

---

Rewriting Life

---

# Brain-Controlled Typing May Be the Killer Advance That AR Needs



Why type when you can just think?

by Jamie Condliffe    November 8, 2017

JUSTIN SAGLIO



**C**licking, typing, and swiping are the norm in 2017. But to streamline the way we use virtual and augmented reality, a startup called Neurable wants to replace all of that with simply thinking.

“Every major computational technology has needed an evolution in interaction,” Ramses Alcaide, cofounder and CEO of the firm, explained at *MIT Technology Review*’s EmTech conference in Cambridge, Massachusetts, on Wednesday. “When it came to the computer, we had the graphical user interface and the mouse. With smartphones, we went to capacitive touch screens. And now that we’re entering augmented reality, we need to start thinking about more natural ways of interacting—your hand, your eye, and even your brain.”

That, says Alcaide, could make the vision of augmented-reality headsets genuinely useful, allowing wearers to influence what they see without fumbling for a keypad or controller. That’s why Neurable has been working on **developing brain-control systems for VR** for over a year now. It uses a headset loaded with dry electrodes that sit on the scalp and track brain activity. The firm’s software analyzes the brain’s activity to work out what its wearer wants to do. A couple of months ago, the company **showed off a snazzy VR game** that uses the technology to let you move objects with your mind.

But that kind of thing is not the company's true goal. "The killer interaction is not something exciting; it's something boring," Alcaide said at the conference. "It's something as simple as typing, sweeping, pinch-and-zoom, and clicking."

To that point, he showed off of an alpha version of Neurable's first typing tool. The current speed record for typing via brain-computer interface is **eight words per minute**, but that uses an invasive implant to read signals from a person's brain. "We're working to beat that record, even though we're using a noninvasive technology," explains Alcaide. "We're getting about one letter per second, which is still fairly slow, because it's an early build. We think that in the next year we can further push that forward."

He says that by introducing AI into the system, Neurable should be able to reduce the delay between letters and also predict what a user is trying to type. And that might make our interactions with technology smoother than ever.

**Want to go ad free? No ad blockers needed.**

**Become an Insider** →

**Already an Insider? Log in.** →

---

## Related Video

**More videos** →





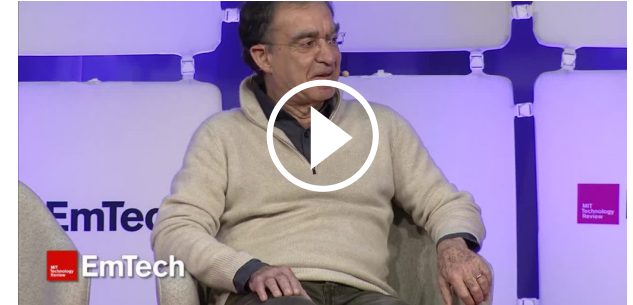
Rewriting Life

### Capturing Our Imagination: The Evolution of Brain-Machine Interfaces 28:35



Rewriting Life

### Next-generation Brain Interfaces 29:32



Rewriting Life

### Understanding Intelligence 23:23

## More from Rewriting Life

Reprogramming our bodies to make us healthier.

### 01 The doctor responsible for gene therapy's greatest setback is sounding a new alarm

Toxic effects seen in animals raise questions about new gene therapies for children.

by Antonio Regalado



### 02 Faced with failing antibiotics, scientists are using killer viruses to fight superbugs

Advances in DNA sequencing and AI could make the idea a more practical treatment option.



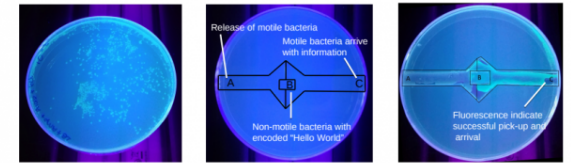
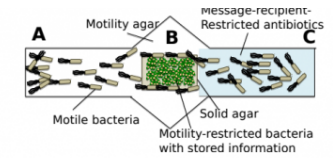
by Emily Mullin



# 03 Storing data in DNA is a lot easier than getting it back out

But a method bacteria use to swap genetic information could offer a way.

by Emerging Technology from the arXiv



More from **Rewriting Life** →

Want more award-winning journalism? Subscribe and become an Insider.

**Insider Plus** \$79.95/year\* **BEST VALUE**

Everything included in Insider Basic, plus the digital magazine, extensive archive, ad-free web experience, and discounts to partner offerings and MIT Technology Review events.

**Subscribe** ↗

---

[See details+](#)

---

## Insider Basic \$29.95/year\*

Six issues of our award winning print magazine, unlimited online access plus The Download with the top tech stories delivered daily to your inbox.

[Subscribe](#)



[See details+](#)

---

## Insider Online Only \$9.99/3 months

Unlimited online access including articles and video, plus The Download with the top tech stories delivered daily to your inbox.

[Subscribe](#)



[See details+](#)

---

\*Prices are for U.S. residents only

[See international prices](#)

