

# PLUS PAGES QUARTERLY

Concepts in Voice and Data Communications



## In This Issue:

<b>Do you really need a new phone system?</b>	1
<b>Virtual Private Networking</b>	2
<b>STS Phone System</b>	3
<b>BICSI Membership</b>	3
<b>STS Package Pricing</b>	3
<b>Microsoft Patch Watch</b>	4
<b>VPN, continued</b>	4



## Inside Future Issues:

IT Information  
Phone Systems/  
Voice Mail Updates  
Company News  
Wireless Information  
Cabling Updates  
Future Technology  
Guides

## Do you *really* need a new phone system?

Greg Stearns, Chief Operating Officer

The economy is moving along slowly. Your sales are down. You are thinking about a new phone system but do not really want to spend money on a new phone system. Then your phone system dies and you have no idea of the number of customers who call but are unable to get through to you. Now your sales suffer even more.

In this day and age, your office phone is still one of your most important and cost effective tools for communicating with your customers, sales force, and technicians. Without your phone, the lack of ringing makes it seem like everyone is on vacation...and the truth is that you might as well be gone also for all the work you will not get done.

Another important office tool is your computer. Without it, you are forced back into the "technology stone age" where you are using typewriters and carbon paper, and taking copious hand-written notes. I am certain that you have upgraded your computer system within the last five years so that you can

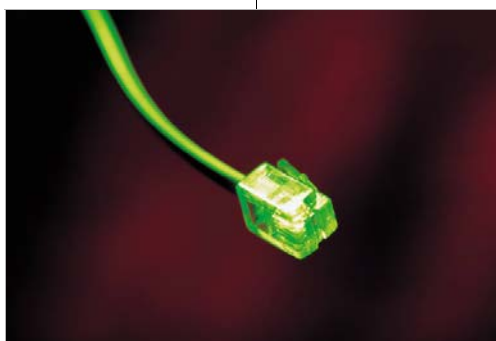
take advantage of the latest technology and not live in that "stone age."

The idea I am trying to paint here is that many businesses spend money upgrading their computers every two to five years, but continue to rely on a phone system that is much older.

If you have had a phone system for longer than five years, it is probably a good time to look into replacing it with a new system. Just as computers have improved features over time, phone systems have also improved features...and have decreased costs.

Take a look at your phone system and decide if it is time to upgrade it with a new one. It is going to cost money to do so, but the alternative (e.g., missing calls, losing sales, not being able to provide customer support) will be more expensive.

Call our sales staff today and ask for information about a new phone system.





## Virtual Private Networking

# Small Investment ⇨ High Payoff

PHILIP SCHLESINGER, IT MANAGER

### How often does this happen in your company?

People are traveling on business, and all of a sudden, the facts on the ground change. The people in the field are completely stranded; the business presentation, contract, or other official business file that everyone has been working months on is no longer valid. It's too big to email, or it'll take too long and it'll be too expensive to FedEx. What do you do???

Let me offer up another common scenario: some of your employees are temporarily based at a project location (such as the construction of a new building or the audit of a client) or even permanently based at a branch office. These workers need to submit reports and periodically update files on the server so the department heads and executives can be kept abreast of progress. For two decades now, people have turned to the fax machine, but faxing can get expensive and upon receipt – if the fax is even legible – someone in the office often has to retype the information into the corporate computer system, which causes further delays as well as extra labor costs.

These types of inefficient business processes are the main reason why companies invested lots of money in the late 80's and early 90's in dial-in servers, but those are expensive to set up and maintain and the long-distance charges rack up quickly. In the late 90's, businesses large and small began to adopt the Internet as a standard for communication, and a new type of technology stepped forward to improve ROI: Virtual Private Networking (or VPN for short).

### Here's how a VPN works:

A VPN server device is connected to the company's Internet connection.

The Internet connection could be a T-1, DSL, cable, ISDN, satellite, wireless (see my last article) or even dial-up. When activated, a VPN client, which can either be software loaded on a remote computer or a small VPN device at a remote site, contacts the VPN server through that remote site's Internet connection (again, which can be T-1, DSL, cable, ISDN, satellite, wireless, dial-up, or as we've done in the past ourselves, piggy-backing on that site's own network). The VPN client and server verify each other's security credentials and then, through the use of a complex mathematical formula, start exchanging information via an encrypted connection or "tunnel". The higher level encryption schemes (3DES & AES – see sidebar) might take a super computer thousands of years to crack.

Sidebar: Older VPN systems use the US Government's Defense Encryption Standard – DES for short (pronounced "Dez") – or an even more thorough form of DES called 3DES (pronounced "Triple Dez"); newer VPN systems use the new Advanced Encryption Standard – AES for short – which is the government's current standard for encrypting documents.

Once this VPN tunnel is activated, computers at both ends of the tunnel can communicate as if they're on the same local network; other than a small time delay, the connection is usually seamless. The remote users can fully use file, email, intranet, and database servers at the corporate office. Depending on connection speed, they can partake in conferences involving video and/or application sharing. Our office, for instance, has been using a VPN for these purposes for nearly two years and we are now considering making our accounting application available across the VPN so we can build sales quotes from the field and allow our accountant to do most of his work

from his office during tax time instead of requiring him to come to our office.

From a security standpoint, VPN technology is great – nobody gets in from outside the office unless they have the right credentials. Our server is safely behind our VPN device, which also acts as a firewall, keeping the baddies on the Internet from touching the corporate network while letting the good guys through.

From an ROI standpoint, the company gets the benefits of remote access without the costs of:

- Multiple dial-in telephone lines are no longer needed (in our case, we just leverage our existing flat-rate T-1 connection)
- Long-distance charges to access the corporate network will drop to near zero, as most connections are through existing flat-rate broadband connections or via local dial-up numbers (in our case, of all of the projects we've worked on in the past and the present, we've only found one site – located in the middle of nowhere in Nevada – where our workers had to dial a long-distance number)
- Expensive hardware requiring constant maintenance to keep dial-up lines active is no longer required (our VPN server is inexpensive and only once has it gone down – we had it up and running again within 15 minutes)

A great benefit over the old dial-up system is that only two things will limit the speeds of the VPN tunnels:

- The lower speed connection on both sides of that tunnel, and
- The processing power of the VPN server.

Continued page 3

## VODAVI STS Phone System

### Perfect for Small Business

Vodavi has just released its newest addition to a solid line of business telephone systems. The Starplus STS (which stands for Small Telephone System) is perfect for small businesses and is loaded with many features previously available only to larger enterprises.



Rather than offering multiple phone models, Vodavi packed all the important features in one easy-to-use speakerphone. The basic system works with 12 CO lines and handles up to 24 digital stations.

Key features include:

- PBX/Centrex compatibility
- 24 flexible programmable buttons
- CTI adaptable
- Additional device port
- Supports full or fractional T1
- 2 x 24 character display
- 2.5mm headset jack
- Hands free use

There is an optional in-skin (e.g., card located inside the KSU) voice mail solution and is an 8-port system with 64 mailboxes and three hours of message storage. Some of the voice mail features include:

- Menu routing
- Fax tone detection
- Message forwarding
- Pager notification
- Live call screening option
- Date and time stamp
- One touch record
- On hold announcements
- Message storage
- Call forwarding
- Remote access
- Change personal greetings
- Password control

All in all, the new Vodavi STS is a flexible and robust system for the small business. The best news, though, is that it is offered at an affordable price. Call us with your requirements and we can give you a quote for the newest, high quality, Vodavi phone system.

### Vodavi STS Phone System Package Pricing

We can get you set up with the new STS phone system at a great price. Look at these great deals...installation and tax is included in all packages:

- 4 phone system is less than **\$1500**
- 4 phone system plus an 8 port voicemail is less than **\$2550**
- 8 phone system is less than **\$2250**
- 8 phone system plus an 8 port voicemail is less than **\$3300**

Call our sales department for a quote for your new system today.

## Tel Tech Plus Maintains BICSI Membership

Keeping up with today's rapid growth of technology requires constant education and training. Tel Tech Plus has searched out key education programs leading the telecommunications industry. BICSI (Building Industry Consulting Service International) is a worldwide organization that offers professional registration programs for communications infrastructure design, data distribution design, outside plant design, and low voltage cabling installation.



Tel Tech Plus holds a BICSI corporate membership and adheres to all guidelines and installation techniques to assure quality, and maintain communications industry standards. All of our staff is dedicated to maintain a high level of professionalism and education to serve our customers with cutting edge technology.

To learn more about BICSI you can visit our website at [www.teltechplus.com](http://www.teltechplus.com) or go to [www.bicsi.org](http://www.bicsi.org).

James Stewart RCDD



## Microsoft Patch Watch

Microsoft published 16 security bulletins during the period of December 2002 to February 2003, seven that were critical. Most of the attention during that period was given to the W32.Slammer virus (worm). We cannot emphasize enough the importance of keeping security patches on your computer systems up to date.

If you'd like to check your computer, open Internet Explorer and click on Tools in the menu bar. Then click on Windows Update. This website checks to make sure that your computer has all of the latest security updates and fixes for several issues, including some you may not even be aware of.

Tel Tech Plus is very concerned about securing your business's information and data. Our IT staff is fully qualified to provide any level of design, implementation, and security. Security attackers can be a problem as they try to find new avenues of access to your network all the time. We can either stop them or make their attempts extremely difficult.

***For more information, please feel free to call (760) 598-6233 x111, or e-mail [ITHelp@teltechplus.com](mailto:ITHelp@teltechplus.com).***



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newsletter is being  
provided by

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## Virtual Private Networking

Continued from page 2

Processing power: VPN devices usually come in three flavors, with every size needs:

- A low-level VPN device will work great for project sites, small branch locations, and telecommuters
- A medium-level VPN device will help out businesses with 50 to 500 remote users
- A high-powered box is best for large corporations, which usually have multiple T-1's or even more powerful connections to the Internet (especially those who are located near the fiber Internet backbones that crisscross the USA).

In summary, VPN is a small investment with a high payoff, and hence an easily achievable ROI. It increases efficiency and promotes communication, which in turn will help your company's bottom line dramatically.

***For more information about this or other topics, please feel free to call me at 760-598-6233 x111 or email me at [pschlesinger@teltechplus.com](mailto:pschlesinger@teltechplus.com).***