

Business Computing

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A free monthly publication for small business. Over 20 years experience providing computer and network solutions.

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The Learning Center

How VoIP works: While the current telephone technology keeps open a connection, "voice over Internet" or packet switch-ing opens a link just long enough to send a small chunk or packet of data. Packet switching entails chopping up the telephone conversation and sending via packets of data. At the receiving end these packets are assembled in the original order and become a normal voice message. Garbled segments in the conversation mean the packets have not been assembled in the correct order. Fortunately, these delays in development are being rapidly overcome. As an added benefit, if the packets of data are compressed it makes an even more efficient way of communicating to use the Internet for telephone calls.



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How the Internet is Lowering the Cost of Long Distance Phone Calls

The Internet is the reason why long distance phone calls are going to get cheaper. What you may not know is ...you may have already used this service over the Internet. Many of the traditional telephone companies are already using "voice over Internet" between their regional offices. The transmission of phone calls via a data network or the Internet is known as Voice-over-IP or VoIP. (IP being Internet Protocol.) So how will this technology save you money?

For the last hundred years telephone companies have provided us with conventional connections via telephone lines. You pick up the phone, listen for dial tone and then dial a number. A connection is made between your phone and the other party you dialed. If you talk for five minutes there is a continuous connection for that time. If you look at conventional phone conversations, much of the transmitted data is wasted. Why? While one person is talking the other is listening, which means only half the connection is in use at any one time. You cannot both talk and listen at the same time. Also a significant amount of time is "dead-time" when neither party is speaking. How do you benefit from this observation?

The way to make a more efficient phone call is by what is known as "packet switching." Here your voice message is chopped up into little bits or packets, transmitted across the Internet and reassembled at the other end. Packet switching is efficient as it minimises the time that a connection is maintained. Several phone calls can

occur in the same space or bandwidth of a conventional phone connection. This is where the saving occurs and will make long distance calling a lot more economical in the future. What about the telephone companies that are already offering this service?

Today with broadband a user with an "always-on" Internet connection has several options for "voice over Internet." Computer-to-computer calling is one option and it is free. All you need is basic software and a headset. The problem is it is not very practical as you really need a telephone not a computer at the other end. Computer-to-phone "voice over Internet" service is now available and could greatly benefit persons or companies that are making many long distance calls. Telephone-to-telephone is another option today where you purchase an Internet or IP phone and plug it into your router and connect via the Internet after calling a special access number.

Although it will take time to happen, you can be sure that eventually analogue phones will be replaced with packet switching technology. By migrating to this technology, telephone networks immediately gain the ability to communicate the way computers do. It just makes sense in terms of economics and technical benefits.

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How to Work Remotely at Home Using Your Office Desktop Computer... Part 2

Last month we talked about connecting to your office computer via a virtual private network. (VPN) This month we will go a step further and explain how Windows allows the display to be remotely viewed on your home computer. To take control of your office computer you will need Windows XP Professional Edition installed at work. Windows XP Home Edition does not give you this feature. On your home computer any Windows versions will do the job of accessing your computer at work. Connecting by a fast or broadband Internet service makes the task a breeze.

When connected, the office computer desktop will be displayed on your home computer. It allows you to take over your office computer by the transfer of control of the mouse and keyboard. This means, for example, that you can connect to your work computer from home and have access to all of your

applications, files, and network resources as though you were in front of your computer at work. You can leave programs running at work and when you get home, you can see the office desktop displayed on your home computer, with the same programs running. Certainly better than lugging home a laptop and having to transfer files.

Important things to remember are, if you are connecting to the Internet at work through a router or firewall you will need to allow for the incoming access. You will also need to allow for remote connections in the Windows XP office setup. Go to Control Panel > System > Remote and click "Allow Remote Users." On your home computer you will need to install the Remote Desktop Connection utility. To do this, place the Windows XP CD in your home computer and let it boot-up. Several options will be displayed. Select the option, "Perform Additional

Tasks." Under this directory you will see the "Setup Remote Desktop Connection" which can be selected and loaded.

Assuming you are connected to the Internet go to Programs > Accessories > Communications and select "Remote Desktop Connection." You will need to enter the IP address or number of the office computer as well as your login and password in the prompt which appears on your screen. This creates a problem as you are assigned a new address each time you connect to the Internet. One way around this is to use an external modem or router and leave it switched on, obtaining the IP address from the routers control panel. The best method is to obtain what is known as a static address from your Internet provider. (This costs extra.) A static address means you will always have the same connection address.

If you need a copy of last month's newsletter to match-up this article, please send us an email.

A Practical Way to Save Money on Long Distance Calls

If you make a lot of long distance calls from your office ...here is a brilliant money saving solution! It is also blessed with minimal setup costs. Your calls will be diverted through the Internet? Assuming you have a computer handy all you need for setup is ...preferably a digital USB headset or phone that plugs into your computer. Cheaper still you can even use a common analogue stereo headset to get you going. Next you need to set up a phone account with a suitable provider. A good example of an international supplier of Internet calling can be located at www.net2phone.com

To get started, you create an online account with login and password and then download the free software. You can use your credit card to transfer funds to your account. A minimum amount is required to get underway. With the free software running on your computer you are ready to roll. The system works very well and there is a considerable saving in phone call charges. If you are travelling out of town or overseas and you want to make use of cost-saving-Internet-calling you can get a direct calling card. This enables you to call a coded number from your overseas location and the call is diverted through the Internet making it only a local call. Internet calling saves you money.

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