

## VoIP: The right call for your practice?

*Flexibility, cost-saving potential are driving Internet phone service into the mainstream.*

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Voice-over Internet protocol (VoIP), once a cutting-edge telecommunications innovation, has quickly reached the information age mainstream (See [Fast facts](#)). Homes and businesses are increasingly using broadband Internet connections to make inexpensive long-distance telephone calls.

Can VoIP help you communicate efficiently and cost-effectively with patients, staff, and colleagues? Read on.

### HOW VOIP WORKS

VoIP lets you make telephone calls using your Internet connection or other computer network. Calls from one PC to another are free, while calls from a PC to a landline or mobile phone are not.

In the most basic VoIP, a user at a computer with a microphone headset calls a similarly equipped user by entering an e-mail address or user name on a network, such as [Skype's](#) "SkypeOut" program. Software transmits the audio signal over the Internet. The technology is similar to that of a mobile phone, which requires cellular towers to send packets of your audio signal.

For as little as 17 cents per minute, you can call from your computer to a regular telephone number anywhere in the world. Skype, SunRocket, and Vonage are among the more popular and inexpensive VoIP providers ([Table 1](#)). In addition to "SkypeOut," Google, Yahoo, and MSN also offer free PC-to-PC calling with voice conferencing.

Another Skype service, "SkypeIn," offers portable local numbers that allow callers—using a computer or a regular phone—to reach you wherever you go. You can be traveling in Paris and receive a phone call at a local Internet café with your notebook computer, yet the caller pays only the regular rate to call your number.

#### FAST FACTS

eBay recently purchased Skype for \$1.3 billion in cash and \$1.3 billion in eBay stock. VoIP use will likely become more widespread after the eBay takeover, industry observers predict. For more information, see <http://news.bbc.co.uk/1/hi/technology/4238258.stm>.

Only Skype offers software that allows telecommunication via Pocket PC. Blackberry is not supported for VoIP communication and SunRocket and Vonage do not offer PDA support.

**Table 1**  
**VoIP Providers**

Provider	Service within USA and Canada	Service to India—New Delhi
<a href="#">Skype</a>	\$0.021/minute	\$0.154/minute
<a href="#">SunRocket</a>	\$24.95/month unlimited	\$0.12/minute
<a href="#">Vonage</a>	\$24.95/month unlimited	\$0.17/minute

## VOIP ADVANTAGES

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The ability to make free or low-cost calls to any location worldwide is an obvious advantage. For clinical use, VoIP can help psychiatrists reach patients who travel frequently and have Internet access.

For the psychiatrist who shuttles between offices, a portable number offers flexibility. Psychiatrists attending national meetings or CME courses can use VoIP to contact colleagues or communicate with patients or staff back home.

Online phone communication is also secure, because VoIP data packets are encrypted as they are sent over the Internet.

VoIP users may be able to eliminate their local telephone service and pay only for broadband Internet access. For emergencies when the Internet is not working, a mobile phone may be sufficient backup.

If you prefer a traditional phone to a microphone headset, you can use a phone equipped with a universal serial bus (USB) connector to make online calls. Skype offers phones with built-in USB connectors, while [Vonage](#) and [SunRocket](#) offer adapters that connect to regular phones and specialized phone adapters that connect to a phone, computer, or fax machine.

Skype, SunRocket, and Vonage offer call waiting and voice mail functions. Many VoIP software clients also offer text messaging and conference calling, allowing you to use your computer to type notes or send files while making a VoIP call. Some VoIP providers, such as [Yahoo! Messenger](#), offer a video signal as well.

Skype offers a Pocket PC software client that lets you make telephone calls while connected to the Internet with a Pocket PC personal digital assistant (PDA). Having a Pocket PC with unlimited monthly wireless Internet data service and using SkypeOut to make mobile telephone calls for 2.4 cents per minute within the continental United States can help control combined PDA/phone charges. Skype will release a Palm OS version of this software sometime this month.<sup>1</sup>

## DRAWBACKS

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When your Internet access is down, you cannot make or receive VoIP calls. Also, as with mobile phones, the connection at times may be dropped or sound somewhat muffled. Overall, VoIP sound quality is on par with mobile phones, but not as good as conventional landline phones.

If traffic over your Internet connection is heavy—with downloads and other applications competing for bandwidth—connection quality can suffer. One solution is to use a router that gives priority to the VoIP application and its data. A router, similar to a “traffic cop” on a shared Internet connection, knows which data to send to and from the different computers/devices and the Internet connection.<sup>2</sup> The [D-Link](#) Broadband Phone Service VoIP Router, for example, enables VoIP calls and Internet sharing.

VoIP inboxes theoretically are vulnerable to spam attacks because of e-mail addresses associated with accounts. Qovia is seeking a patent for technology designed to guard against VoIP spam, but VoIP spam attacks have not yet been reported because VoIP has only recently become popular.<sup>2</sup>

As mentioned, VoIP could eliminate the need for a regular telephone line, but if you use a digital subscriber line (DSL) for Internet access, you will need to keep at least a local telephone service.

## TELECOMMUNICATION: THE FUTURE

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The development of faster Internet access with Internet2 could lead to consolidation in the communications industry, allowing voice, data, video and other media to be managed via one connection. Internet2 is a consortium of universities working with industry and government to develop and deploy advanced network applications and technologies for the creation of tomorrow's Internet.

## Related resources

1. Federal Communications Commission. Voice-over Internet protocol: frequently asked questions.  
<http://www.fcc.gov/voip/>
2. Internet2. <http://www.internet2.edu/>

## Disclosure

**Dr. Luo reports no financial relationship with any company whose products are mentioned in this article. The opinions expressed by Dr. Luo in this column are his own and do not necessarily reflect those of CURRENT PSYCHIATRY.**

## References

1. Rojas P. Skype coming to Palm next month? *Engadget* Sept. 14, 2005. Available at:  
<http://www.engadget.com/entry/1016803924623324/>.
2. Qovia files patents for voice spam blocking technology. Available at:  
[http://www.qovia.com/company/news/06.28.2004\\_voip\\_spam\\_patent\\_app\\_final.htm](http://www.qovia.com/company/news/06.28.2004_voip_spam_patent_app_final.htm).