Dial *N* for Net Phone

I FIRST HEARD ABOUT INTERNET TELEPHONY BACK in 1985, when MIT professor Steven Burns told me about an "Etherphone" that some researchers at Xerox had created to send voice over a computer network. The system worked by taking a person's voice, digitizing it, breaking that digital data into packets, and finally sending those packets over a high-speed network. At the other end, another Etherphone reversed the whole process. Neat technology, I thought, but far too computationally intensive and wasteful of resources to ever be practical.

How wrong I was. In the past 18 years, computers have gotten more than 1,000 times faster and networks nearly 100 times faster, but the human voice has remained basically unchanged. As a result, it's now dirt cheap to send reasonably high-quality voice over the Internet. And with programs like Microsoft NetMeeting, Apple's iChat, and Skype, it's relatively easy for anyone with a decent PC and sound card to set up a two-way voice or video conversation over the Net—provided that you don't mind making all of your phone calls in front of your computer, and that the only people you want to call are other people sitting in front of their computers.

But even this arrangement is obsolete. A new service called Vonage offers a completely different approach to Internet telephony. It still uses your high-speed Internet connection, but instead of a desktop computer, you make your phone calls using a special "telephone adaptor" that's about the size of a trade paperback. You plug this adaptor into your home network's hub or router, and into the wall for power. Then just plug a standard telephone into the adaptor and you're ready to go.

The Vonage adaptor is a tiny digital-telephone branch office in a box. It provides the dial tone when you pick up your phone and rings the bell when there is an incoming call. It digitizes your voice and sends it over the Internet to Vonage's servers, where calls are transferred to the same public telephone network that traditional telephones and cell phones use. Indeed, unlike NetMeeting, Skype, and the others, Vonage lets you make real telephone calls to other phone numbers. Vonage also provides you with your own phone number that anybody can call.

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Another difference between it and the others is that Vonage costs real money—but not much. The basic plan offers 500 minutes of calling anywhere in the United States and Canada for $15 a month. That plan includes caller ID, voice mail, call forwarding, and other features that phone companies typically charge extra for. Unlimited local calling with 500 minutes of long distance is $25 a month. For $35 a month, you can have unlimited calling anywhere in the country. Plus, the adaptor has two phone jacks on its back, allowing you to add a second phone number for a fax machine or your kids for a small additional fee.

Vonage's servers are oblivious to geography. When you sign up, the company asks you in which area code you would like to list your phone number. I have a friend in France; his Vonage phone has a Maryland area code because that's where he used to live. If I call him from my cell phone, the conversation moves over the telephone network on its way from Massachusetts down to Maryland, then hops on the Internet for the trip across the Atlantic. The result: no international telephone charges! And he can call anywhere in the United States without paying a centime to France Telecom.

The Vonage adaptor is delightfully easy to use. I didn't bother reading the directions when mine came in the mail: I just plugged it into my network, connected it to a cheap telephone, picked up the receiver, and dialed. I heard a normal ring at the other end of the line, the person answered, and we started talking.

Alas, there are some problems with the Vonage system. It takes between five and ten seconds longer for local phone calls to connect over Vonage than over my landline. The caller ID only shows the caller's phone number, not his or her name. Sound quality is great over a high-speed connection, but with a 144-kilobit-per-second ISDN hookup it is often garbled—like a poor cell-phone connection. My biggest concern, though, is reliability: unless you have battery backup for your Internet connection, the Vonage phone won't work if the power goes out. You can mitigate this concern to some extent by having your Vonage phone number automatically forward to another, regular telephone number if your Internet connection fails.

Other companies are entering the consumer and small-business Internet telephony market, but with more than 100,000 customers, Vonage is the leading player. If you already have a high-speed Internet connection, this is an easy way to shave cash off your monthly phone bill. TR

Simson Garfinkel is an incurable gadgeteer, an entrepreneur, and the author of 12 books on information technology and its impact.