

Meet The iPad 13: Imagining The iPad, Decades From Now [Bianca Bosker](#)



Apple's [new iPad boasts a high-definition screen, faster connection speeds and an improved camera.](#)

But what about a holographic display? A keyboard that attaches to your hips? Or the ability to track where you look and what you're thinking?

Those are just a few of the features experts predict users could see integrated into Apple's iPad and other tablets a decade or more from now, based on current research, evolving technology and trends in human-computer interaction.

If there's one industry that chews up and spits out the hot new thing even more regularly than Hollywood, it's Silicon Valley. Apple's sleek, svelte new iPad, announced Wednesday, will soon resemble the Palm Treo of yesteryear -- clunky, maddeningly slow and impossibly out of fashion -- next to the thirteenth-generation iPad 13 or thirtieth-generation iPad 30, devices that futurists and researchers say could be immersive, personable, wearable and blazing fast.

"You'll look back on the iPad and go 'How did we ever use that to power our lives? You mean your iPad didn't have the virtual doctor to diagnose you when you were sick? You meant you didn't use your iPad to make feature films that you'd instantly stream worldwide in front of 5 billion people?'" said James Canton, a former Apple executive who is now CEO of the Institute for Global Futures, a think tank that researches future trends. "Today's iPads will be in museums because they will be artifacts."

The iPad's glass and aluminum shell may give way to a flexible screen that can be rolled or folded, like a sheet of paper, to fit in a pocket or expand to the size of a flat-screen TV, some experts say. The supple iPad of the future could be slipped into clothes, or develop new input mechanisms, so that bending down the corner of the screen might bookmark a page.

Experts predict iPads a decade or two from now will be worn, not carried. As this device becomes more attached to users' bodies, it also stands to transform into a health tool monitoring, say, blood pressure or weight gain.

"The iPad you'll be wearing will be almost like a medical device," Canton said. He illustrated the potential advantages of a worn device: "Let's say you're having lunch and you want to check your email. You'll tap your iPad on your wrist and create a holographic image in front of you."

Canton foresees the development of an "iPad Holo" that could beam holograms of media or text into the area in front of the user. It might also use augmented reality technology to superimpose information on the physical world, such as displaying an acquaintance's name next to his face, or layering a restaurant review on top of a deli on the street, a feature that already exists.

By the time Apple unveils the iPad 13, wires will be long gone, futurists affirm. The iPad will be able to charge itself without cables and communicate instantly with devices all around it, from living room television sets to screens on the subway.

Futurists also say the iPad will develop a personality, and Siri, the virtual personal assistant offered in the iPhone 4S, will evolve from a disembodied voice to a friend whose appearance and demeanor varies for each user and who understands and anticipates a user's needs.

"The single greatest change I expect to see in my lifetime is the development of a conversational interface -- being able to talk to computers and have them understand you," said John Smart, president of the Acceleration Studies Foundation.

Over time, our eyes, voices and brains may displace our fingers as our primary means of communicating with the iPad. The iPad's touchscreen could eventually be supplemented by eye-tracking technology and sensors that monitor our brain activity for clues on what to display, though the latter is likely more than a decade away from mainstream adoption. For example, the iPad could switch applications, turn the page of an ebook, or open an email folder just by following the user's gaze. Already, some manufacturers are experimenting with devices that can track and respond to users' eyes movements and [Apple recently filed a patent application for a "3D eye-tracking interface."](#)

Rob Jacob is a professor at Tufts University's Department of Computer Science who focuses on brain-computer interaction. Jacob is developing ways to enable electronic devices to adjust their performance based on a user's brain activity. In a recent experiment, Jacob used sensors to monitor a subject's brain activity while she controlled a robot performing a task. He showed the robot could automatically shift into autopilot when the person commanding it became busy or distracted.

“If you’re busier, the robot you’re controlling goes on autopilot, and if you’re not, you control the robot,” Jacob explained. “There’s no reason someday devices couldn’t read more information from our brains, but this is beyond both of our lifetimes.”

Jacob is also examining how software can deliver more personalized results by monitoring users’ brains. In another study, Jacob showed subjects IMDb pages, and rather than having users click “like” or “dislike” to indicate which movies appealed to them, he said he could “figure out from your brain which you like and don’t.”

While the iPad of the future will be faster and lighter, it will not necessarily be smaller: Futurists point out that the iPad’s shape takes its inspiration from centuries of notepads and books of a similar size, and the tablet fits nicely with our bodies and eyesight limitations. Anything much bigger would be a challenge to hold, and smaller devices would make reading or watching video a challenge.

“One of the things that we can be pretty sure about is people’s dimension will probably be about the same, and one of the fundamental things about tablets is they sit really nicely on your arm,” said Brad Myers, a professor at the Human Computer Interaction Institute at Carnegie Mellon University’s School of Computer Science. “The iPad has been the size of an entity that people have written on for thousands of years ... It’s a convenient size for carrying around and reading on, and there’s plenty of reason to expect that this size of device will still be useful.”

In other words, our own hardware could be the limiting factor in the iPad’s evolution. “The size [of the iPad] is dictated by the size of our hands and arms and bodies,” Jacob said. “We’re stuck with fat fingers.”