

Technology convergence may widen the digital divide

May 17 2012

(Phys.org) -- Technology is helping communication companies merge telephone, television and Internet services, but a push to deregulate may leave some customers on the wrong side of the digital divide during this convergence, according to a Penn State telecommunications researcher.

"Moving away from [copper lines](#) is an example of abandoning obsolete technology and embracing technology that is faster, better, cheaper and more convenient," said Rob Frieden, Pioneers Chair in [Cable Television](#) and professor of telecommunications and law. "But the risk is that we may be creating a [digital divide](#) -- not necessarily a divide between the rich and poor, but between the informationrich and information poor."

[Telephone companies](#) are lobbying for [government regulators](#) to free them of their traditional role as a public utility, citing the convergence and availability of new communication technologies, such as cellular phones and [fiber optic cable](#), that make copper-based telephone land lines obsolete, according to Frieden. However, not all these alternatives are as affordable and as ubiquitous as copper landlines, a problem that could leave many rural residents underserved, he said.

The researcher, who presented his critique at the End of the Phone System workshop held at the University of Pennsylvania in Philadelphia, today (May 17), said that rural customers could replace land line telephones with cellular phones, for example, but most [cell phone](#) companies charge a fee for each minute of use -- metering -- while most fees for land lines are unmetered and are paid through a fixed monthly

charge.

Frieden also doubts that [cellular service](#) will be as dependable as landlines.

"Cell phone companies have these colorful maps that show how well they cover areas," Frieden said. "But there are lots of places -- including places in rural Pennsylvania, West Virginia and New York -- that do not have [cell phone service](#), or offer limited services not suitable for broadband, Internet access."

Fiber optic lines are glass wires that can carry voice, television and Internet signals. For instance, fiber optic equipment is often used for Voice Over Internet Protocol -- VOIP -- a technology that uses broadband Internet to carry such services as voice, texting and fax.

While fiber optic lines are more common now, they are usually not found in rural or remote areas.

"The phone companies are right," said Frieden. "There are other forms of competition now, but these alternatives are not fair or adequate everywhere."

As communication technologies merge, telephone companies face stiff competition from cable companies, which are classified as information service providers by the government and face limited regulation. Frieden said that telephone companies, however, are regulated as a utility. As a utility, phone companies -- called carriers of last resort -- are obligated to provide service to customers. To increase profitability, telephone companies would like to be released from the carrier-of-last-resort designation that binds them to providing high-cost, labor-intensive telephone landline service.

Frieden said that the push to end the phone company's status as carriers of last resort may be the first step toward complete deregulation.

While telephone company lobbyists suggest that the market forces will ensure that all customers will eventually receive equal service in a deregulated environment, Frieden is skeptical about this promise.

"Everyone wants to say, the marketplace is great," Frieden said. "But there's also something called market failure particularly in rural and low-income areas."

Provided by Pennsylvania State University

Citation: Technology convergence may widen the digital divide (2012, May 17) retrieved 20 March 2024 from <https://phys.org/news/2012-05-technology-convergence-widen-digital.html>

<p>This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.</p>
--