NEWS / PROFESSION

Internet Telephony: Voice Communication on the World Wide Web

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Internet telephony is a term for using the Internet to exchange spoken or other telephone information, rather than the traditional telephone structures and rates. Since most access to the Internet is made at a local phone connection charge, international or other long-distance calls can be made over the Internet at much lower prices than the traditional telephone system. With the right program, you can call people around the world, send faxes, share files, and conduct multi-user videoconferences, all for the price of a local call.

The question is, what program should you buy? With more than two dozen Internet phone programs currently available, it's difficult deciding which one is worth the price (phone programs generally cost around $50). Fortunately, many software manufacturers offer downloadable trial versions of their programs. This lets you sample a product before buying it, and gives you the option of trying many programs to find one that suits your needs. To provide you with a better understanding of what voice communication is like over the Web, we downloaded demo versions of five different phone programs and tested them thoroughly.

Televox: a Dubious Beginning

The first program we tried was Voxware's Televox Pro 2.5. The program was easy enough to install; most of the work was handled by setup wizards that picked a directory for files and created icons. The first time we ran Televox, it tested the computer's specifications, microphone and sound card, then configured the program to produce the best results. (Nearly all phone programs run some type of system test; most involve speaking into the microphone, adjusting the volume, or listening for a prerecorded message). After Televox was configured, we were ready to start making calls.

One advantage of Televox is that it works with full-duplex or half-duplex sound cards, an important feature for those of you with older computers. And connecting to another user is easy. When you start the program, Televox lists all the users online at the time. To contact someone, just double-click on the name; Televox will automatically call that person. Some other features include file transfer capabilities from one user to another, text-based chatting, caller ID, and the ability to leave voice mail messages for people you can't contact.

Unfortunately, Televox is somewhat lacking in sound quality. Because the delay between sending a message and receiving a response can sometimes be five to ten seconds or longer, conversations are difficult to conduct. In addition, it can be hard contacting someone; out of all the test performed, we were only able to talk to three people. All in all, it's a middle-of-the-road Internet phone program. The beta version of Televox expires after 14 days, so you'll have to reload it; however, it is a free program, which does make it worth trying once or twice.

Net2Phone: a Step up, but at a Price

Hoping for better results, we tried Net2Phone. IDT Corporation, the maker of the product, claims that Net2Phone is "the most revolutionary technology on the Internet." Any company that would issue such a bold statement must have a product worth looking into, so we decided to download a copy.

Our tests produced a mixed bag of results. A strong point of Net2Phone is that unlike most phone programs, you can place calls to anyone in the world through your computer, instead of choosing from a list of users. The person you're trying to contact doesn't need a computer to answer the call, either. As for style, the program's interface was also among the nicest we've seen; the display actually look like a push-button phone. And despite the usual small delays in transmission and reception, the sound quality was a noticeable improvement over Televox.

There is a catch to Net2Phone: a big catch. Unlike other Internet phone clients, Net2Phone will cost you for each minute of use. The demonstration version only allows calls to toll-free 800 and 888 numbers. In order to make other calls, you need to purchase a Net2Phone debit calling card at their website.

Long distance rates on Net2Phone are generally better than those from long distance phone companies. All calls made within the U.S. cost 10 cents a minute, and calls made to (or from) international locations are substantially cheaper than regular telephone charges. For instance, a call to France on Net2Phone will only cost 26 cents a minute; the same call costs about 58 cents per minute using a major long distance carrier. However, if you're more concerned about quality than cost, you might want to just use the phone instead.

GatherTalk: A Problematic Plug-in

The next program tested was GatherTalk, a plug-in phone program for your web browser. When you start up your web browser, GatherTalk is activated. This is an advantage in that it only takes one step to start up two programs. After evaluating the performance of GatherTalk during numerous chat attempts, however, this seems to be the only feature worth mentioning.

Problems abound in GatherTalk. For starters, if you don't have a full-duplex sound card, you will be able to receive voice messages only, not send them. Considering the amount of mumbling and groaning that went on trying to achieve a conversation even approaching telephone quality while using this program, that may be considered a good sign.

The quality of voice communication achieved on GatherTalk can be summed up in one word: poor. The sound quality of this program was so bad that it reminded the reviewer of his childhood days, when he used to connect soup cans together with long pieces of string. Compared to the level of communication on GatherTalk, the strings and soup cans might be a welcome alternative.

Intel Internet Video Phone: a Solid Choice

After downloading three straight lackluster programs, there was reason to worry about the quality of the programs available. Fortunately, they weren't all lost causes. We struck gold with our fourth test product, Intel's Internet Video Phone.

Unlike the previous three products, Internet Video Phone can be used for voice-only calls and videoconferencing (if you have the right equipment). It's designed as a helper application for your system's Web browser; when you run Internet Video Phone, it "snaps on" to the bottom edge of your

browser and provides video windows of people making the call.

Internet Video Phone is also supported by the leading Internet directory services, such as WhoWhere, Four11.com, and Bigfoot. All you need to do is register with one of those services, and you can look up other users who have Internet Video Phone.

Among some of the program's nicer features are: full-duplex support, which allows you to have two-way, normal phone conversations; an easy interface to contact users; and a quick dial list that lets you maintain and call frequently used numbers. Another advantage is that the beta version of Internet Video Phone lasts much longer than the others, which gives you more time to test it before reinstalling the program. The first beta version of Internet Video Phone expired recently, but the new version should be available by the time you read this.

And the Winner Is: Vocaltec's Internet Phone 4

As good as Intel's Internet Video Phone is, Vocaltec's Internet Phone 4 may be even better. The sound quality for communication was as good as anything we've tried on the Internet. In each test we tried, other users were able to hear us quite clearly, and most of the time there was very little (if any) delay between transmission and reception. In one test, we spoke with a gentleman in Curacao for approximately five minutes; in another, we talked with a woman in the Philippines for almost 10 minutes. Since the connections were made through a local call to our provider, we paid no long distance charges.

Internet Phone 4 has the most options of any phone program we tested. It has a lot of amenities that normal telephones have (caller ID; voice-mail messages; call waiting, screening, and blocking; and directory assistance, to name a few). It's also one of the easier programs to set up and use; an animated assistant is on-screen most of the time to help you if you run into trouble.

One of Internet Phone's best features is the "whiteboard," which allows you to create, edit and view documents with other users in real time. You can also transfer files from one computer to another, and create private chat rooms for friends or business conferences. And if you have a video camera and the right equipment, Internet Phone lets you hold videoconferences.

The trial version of Internet Phone 4 only lasts for a week; after that, you won't be able to use it. However, you can place an order at the Vocaltec website, which will give you a registration code that removes the program's trial mode.

The Downsides of a New Technology

Internet telephony has significant problems. There's no standard protocol for letting users of one program communicate with users of a different program (even though the H.323 standard is gaining acceptance by the industry). If you have Internet Phone, you can't call someone using Digiphone Deluxe or Netspeak, for instance. And VocalTec's product works on America Online only if users are running AOL for Windows 95 (which requires a Pentium processor and 16 megabytes of RAM).

There are reliability issues, as well. Voice communication on the Internet isn't instantaneous. As a result you may experience delays between transmission, which make conversations choppy. During some of our tests, we were cut off in the middle of a call. Other times, it sounded as if the person on the other end was talking with their hand over the microphone. Still other times, we simply couldn't make contact with another user.

This technology is in its infancy, so it needs time to develop and grow. Less than 15 years ago, few people knew what a compact disc was, but CDs now are commonplace items. The possibility of speaking with (and seeing) anyone in the world for virtually nothing may sound unrealistic, but by the end of the century, Internet telephony could be as common as the regular telephone is now. Listed below are the manufacturers of each program reviewed, as well as their websites.

GatherTalk:
[url=http://www.cixt.cuhk.edu.hk/gtalk]http://www.cixt.cuhk.edu.hk/gtalk[/url]
Intel Internet Phone: [url=http://www.intel.com]http://www.intel.com[/url]
Internet Phone 4: [url=http://www.vocaltec.com]http://www.vocaltec.com[/url]
Net2Phone: [url=http://www.net2phone.com]http://www.net2phone.com[/url]
Televox Pro 2.5: [url=http://www.voxware.com]http://www.voxware.com[/url]

A large collection of evaluation phone programs is also available at C/Net's Download.com website ([url=http://www.download.com]http://www.download.com[/url], search keyword "phone"). As always, we welcome your comments. If you have any questions or suggestions about this column, please contact me.

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