

VoIP: Why it's not your parents' Plain Old Telephone Service (POTS)

Electronic Frontier Foundation
Lee Tien, Senior Staff Attorney, 415-436-9333 x 102
Seth Schoen, Staff Technologist, 415-436-9333 x 107

<http://www.eff.org>
tien@eff.org
schoen@eff.org

Any Number Can Play: Internet Innovation from All Directions

Internet communications aren't like POTS communications because the Internet is more open than traditional phone networks. Internet communications need not flow through any particular central point and need not be organized in any particular format. And they can use components created completely independently from any "carrier" or provider. EFF believes that VoIP (voice over IP) applications and their users should benefit from this openness.

Much of the Internet's success is a result of uncoupling network providers from service providers and software writers. You can get e-mail through Hotmail, for example, whether you get Internet service from a library, Comcast, or any other ISP.

What's more, creating new kinds of Internet services doesn't require the permission or cooperation of ISPs. A single software developer can write a new application that end-users can immediately deploy, which can stimulate further innovation.

- Tim Berners-Lee (an individual) created the *World Wide Web* as a research project in 1989 while a researcher at CERN, a European physics center.
- Mirabilis (then just three persons) created the *ICQ* instant-messaging platform in 1996.
- John Walker (an individual) designed and implemented one early VoIP application, *Speak Freely*, starting in 1991; users download the software and talk directly PC-to-PC.

These innovations came from individuals or small groups who experimented outside any formal technical coordination or standards process, and they were **adopted directly by end-users** who were free to decide what would serve their needs. The Internet environment is uniquely competitive because the barriers to entry are relatively low. New services and new kinds of services can be created any time, anywhere.

This is true for VoIP, too. VoIP isn't a single technology or architecture – it's a **potentially unlimited number of application designs**. New applications with new features will be invented every year and will compete in the marketplace for adoption, perhaps using new, more efficient data formats or "calling" architectures. Because of the Internet's openness, **using new VoIP technologies can be as easy as downloading new software**.

The FBI's recent proposal to subject VoIP to CALEA (Communications Assistance to Law Enforcement Act) requirements threatens this openness, as well as our privacy. Among other things, the FBI wants the power to review and approve or disapprove many new communications applications **before** they may be lawfully deployed. Not only is this idea unconstitutional and unworkable, simply attempting to do so would endanger Internet innovation in the United States. Would we even have a thriving, vibrant Internet today if the FBI had always had such power?