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## **TechnoFeature: Talk Is Cheap: What You Need to Know About VoIP**

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### **INTRODUCTION**

In 1995, MIT professor Nicholas Negroponte pointed out that televisions and telephones were switching places. Phones were becoming mobile and televisions were being tethered to fixed cable sources. Today, a lot of people still have landline phones, but many people use cell phones exclusively. Add to this a new Internet-based choice. If you've seen TV ads by a company called Vonage, offering unlimited nationwide calling for about \$20 per month, then you are somewhat familiar with VoIP. You need a high-speed Internet connection to take advantage of VoIP, which most people reading this article probably have. So do any of the advantages of VoIP make sense for you? Maybe.

### **LINGO TO KNOW**

Just what is VoIP? It stands for Voice Over Internet Protocol. Simply stated, it enables you to use an Internet connection to speak with another person — audio only or including video.

### **TYPES OF CALLS**

With VoIP, you can make calls from computer to computer, computer to a phone, or phone to phone. Some VoIP services limit the type of calls you can make (i.e. only to other people with the same service or only to people with a computer). Others enable you to call anyone (usually for a small fee). Video calls have become easier to make and many VoIP services offer video options at low, or even no, charge.

### **TYPES OF SERVICE**

Two main types of services exist — IP phone and voice chat.

IP phone service requires a nominal monetary investment (small compared to Plain Old Telephone System (POTS)) and special hardware. These services work with traditional phones and can require users to sign contracts. They are less portable but can work for multiple users. They aim to replace traditional phone lines in a home or small business.

Popular choices for Internet phones include:

- [Packet8](#)
- [Vonage](#)
- [Sun Rocket](#)

Voice chat services are generally free. Typically you will have to install software and perhaps make a small hardware investment: a microphone (\$10) or a USB powered video camera (about \$40). These computer-based services enable you to call from your computer to another computer. The good news is that you can take your "phone" with you anywhere. The bad news is that to carry your "phone" you have to tote your laptop around.

Popular choices for voice chat include:

- [Skype](#)
- [Google Talk](#)
- [Gizmo](#)

We will focus on Skype and Packet8 because we have used these services most often. However, before committing time and energy to one type of service you should compare the options each service offers; the easiest way to do this is to visit the company Web sites and be sure to consider security issues. The for-pay services, Vonage and Packet8, usually have a 30 day trial period that enables you to experience the new system firsthand before committing to a monthly plan.

### **WHAT WILL IT COST?**

Costs vary from free to fairly low. IP phones can run as low as \$14.95 and include the ability to make international calls for pennies per minute. Voice chat services remain mostly free when you make a call to a user on the same service.

Twenty dollars a month for a local phone number with unlimited nationwide long-distance calling sounds too good to be true. If we told you that you also get free voicemail, call forwarding, and other valuable features (which traditional phone companies charge you for), you might be quite interested in VoIP.

### **IP PHONE SERVICES**

Lets begin by using Ernie as a case study. He recently left his law firm and started his own practice, initially opting to work from home. He had no landline, and hadn't seen the need for one. He and his kids had cell phones. But working from home he quickly realized he used a lot of cell phone minutes during peak hours. At that point a \$20/month phone service with long distance calling started to make sense.

The two major players in the consumer world of VoIP are Vonage (\$25/month) and Packet8 (\$20/month). Both offer unlimited nationwide long-distance, and a host of free add-on services — most of which are available under cell phone plans, but which wind up costing you money. Not so in the VoIP world.

Ernie, for example, can have calls to his Packet8 phone number automatically routed to his cell phone at no additional charge, but not vice-versa; Sprint has a per-minute charge for forwarded calls. Many people aren't interested in call-forwarding, or at least they think they aren't. People tend to conceive of call-forwarding as something you activate only once in awhile. In the VoIP world, call-forwarding is enhanced to the point where it makes sense to leave it activated all the time.

Ernie, for example, enabled Packet8's "simultaneous ring feature," which means that calls made to his Packet8 number will also ring on his cell phone. If a client calls him while he is in his office he can take the call on his VoIP phone and not incur any cell phone usage. But, if he were out of the office he would still receive the call on his cell phone. Thus, the simultaneous ring feature is much more useful than regular call-forwarding. And Packet8's feature passes caller ID information through to the forwarded number so when the call comes in Ernie knows exactly who it is from. This feature has proven so useful that Ernie leaves it on all the time. Why not?

What happens if Ernie's Internet connection goes down? Would that mean he doesn't get calls (or that they don't ring through to his cell phone)? No. Packet8 has a forwarding

feature that kicks in if the user's Internet connection goes down so calls pass through to the alternate phone number without a hitch.

Voicemail is a standard feature for all phone services these days, but with VoIP plans you can opt to have voicemail messages delivered to your e-mail account. Why is this useful you might ask? Well, for starters, it often makes more sense to keep voicemail messages in an e-mail file folder, especially if it relates to one of your cases. Navigating past stored messages on a phone is a pain, so it's unlikely that one would store a voicemail message for more than a week or two. But moving the voicemail out of your phone and storing it separately from other voicemails is highly useful.

Adriana also uses the Packet8 phone service and has successfully found this feature useful. She configured her Packet8 account to forward voicemail messages as e-mail attachments (they arrive as small .wav files) that she can listen to on her Treo Smartphone.

VoIP services can be especially useful if you travel to a foreign country. Ernie travels frequently to Panama to visit his brother. He, like many other international travelers, faced a typical challenge that plagues cell phone users: his Sprint phone doesn't work in Panama. But now, if he wants, he could unplug his Packet8 device from his router at home and plug it into the Internet router at his brother's house in Panama. Then he could make unlimited long distance calls to people in the United States as part of his \$20/month plan. And when people called his Packet8 number the phone would ring in Panama (the 'simultaneous ring' feature wouldn't work due to the aforementioned cell phone limitations, i.e. not working in foreign countries).

Both Ernie and Adriana have tackled the problem of having to make and receive phone calls while in a foreign country. Some of the VoIP solutions they use are completely free of charge, which brings us to a discussion of Skype, GoogleTalk, and other voice chat services.

## **VOICE CHAT SERVICES**

When Adriana agreed to take a two week training gig in Caracas, Venezuela she started planning how she could talk to folks back home without incurring heavy international long distance charges. Before departing, she called the hotel in Caracas (from her Packet8 phone, at a mere \$.07/minute) to confirm that she would have a high-speed Internet connection in her room. When she learned that her room would have the necessary connection, she installed Skype and Gizmo on her laptop, and on her mother's PC. She bought a Logitech camera to experiment with the Skype video tool (International travel is a perfect opportunity to push the "tech envelope").

Upon arrival at her hotel, she called Ernie using Skype (Ernie had installed Skype on his Mac laptop). The voice quality was quite acceptable and the cost of making the calls was zero. Adriana had similar success when she called her mother. She often uses her mother as a tech yardstick: if her mom can use the technology, anyone can use it. Skype passed the "mom-test" without any major problems.

Still, it bears emphasis that with the free services you have to keep your expectations at a realistic level. Some of these free VoIP services are far from perfect. Occasionally, Ernie sounded as if he had gone under water or someone had changed the RPMs on a turntable (then again maybe, in a wistful moment of Sixties-era nostalgia, he was listening to the White Album backwards).

After all was said and done, even with the minor problems, we periodically stopped and marveled that we had made lengthy international calls with ease and completely free of

charge. Ain't the Internet grand?

So, some of you are thinking, "Well, that's great but who wants to lug around a computer just to make phone calls?" To which we point out: maybe you don't.

### **HEY, LOOK MA — NO COMPUTER!**

If you are willing to take a slightly bolder tech challenge (not all that difficult, though) you can try using Skype with just a PDA. Adriana has successfully used her Dell Axim, which runs Pocket PC software, to make and receive calls from other Skype users. [Download the Skype PocketPC software.](#)

Let's go back to Venezuela for a few final points. Adriana also needed to check the voicemails accumulating back home on her Cingular cell phone (the one that wouldn't work in Venezuela). Obviously, this required using Skype to call a traditional telephone number. Adriana signed up for the fee-based SkypeOut service, which would enable her to call regular telephone numbers for low cost — three cents a minute to be exact.

When she called her voicemail the connection was often a bit grainy. But at least she was able to retrieve her messages. And the already-low costs continue going lower: the current leader in Web-based calling, Skype recently announced that it's dropping fees on SkypeOut calls in the U.S. Since Skype is in the process of being acquired by eBay one can only hope that the quality improves and the costs continue to stay low or drop further. But Skype isn't the only free service out there.

For kicks, we also tried a service called Gizmo. It had good sound quality, and offers some fun features that Skype doesn't. The ability to trigger sound effects, such as a laugh track or a gong, can really spice up an otherwise ho-hum conversation. Gizmo also has a mapping feature, which displays a Google map of the where the two people are located in the world. That probably doesn't sound that cool, but looking at the map and seeing Caracas, Venezuela connected to New Orleans, Louisiana seemed like something out of a science-fiction movie.

We also tried Google Talk, expecting major bells and whistles. We were surprised to find that it's fairly lean on features, but not surprised that it worked flawlessly and sounded great.

A few general notes: we both use all of these services over wireless connections and the quality of the calls is often amazing, sounding much, much better than a cell phone conversation. As with any other technology, you should be aware of security risks; so do your homework. And keep in mind that if you work at a firm with an IT department that manages your technology, please consult with them before installing any of these tools.

And a word of caution: before you cancel your traditional phone service, consider this tip from folks in disaster prone areas: analog lines usually work even during power failures. So you might want to keep a basic no-frills landline, just in case.

### **OUR DOG ASTRO**

As kids, we watched The Jetsons for tips on how to live in future. With the current crop of VoIP services, that offbeat, colorful future is pretty much here.

Many of the VoIP services offer a video component that is surprisingly good. Our first Packet8 phones had video capability. The quality wasn't very good and to use it, you had to be tethered to the phone, which makes communications a little more cumbersome. But we experimented with other video approaches.

Adriana bought a Mac so we were able to use Apple's iChat software and iSight camera. The iChat/iSight combination is outstanding plus it's easy to use and completely free. Better yet, iChat is compatible with AOL's instant messaging service (AIM) so you can video chat with Windows users as well as Mac users.

## CONCLUSION

Voice over IP is revolutionizing voice and video communications. Whether you are looking for reliable and low cost phone service for your home or business, or even just something completely zany and free, you should check out some of the current offerings. Like us, you might be pleasantly surprised. [Take a look at our resource page.](#)

## ABOUT THE AUTHORS

Adriana Linares of [LawTech Partners](#) is a legal technology trainer and consultant based in Orlando, Florida. Using her practical and personal approach to technology, she speaks and writes regularly on legal technology issues, tools, and training and is a member of the ABA TECHSHOW Planning Board. [Learn more about Adriana and pick up tips, tricks and tech advice at her blog.](#) You can contact Adriana via e-mail <[adriana@lawtechpartners.com](mailto:adriana@lawtechpartners.com)>.

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