In Defense of the Internet Craftsman

Universal broadband should be about control, not just access.

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But in all this praise of the Internet, we can't forget one thing: The Internet is a democratizing technology not because users have access to services like Twitter and Facebook but because it supported the development of these tools in the first place. Ignoring this distinction has led to the United States' unfortunate decision to craft public policies that focus primarily on expanding Internet "access" with too little attention paid to the fact that not all access is created equal (PDF). By focusing on access, disregarding the mounting threats to the openness of the Internet, our politicians and regulators are ignoring a growing divide between users with control over digital technologies and those without.

To save the Internet as a platform for innovation, we need to see concerted intervention to protect the rights of users to create. Most importantly, we must fight for the Internet craftsman?the individual who is free to develop networks, services, and applications and who shapes networking technologies better to meet her own needs and those of her community.

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The concept of the craftsman comes from Richard Sennett, a New York University sociologist. In his 2009 book, he advanced the idea of craftsmanship as the desire and ability to innovate and adapt a medium to create a new form or function, like a carpenter reimagining a block of wood as a table. The Internet offers a similar opportunity for digital journeymen. As Sennett argues, open-source tools like Linux serve as a digital toolbox. Any Internet denizen with the expertise should have the freedom to deploy an application or build a network to fulfill yet-unimagined needs. But the Internet craftsman is currently under threat, increasingly locked out and restricted.

This quiet shift is perhaps best exemplified by the current state of mobile connectivity. Different levels of control, allowed on different connections, affect how users can access and share information. For example, in 2009, AT&T stated that it considered smartphones tantamount to personal computers. (The company used this classification to justify blocking a streaming-TV app from iPhones, claiming that its acceptable use policy prohibits the "redirect [of] a TV signal to a personal computer.") But Harvard law professor Jonathan Zittrain has convincingly documented the very uncomputerlike nature of the iPhone. As he described in his book The Future of the Internet?and How To Stop It,the iPhone is part of a new class of devices that actively keep the end user from having control. Apple's App Store determines what applications can be submitted (and therefore easily installed on users' iPhones). And Apple is not alone. When T-Mobile released the HTC G2 with Google, the phone was designed to prevent users from changing the operating system to add more functionality, such as turning a smartphone into a mobile hotspot, also known as tethering. Another smartphone, the Motorola Droid X, contains an "eFuse" whose purpose is to render the device inoperable if a user tries to modify the device.

In effect, mobile carriers have created a second-class Internet connection. This spring, Verizon demanded that Google remove free tethering applications from the Android Market so that it can charge users a monthly fee to turn their smartphones into mobile hotspots. Combined with restrictive data caps?often a low two to five gigabytes per month (for comparison, the typical Blu-ray disc containing your favorite movies can hold 50 gigabytes of data)?mobile connectivity severely limits user options.

This is deeply problematic, because craftsmanship requires not just use but control of a technology. Mobile networks disincentivize users from adapting or sharing improvements; just to have the same functionality they have on wire-line networks, users must break their providers' terms of service and acceptable-use policies. When compared with the freedoms still present on other types of broadband

connections, mobile networks' demands offer fewer opportunities to think differently or to innovate. This is particularly problematic because it disenfranchises those (such as minorities, people in lower income brackets, and young adults) who are more likely to depend on smartphones to access the Web. In fact, Pew Internet and American Life Project found that smartphone ownership is highest with minorities, and nearly one in five young adults only access the Web on mobile networks. The increasing limitations on the Internet craftsman means these groups do not have a voice in how the Web evolves.

In marked contrast to what's happening domestically, U.S. foreign policy embraces the Internet craftsman as central to protecting human rights. In February, a year after announcing "Internet Freedom" as a pillar of U.S. foreign policy, Secretary of State Hillary Clinton gave a speech describing the Internet as a critically important public sphere. WikiLeaks caveats aside, the State Department has actively supported technologies that place the tools of communications in the hands of the general public worldwide?for instance, by funding Commotion, an open-source, mobile, ad hoc networking platform. (Disclosure: Commotion is an effort lead by the Open Technology Initiative, a project we work on at the New America Foundation.) By creating "device-as-infrastructure" networks that connect gadgets like cell phones and laptops directly to one another, network participants don't need any central infrastructure to communicate?creating opportunities for entirely new applications and services with a community-wide intranet. In enabling local area networks, technologies like Commotion open new avenues for an Internet craftsman to ply her craft.

In Gutenberg's era, the printmaker, not the machine, determined the subject matter of his work. No printing press could impose terms of service that dictated the language or content that could be printed. Instead, the craftsman was in full control of his speech. Yet these restrictions are being hardwired into modern technologies.

The democratic potential of the Internet is not predicated on a subscription to an Internet connection but on the idea that the Internet is a platform for free speech?a space to access and share ideas and innovations. Policies addressing the digital divide must embrace the Internet Craftsman and confront the deep and growing chasm between users of restrictive technologies and those free to innovate without gatekeepers. The Internet's potential to empower is strongest when users are free to turn their imaginations into reality, not when innovation is confined by increasingly restrictive policies of network operators. The future of democratic communications depends on the ability of network participants to have control over the technologies we use every day.