

A killer product

—by Brian Braiker

If you say that the iPhone is the greatest invention of your lifetime, few would bat an eye. If you stay up all night playing Halo 3 like some deranged super-marathoner bent on blasting strangers a continent away on your Xbox Live, few would question your sanity. But dare to claim that devices like the iPhone and the Xbox are killing the Internet as we know it, you'd be laughed out of town.

But this is the central argument of a new book, *The Future of the Internet—and How to Stop It*. Jonathan Zittrain claims that the very thing that makes the Internet great—its “generative” or innovative nature—is being locked down in a new wave of closed devices like the iPhone, Xbox, TiVo and the OnStar system. Zittrain, cofounder of Harvard Law School’s Berkman Center for Internet and Society, claims the Internet’s ability to serve as an open platform for innovation is being undermined by these “tethered” toys that can’t be easily modified by anyone except their vendors or selected partners.

“The Internet has been a collective hallucination,” says Zittrain, who is also a professor of Internet governance and regulation at Oxford University. Zittrain has qualms with Apple, Facebook applications, spam, and government filtering. He is particularly concerned about the threat to the generative quality of the Internet.

“Through historical accident,” says Zittrain, “we’ve ended up with a global network that pretty much allows anybody to communicate with anyone else at any time. Devices could be reprogrammed by them at any time, including code written by other people, so you don’t have to be a nerd to get the benefits of reprogramming it. [But] this is an historical accident. Now, I see a movement away from that framework—even though it doesn’t feel like a movement away.”

For example, an iPhone can only be changed by Steve Jobs or soon, with the software development kit, by programmers that he personally approves to go through his iPhone applications store. Even whimsical applications that run on the Facebook platform or the new Google apps are controllable by their vendors in ways that Bill Gates never dreamed of controlling

Windows applications.

But Bill Gates has total control, doesn’t he? No he doesn’t. That’s the irony of it. Bill Gates is Mr. Proprietary. But under the standard Windows operating system from 1990 - 1991, one can write the code and hand it to somebody else to run. Bill Gates can’t do anything about it. So it’s funny to think that by moving in Steve Jobs’s direction, Windows will actually end up being more proprietary.

Jobs is notorious for creating a very closed ecosystem of products that include the iPod and iPhone. It’s amazing to see how much Apple’s progress tracks the trajectory that Zittrain is concerned about.

It was Steve Jobs who brought us the first PC in 1977—totally re-programmable, totally generative. It was Steve Jobs who then came out with the Mac that made it so much easier to use, while retaining the generative quality and allowing everyone to write code for it. Recently, Steve Jobs brought us the iPhone, which in version one is completely locked down. And then in the most recent announcement he says: “O.K., we’re going to allow third-party applications, but you can’t just hand an application to anybody, you have to put it through the iPhone store, and we reserve the right to take a cut for every application. And, if we don’t like an application, we can kill it.” Apple isn’t the only company you’re critical of. You also take Facebook to task. What are they doing wrong?

Facebook is doing what comes naturally. Zittrain does not blame them. But in the big picture, they’re developing a platform where—again, quite naturally—they’re retaining the right just in case they need it to kill any application they don’t like and to control the flow of data.

At some point does there have to be some authority that decides “this application is too offensive or ...” No such authority has governed the PC over the past 30 years, and that may a reason why the PC is near the end of its life cycle, in part because there’s now a business model for subverting the PC.

Which is?

The viruses and malware that sell zombie computers by the pound to the highest bidders. Zittrain is interested in helping secure the PC—“we need inno-



vation here,” he says. “It’s not just hug your PC, hate the iPhone. In fact I don’t even hate the iPhone; I think it’s really cool. I just don’t want it to be the center of the ecosystem along with the Web 2.0 apps. What I’m calling for is a more grass-roots .org effort to help secure generative systems so that when the PC then makes a market decision, it has its best party dress on.

Meaning what? Free software? Open-source initiatives?

No. Zittrain, cofounder of StopBadware.org, at the Berkman Center and at the Oxford Internet Institute funded by Google, Sun, Lenovo, and HP, says the answer lies in creating a .org that would help us identify bad code on the Net using the cycles and bandwidth of participating Internet users. “It’s stuff you download to your machine that reports back its vital signs and runs code to the rest of the ‘herd,’” says Zittrain. “This way we’ll be then able to figure out such things as how many self-described experts vs clueless people are running the application, when the herd first encountered it, and whether it is brand new. This knowledge will in turn help users decide if they even want to run the code.

And this is separate from the Access Denied initiative?

The open Net initiative tracks filtering around the world. Zittrain and his colleagues have been doing it in a pretty organized way. They send people into various countries, have them try accessing a bunch of Web sites and thus “see where they can and where they can’t run the code, and then have them leave before they get arrested.”