuteaar, and user-friendly
- findings were eduenvil at the 2013 workshop
- international roeeennfc
- financial cpyorpyhgrat
- afcai or voice recognition
- connects to a computer essyewliir
- atertxc things like ATM PINs

Answers – Synonym Match

1. i	2. e	3. b	4. g	5. d
6. c	7. h	8. j	9. f	10. a

Role Play

Role A – TV presenter

Think of questions to ask the inventor of the Neurosky MindSet, the hacker and the device's buyer.

Role B – Inventor

Think of 5 ways the Neurosky MindSet will change people's life. Ask what the others think of your device.

Role C – Hacker

Think of 5 dangers of the Neurosky MindSet. Tell these to the inventor and device's buyer.

Role D – Device buyer

Think of 5 other uses for using brainwaves. Ask the inventor and hacker what they think.

Speaking - Password

Rank these and share your rankings with your partner. Put the thing most in need of a password at the top. Change partners often and share your rankings.

- | | |
|---------------------|-----------------------|
| • bank cash card | • school / work |
| • your computer | • credit card |
| • your mobile phone | • your e-mail account |
| • software / app | • other _____ |

Answers – True False

a	F	b	T	c	T	d	F	e	F	f	T	g	F	h	T
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Answers to Phrase Match and Spelling are in the text.