AT&T Consultant/Vendor Sales Group
UPDATE
April 2007

inside...

kari's corner

New Opportunities

What a busy start to the year! Our merger integration with BellSouth continues to expand our business and consumer solutions portfolio. Local to global, we remain dedicated to providing the most complete, secure and reliable networks for your business success.

In such a fast-changing industry, access to the latest information is essential. Your Consultant Liaison Managers certainly take the lead in keeping you informed, and we hope you also find value in this publication. And this year we are delighted to add to that communications stream by offering you the opportunity to attend FOCUS seminars! FOCUS is a non-profit AT&T business user group that has grown steadily by providing an active forum for communications users and providers. FOCUS programs and events provide the professional advantage members need to stay on top of today's industry evolution.

Earlier this year, we had a very successful FOCUS chapter meeting in Anaheim, California. Consultant Robert Harris from Communications Advantage said the event was "a great example of how the CLP program keeps me (and my team members) informed and supported, and ethically leverages the relationship that consultants have with clients."

Also in Anaheim, consultants were invited to attend our Networking Leaders Forum. This full-day event gave consultants, customers and AT&T account teams the opportunity to discuss the critical business continuity and network security issues businesses face today. Participants were able to observe as the AT&T Network Disaster Recovery (NDR) team conducted a test of our business continuity processes in the event of a network outage. Consultant Roy Walker, president of Walker Consulting LLC, remarked, "I was very impressed with the event and appreciate knowing about these vital services."

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AT&T Customer Service Numbers

Pre-Merger SBC Areas:

California	Sales & Billing	Repair
Small Business	1-800-750-2355	611 or Toll-free 1-800-750-2355
Medium Business	1-800-891-1800	611 or Toll-free 1-800-332-1321

Nevada	Sales & Billing	Repair
Business/Consumer	1-800-288-2020	1-877-469-2355

Southwest	Business
Sales	1-800-499-7928
Billing	1-800-559-7928
Repair	1-800-286-8313

Midwest	Small Business Sales & Billing	Small Business Repair
Indiana	1-800-660-3000	1-800-727-2273
Wisconsin	1-800-660-3000	1-800-727-2273
Illinois	1-800-660-3000	1-800-727-2273
Ohio	1-800-660-3000	1-800-727-2273
Michigan	1-800-660-3000	1-800-727-2273
Español		1-800-426-2902

East (CT)	Sales & Billing	Repair
Business	1-800-448-1008	1-800-922-4646

Pre-Merger AT&T Mass Market Areas:

Local and Long Distance Service: 1-800-222-0300

AT&T CallVantage Service: 1-866-596-8464

AT&T Worldnet and DSL Service: 1-800-WORLDNET (1-800-967-5363)

AT&T Alascom (Alaska):

Business Services: 1-800-955-9556

jerry hinek

Zombie Networks

One of the primary tools in the cyber wars waged against each of us every day is the zombie. A zombie is a personal computer whose processing time and capabilities are taken over anonymously and remotely by a hostile stranger, for personal enrichment, at the expense of the computer owner.

A zombie network can consist of thousands of zombies controlled by one person. A zombie can be used to attack other computers, to send spam or to disrupt other normal activities. If you haven't taken care to protect yourself, your own computer could be a zombie.

Zombies are an evolutionary by-product in the development of computer viruses. The first viruses were written simply to be disruptive. New technology, new computers and new virus techniques, along with the profit potential, lead to the creation of viruses that create zombies.

Computer viruses have always had three main components: infection, self-replication and payload.

Infection

Just as an organic virus infects human beings, a computer virus infects its victims in the course of normal activities. Shaking hands or flying on an airplane with a sick person can lead to a cold or flu. Having your computer connected to the Internet, opening email or surfing infected websites can lead to a computer virus.

The virus infection takes place without any direct awareness by the infected person or system. We wouldn't choose to become infected or to have our computers infected.

Of course, where this analogy breaks down is that while viruses in humans are a product of natural selection, computer viruses are purposefully designed, written and modified. Those writing the viruses have goals in mind, and their skill in writing the virus determines how successful they will be in achieving their goals. For both kinds of virus there are precautions you can take before infection, and things you can do after infection, to lessen the pain or hasten the recovery. The last half of this article discusses protecting yourself.

Self-Replication

It's just a technical problem to write a computer virus to infect a computer. In some ways it's no different than writing any other software except that the person who owns the target computer may have to be tricked into allowing the virus into the computer.

Early viruses spread when people shared infected 3.5 inch diskettes. This process took time, and viruses spread slowly. The cycle would start with a virus writer infecting a diskette that had some attractive file or game or other software that an unknowing person might want to run. Then the virus writer would give the diskette to someone who would load the infected diskette into a PC and infect it. Then the infected PC would infect other diskettes that were passed around and loaded into other PCs.

The Internet has enabled viruses to spread almost instantly around the globe. They can hit and infect a vulnerable computer, replicate themselves and attack other computers many times a second. Even with good anti-virus software, a new virus may infect a computer before updates are available to clean the virus or to protect uninfected computers.

Payload

So why do virus writers write viruses? Motivation is personal, and virus writers have different motives. Early viruses were written for three primary purposes: for the challenge, to disrupt or annoy a

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A zombie is a personal computer whose processing time and capabilities are taken over anonymously and remotely by a hostile stranger, for personal enrichment, at the expense of the computer owner.

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person, and to destroy the information on a computer. That was the limit of the technology at the time.

As virus writers developed techniques to exploit technological advances and to stay ahead of the anti-virus industry, they got better at spreading their viruses. They discovered ways to profit, and they got greedy. Some may still write viruses for the challenge, but most viruses are written not to destroy or to annoy, but to steal computer capabilities remotely, and to cash in.

Zombie networks can be made to send out newer viruses or spam and phishing that generate great profits if even a small number of recipients respond. These networks can also be bought and sold or rented to others.

How a Computer Becomes a Zombie

To stay ahead of the anti-virus industry, virus writers incorporate hacker techniques and tools. In fact, a lot of viruses are merely automated hacking plus the ability to replicate.

Hackers look for vulnerabilities in operating systems and common software, and then they look for ways to exploit any weaknesses. They do that by pushing legitimate software to its design limitations to find anything that the writer didn't think to handle. It can be as simple as putting a 25-character name into a field that was only designed for 24, or as complicated as sending a network signal that appears to conform to protocol but is constructed to bypass security. Tactics from the simple to the complex may break the software or operating system and give the hacker the privileges of the owner or administrator.

Hackers have their own networks for information sharing. They brag about the vulnerabilities they've found and share their techniques and tools for exploit and attack.

Virus writers take some of these tools and techniques and incorporate them into viruses. An attack may hit a thousand computers, and infect ten. That creates ten zombies that can be made to attack another thousand computers each.

When a computer is infected it may contact a computer owned by the malicious attacker anywhere in the world and ask for further instructions. The attacker then loads more malicious software. With enough computers under control, the zombies become a powerful tool for attack.

Protecting Yourself

Protecting your computer and network from hostile attacks is one of the areas in life where enlightened self-interest aligns with the common good. If you protect your computer you can't easily be attacked, and you won't likely have your computer attacking others. If we all take responsibility for our own security we will get the most benefit from our investments in our computers.

Software Updates

Both operating systems and application software normally contain weaknesses in their designs that hackers exploit. Oversight or lack of training on the part of the software developers contributes to the problem, as does the fact that operating systems and applications are written by teams of people, are very complex, and can contain millions of lines of code. There are many ways to attack software, and the larger the program, the more points of attack there are.

As vulnerabilities in software become known, the companies that develop and sell software release updates that attempt to patch weaknesses. This is a double-edged sword because release of a patch lets hackers know there is an opportunity for attack. It's always in your own interest to keep your PC up to date with any security-related patches. You may not care about a patch that fixes processing of daylight savings time in Australia, but you should care about a patch that closes a security hole.

The majority of people use Windows® software. Windows can be set to update itself automatically. Make sure that function is enabled for your PC.

Firewalls

Good firewalls do two things: they make it difficult for hostile attackers to reach your system, and they can prevent an infected computer from sending messages to unknown computers

anywhere in the world. Your computer should only communicate with the Internet at *your* will.

Firewalls are readily available. You can purchase them at most retail electronics stores. Software firewalls and network routers with Stateful Packet Inspection (SPI) firewalls are inexpensive to buy and to install.

Anti-virus Software

Most people have easy access to free or inexpensive anti-virus software from their Internet Service Providers. Anti-virus software is available in retail stores, office supply stores, warehouse clubs and computer stores. Anti-virus software can also protect you from phishing and spyware. It's worth your time to get it and run it.

Restore Points

Newer operating systems allow you to restore your computer configuration to the way it looked on a previous date. In case of infection or failure, it can be helpful to know how to go back to the time before the problems arose. That won't always work, but if it does it can save a lot of headaches in cleaning your computer. Learn how to create a restore point on your computer and how to recover your computer to a restore point.

Back Up Your Computer

Backing up a computer is one of people's favorite things not to do, even though there are so many reasons to do it. There's a delusion that if things are going well today they will go well tomorrow. Not only can a back-up save your day if you lose your computer or your hard drive crashes, it can mean success or failure with important professional or personal projects stored on the PC.

The zombies really are out to get you. They're real and they don't sleep. By protecting your own computers you can save yourself and others from the disruption and damage of zombie attacks.

Jerry Hinek, CISSP
Senior Business Security Manager
AT&T Information Services

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KARI'S CORNER – Continued from page 1

FOCUS opportunities are available in Northern California as well. Don't miss the upcoming chapter meetings in San Francisco April 24th and in Sacramento April 25th. The agenda includes:

- IP technology update and training by industry experts Hill & Associates
- Forward-looking view of the IT/telecom industry by Nemertes Research
- Interactive demonstrations by Avaya, Nortel, Cisco and others
- Networking opportunities with your peers

For those of you able to attend FOCUS in Sacramento, we have a special opportunity. Sacramento is home to one of two AT&T Network Operating Centers in California (the other is in San Diego). The NOC is responsible for surveillance, provisioning, and integrity of the AT&T core network. A special tour has been arranged for consultants immediately following the Sacramento FOCUS meeting. If you are interested, please contact your Liaison Manager at 1-800-552-5299 to reserve your place.

We hope these new training opportunities help ensure continued success for your company, because – as always – your success is our success!

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Monitoring and Managing Your Network Is as Easy as Point and Click

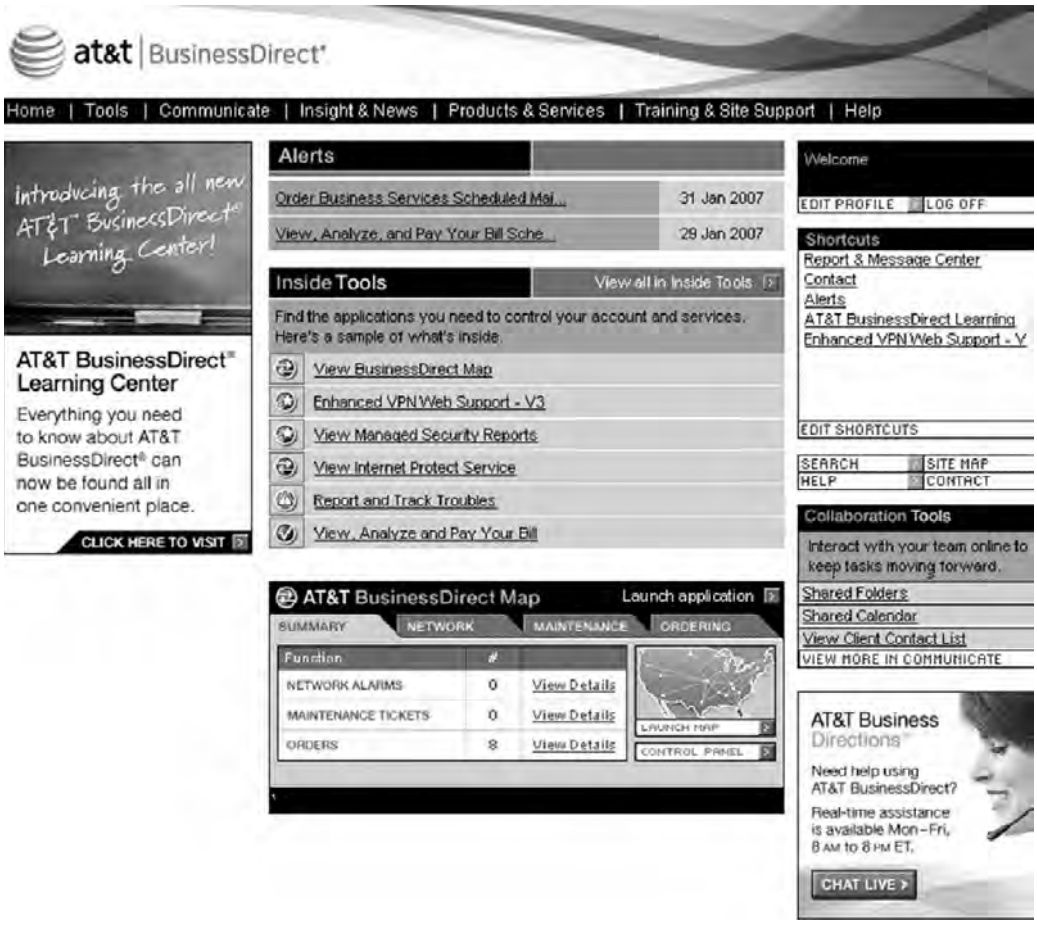
This industry teaches us that customers think about telecom management as a single, integrated experience involving network monitoring and management, inventory management, ordering, billing, and troubleshooting – and not as separate or individual tasks. This key principle inspired our most innovative tool to date, AT&T BusinessDirect® Map.

The first of its kind in the industry, AT&T BusinessDirect Map is the only map-based servicing tool to offer a consistent, fully-integrated experience across multiple telecom functions and across multiple services.

AT&T BusinessDirect Map delivers point-and-click network management capabilities atop an interactive world map, in *real-time*. It empowers customers to monitor their network and trunk performance; obtain trunk and carrier outage notifications; create and track trouble tickets; view and manage inventory; and place and track orders. In 2006, the tool was expanded to include every country where AT&T provides service. Because it resides on AT&T's award-winning business portal, secure 24/7 access is assured.

AT&T BusinessDirect Map is designed to mirror the way customers do business. It first presents customers with "the big picture" – their AT&T service network and its overall performance.

AT&T Business Direct® Map delivers point-and-click network management capabilities atop an interactive world map, in real-time.



Then, through the use of its point-and-click capabilities, it allows customers to drill down to the underlying network details from which they can check inventory, order, react to changes in their network, or report trouble.

The AT&T BusinessDirect Map *Control Center* (page 6) serves as the main communication hub from the portal home page. It gives customers proactive status on all major telecom functions: ordering, maintenance, and network performance. Specifically, *Status Indicators* change from "grayed-out" to "highlighted" to alert customers about their ordering status (e.g. pending order, jeopardy order); maintenance status (e.g. circuit ticket, partial outage); and network status (e.g. over-utilization.)

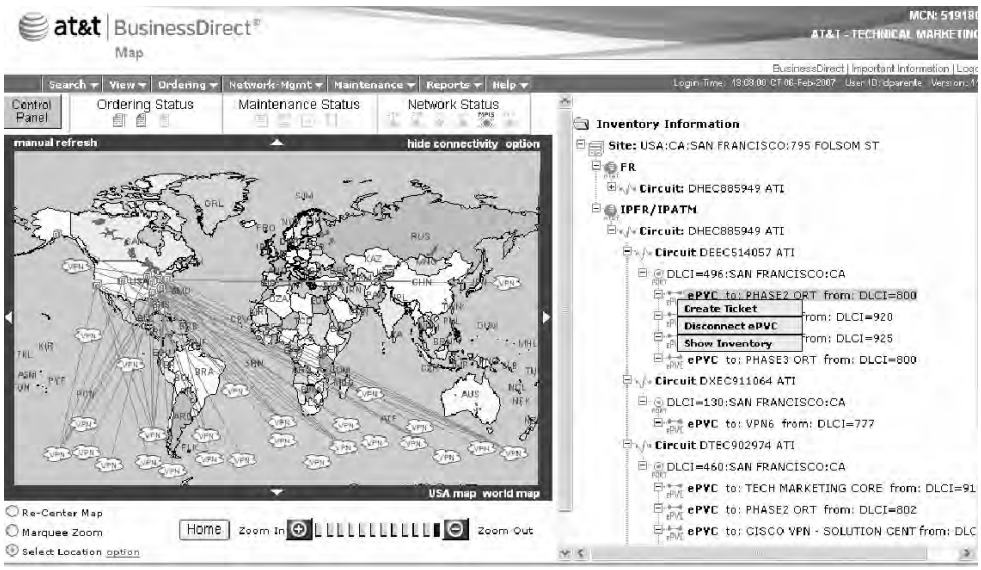
AT&T BusinessDirect Map also provides customers with their Inventory (see below) in three different ways: 1) atop a graphical world map with zoom capabilities that drill down to the street names of domestic territories or to the postal/city level of international locations; 2) via a hierarchical tree organized by sites/locations; and 3) via inventory reports (e.g. Location Summary Reports, Circuit Summary Reports, APN Reports, and VPN Site Lists.)

The Integration of an Other Tools feature within AT&T BusinessDirect Map lets customers seamlessly transition between inventory, ordering, and maintenance tasks, eliminating the need to open and close multiple tools. It allows data (e.g. circuit numbers) for use on orders and trouble tickets to be pre-populated directly from the inventory database.

To learn more about the extensive features and applications of AT&T BusinessDirect Map, visit att.com/ebcc.

Robert Sloan
Vice President
AT&T eSales & Service

AT&T Business Direct® Map . . . allows customers to . . . check inventory, order, react to changes in their network, or report trouble.



Power becomes available only when you know exactly what you want . . . and are fully determined not to quit until you get it.

– Alexander Graham Bell

Business customers today increasingly rely on IP-based technology to reduce the cost of their network, and to provide increased bandwidth, performance and functionality. Competitive pressures have also placed a greater emphasis on network protection, profitability and productivity. The AT&T Multi-Protocol Label Switching (MPLS) based Virtual Private Network (VPN) service provides all the benefits of a private network—security, service level agreements, manageability, scalability and reliability—at a lower cost.

AT&T VPN is the evolutionary result of AT&T's strategic direction to provide network-based IP services.

What is AT&T Virtual Private Network (AVPN)?

AT&T VPN is the evolutionary result of AT&T's strategic direction to provide network-based IP services. Our strategy is to create a *single* network-based VPN service with a robust set of features to allow customers the flexibility to choose the options they require without the need to migrate from one network VPN service to another. AVPN has been designed to include the best features from our IPeFR/ATM, PNT, EVPN and NVPN services; however, it will take time for AVPN to reach feature parity with all of these VPNs.

AVPN is a network-based MPLS service. It enables customers to build an application aware, virtual private network to link locations and efficiently transmit voice, data, and video over a single connection. AVPN leverages our highly scaled OC-192 domestic AT&T IP Network—also called Common Back Bone (CBB)—the same way that IPeFR/ATM does today. However, AVPN also makes use of private provider edge (PE) routers. This means that they are not used for Internet access services and no Internet routes are contained in the routing tables. While AVPN provides MPLS service to customers, we also use this technology in our core network to keep traffic from private MPLS VPN services separate from Internet traffic.

AVPN has options that appeal to customers of all sizes in all markets. Customers typically choose network-based IP VPN services like AT&T VPN in the following situations:

- They need simplified meshed/semi-meshed communications.
- They need a more efficient disaster recovery plan for their hub site(s).
- They want to reduce complexity in their network.
- They are rolling out new IP applications like Enterprise Resource Planning and/or are establishing business-to-business extranet connections.
- They are looking for robust features such as the ability to mix and match port protocols and access options.

AVPN Service Components

The primary AVPN service components are MPLS ports. An MPLS port provides the connection between a supported AVPN access arrangement and the AT&T network. The MPLS port speed is the maximum rate for transmission of data through the MPLS port. AT&T MPLS ports are available in a variety of protocols, and the availability of specific port speeds will vary by protocol. Currently, available port speeds range from 56k through OC12 and we are developing provisions for Ethernet up to GigE. Customers have the option of choosing AT&T stand-alone access products or providing their own access from other sources. AT&T VPN has a flexible set of access protocol options that may be used to connect to an MPLS port. They include ATM, Dedicated Private Line, Frame Relay and DSL (where available). Ethernet MPLS port and access options are future enhancements.

AT&T VPN is generally available across the United States, including Hawaii, Puerto Rico and the U.S. Virgin Islands.

It is not yet available in Alaska. International capabilities in 42 countries are in controlled introduction.

MPLS ports, MPLS DSL access connections and AT&T VPN optional features are billed at fixed monthly recurring charges based on the port speed selected and, if applicable, class of service (CoS) charges. Discount pricing plans are available based upon revenue and term commitments.

AVPN Addresses Customers' Networking Needs

AVPN addresses a number of critical IP VPN business networking needs:

- **Any-to-any connectivity** – AVPN enables communications between any two sites (regardless of the types of AVPN ports at the sites) in a specific customer VPN, eliminating the need for tandem routing and defined virtual channels between sites. Growth no longer requires resizing and rebalancing of multiple Private Virtual Circuits (PVCs). Additional sites can simply be added to the VPN and AT&T will manage IP core capacity. (See below.)
- **Prioritization of traffic** – AVPN provides customers a very flexible traffic prioritization scheme through network-based class of service (CoS). Customers can choose from four different CoS profiles to establish their application mix.
- **IP-based disaster recovery** – AVPN provides customers with dynamic IP disaster recovery via Border Gateway Protocol (eBGP) which allows load balancing across six discrete Customer Edge-Provider Edge connections as well as supporting several redundancy options for carrying primary and backup routes.
- **Simplifies customer premise equipment (CPE) configuration needs** – When adding an additional site, customers need only reconfigure the new site router, unlike a Layer 2 PVC network, in which both the hub and the remote site's routers must be reconfigured. This can result in CPE equipment savings of up to 50% due to the need for fewer and smaller routers at each site.

Our Value Proposition

AT&T introduced the first MPLS service in 1998 and has continued to lead the industry with the largest MPLS networks in the world. AT&T VPN provides several major advantages:

- **Reliability** – The backbone network is designed with no single point of failure in the core architecture.
- **Network performance** – The AT&T network provides buffers to ensure customers with large data transmission needs do not impact the performance of customers with less demanding transmission requirements. Network performance reports allow customers to monitor and measure their network. Customers will have access to reports ordered for designated service components via the AT&T BusinessDirect® portal.
- **Network design support** – AT&T network design consultants can design an optimal performing network for customers using VPN networks to integrate legacy and client/server applications under a single network backbone.
- **Security** – AT&T VPN Service offers the level of security that customers have come to expect from traditional Frame Relay/ATM services, but also extends that security into the IP VPN environment. MPLS provides for greater security through the creation and assignment of unique Virtual Network Routing and Forwarding (VRF) tables to each customer's VPN. This offers the same level of privacy as a network designed with ATM or FR

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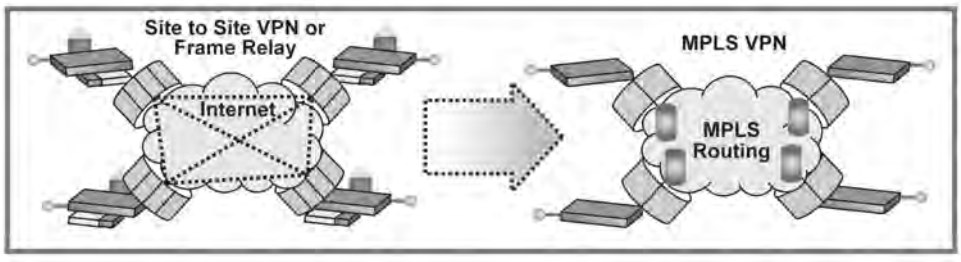

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PVCs, because users in a specific IP VPN cannot see traffic outside their IP VPN.

- **Reduced network complexity** – Network communications are simplified through a reduced requirement for the complex CPE routing tables that enable "fully meshed" communications. Instead of the multiple IP to Data Link Control Interconnection (DLCI) addresses required for meshed PVC networks, only a single IP address is required to route all traffic across the network.
- **Robust meshed connectivity** – The service is cost effective for customers requiring even a moderate degree of meshed or any-to-any connectivity between multiple locations. For example, a 25-site network requiring fully meshed connectivity would require 300 PVCs to accomplish the connectivity provided by 25 AVPN MPLS connections. This offers considerable cost savings over traditional Frame Relay-type services.
- **Eliminates the need for tandem routing** – Eliminating tandem routing reduces potential port congestion.
- **Superior scalability** – Adding new locations or CPE to the customer's network requires significantly less effort than would be required in a comparable meshed Frame Relay or Internet Virtual Tunneling network
- **IP awareness** – The service allows the user to define the priority of different applications and assign the appropriate class of service to each application at each location within the customer's network. Real time class of service is supported through separate queuing in the AT&T Global IP network, ensuring that traffic delivery is reliable and high performing.
- **Flexible access options** – The variety of access arrangements available to users simplifies the addition and support of remote users, as well as allowing for access by approved external organizations.
- **Cost efficiencies** - AT&T VPN supports Unilink as an optional feature which provides the ability to support multiple Logical Channels on a single MPLS Port.
- **Multicast** – AT&T VPN Multicast allows customers to send data from one MPLS port to multiple customer MPLS ports with a Multicast-enabled VPN. Applications include corporate broadcasts, file transfers, video conferencing and training.
- **Diversity options** – AT&T VPN supports the automatic rerouting capability of MPLS and two diversity options. The Service Diversity Option ensures that ports are provisioned on diverse switches/PE routers within the same switch POP. The switch POP Diversity option guarantees that ports are provisioned on diverse switch POP's.
- **Service Level Agreements** – Some of the industry's most aggressive SLAs define our customers' expected network performance and cover on-time provisioning, availability/repair time, delivery rates and latency.
- **Built-in disaster recovery** – Because it's IP-based, networks can be kept up and running more simply in the event of site or network outages.
- **Investment protection** – AT&T VPN is our strategic network service. Future AT&T feature and option enhancements will be on this platform.

Business customers will find they can save money on their network utilizing an IP-based solution.

Business customers will find they can save money on their network utilizing an IP-based solution.

AVPN offers application awareness for traffic prioritization, scalability, and MPLS-based architecture. It provides web-based tools for reporting and supporting network and end users, and has industry-leading service level agreements. With features to match the unique needs of our customers' requirements, AT&T VPN offers economical, reliable and seamless communications domestically and internationally.

Tom David
Liaison Manager
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CPUC Considers Area Code Changes

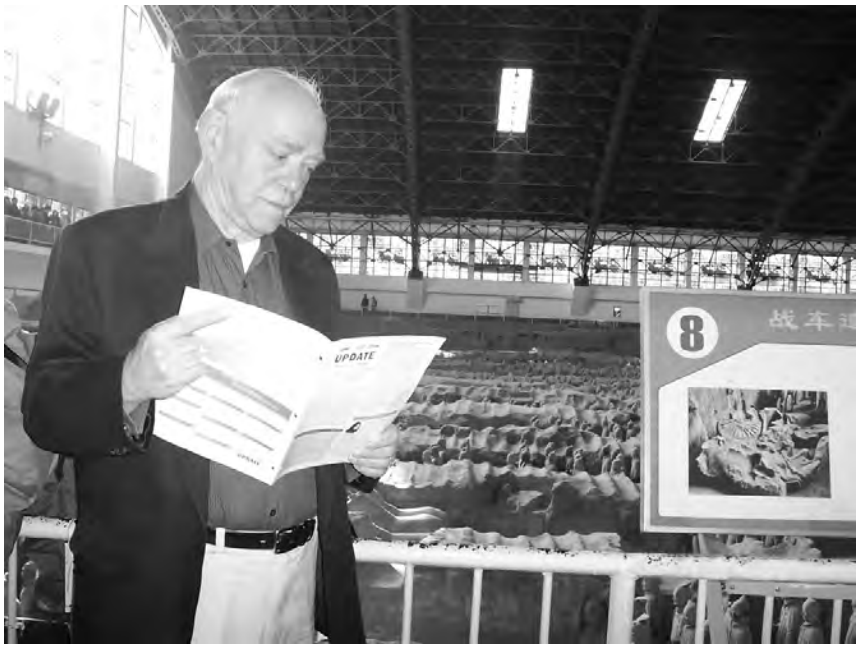
Recognizing that there may soon be a shortage of available telephone numbers in the 714 and 760 area codes, the California Public Utilities Commission (CPUC) plans to issue a decision later this year regarding what type of area code change is appropriate for the region.

Traditionally, area codes have been split to provide more prefixes for the telecommunications industry and its customers, creating smaller geographic areas. Area code splits create new area codes by splitting a geographical region in multiple ways. Only one area code is assigned to a particular geographical region. If this type of change is authorized by the CPUC, some people will be able to retain the original area code, while others will have to change to the new area code.

The alternative is an area code overlay. An overlay is a form of area code change that adds area code(s) to the same geographic region, so multiple area codes co-exist within the same region. In this scenario, customers retain their current telephone number(s) and area code. Additional telephone numbers or telecommunications services may be given telephone numbers with the new area code.

More information is available at http://www.cpuc.ca.gov, in the Telecommunications Proceedings section.

READ THE WORLD OVER



Dick Kuehn, President of RAK Consulting, catches up on important reading as the terracotta army of the first Qin emperor looks on.
Xi'an, Shaanxi Province, China.

nancy grover

One Laptop per Child – Bridging the Digital Divide

The One Laptop per Child (OLPC) project gives the world's poorest children laptops of their own so they can take advantage of the opportunities computers and the Internet offer. The goal is to enable school children to connect to their classmates and teachers, even in a remote setting, to improve prospects and ultimately lives. Since MIT's Media Lab first unveiled the quirky looking laptop students receive through OLPC in November 2005, it has gained many fans among computer and security geeks.

The goal is to enable school children to connect to their classmates and teachers, even in a remote setting, to improve prospects and ultimately lives.

Brazil, Thailand, Argentina, Libya, Nigeria, Rwanda and Uruguay are participating in OLPC, and many more nations are lining up. The laptop's manufacturer, Quanta Computer (who also makes notebooks for Apple, Dell and HP), has received one million orders. The objective is to eventually sell 100 million XO's.

This is quite a noble undertaking to be sure. But just how do the OLPC people plan to secure the computers? Millions of XO's could mean millions of new hacker targets. So just how will the folks at MIT protect them? The child who owns the XO probably can't run next door to get help from the neighborhood computer guru.

How They Work

Even though the machine looks like a toy, the XO is anything but. Its thick, plastic case is dirt and moisture resistant. There are no motor-driven parts, no hard drives, no CD/DVD or floppy drives, no fans, and it can operate without electricity.

What the XO does have is a nifty 7.5-inch LCD screen that can switch between a low-resolution color and a higher-resolution black and white display. It boasts a camera, a microphone capable of enabling clear video calls, 126 MB of RAM, 512 MB of flash memory, and a long-lasting battery that can be charged using a cord, a car battery or foot-operated generator. And it includes built-in WiFi with an amazing range.

A conventional wireless network only handles traffic within its local wireless cloud. Each node transmits and receives its own data, but packets are not routed between nodes unless allowed to communicate directly. The XO, on the other hand, uses an extended-range chipset to form a wireless mesh network.

So, whenever the laptop is powered on, it participates in a mobile ad-hoc network, with each node operating in peer-to-peer fashion with other XO laptops it can "hear' (think daisy-chain). If just one computer in the cloud has access to the Internet, all the computers in the mesh can share that access. The data rate isn't high, but it's more than sufficient for classroom applications, web browsing and streaming video within its own network.

The XO uses a locked down Linux operating system and a unique user interface called Sugar, which was jointly designed by Red Hat and Pentagram. If the project goes according to plan, Sugar could become one of the most common platforms in the world. This of course leads to that other problem. With so many children using the same type of computer, the XO could be set to become a primary target for rogue code, DOS attacks and botnets. But that's where BitFrost comes in.

BitFrost

The XO does not rely on antivirus software, firewalls, or even passwords for protection. Instead, it depends on a new security model called BitFrost. BitFrost requires each program to run on its own, with a limited set of permissions

that will not interact with other programs or the operating system kernel. This means that a word processing program cannot access the Web, and the Internet browser cannot interact with the word processing program. So even if a hacker uses an exploit to gain control of the word processor, he will be unable to use the Internet to view, change or extract the user's documents. The OLPC team contrasts this with Windows XP where even the game of Solitaire has permissions to access the web, send email, and open a picture viewer. BitFrost would simply deny the Solitaire game from doing anything other than being a card game.

The idea of limiting application permissions isn't new. In fact, the concept dates all the way back to 1959. It was never widely adopted because it put the burden on application writers to incorporate security into their code. But, by limiting permissions along with the secured operating system, virus and malware writers will have a difficult time deploying their code onto the XO. Even if something does corrupt one of the applications or the machine, BitFrost calls for a trivial reinstall of the operating system to put the machine back into a fully functioning state. And it does this with no user interaction.

BitFrost does have a drawback, though. Because it limits interactions between applications, applications must work independently of each other. But according to Ivan Krstic, architect of BitFrost, "This kind of model makes it more difficult for glue between applications, but 99 percent don't need glue."

Theft is a real concern, especially in areas where gray markets abound. To help make sure each XO stays with its assigned child, an anti-theft system has been designed to make stolen laptops virtually useless. Each XO is assigned an encrypted "lease", or temporary license. Each time the laptop connects to the Internet, it checks in with a country-specific server to see if the laptop has been reported stolen. If not, the lease is extended. If the laptop is stolen, or the lease expires, the XO's Internet connectivity becomes deactivated and the computer eventually becomes un-operational — a virtual brick.

So where can you get your very own XO? You can't. The XO is slated to be sold through government agencies of developing countries only. Therefore, the laptop is not available to children in the U.S., Britain, France, or other developed nations, not even for those children whose families are too poor to buy a computer. And that is just one of the criticisms of the project.

Another issue is the money. Even though the machines sell for about $100, there are other costs involved, such as teacher training, curriculum development, maintenance, and Internet access. Many critics are questioning the costs, saying that poor people need food and shelter, not laptops. The OLPC says that while this is true, "There are multitudes of people in rural or suburban areas who have plenty to eat and reasonable accommodations. What these people don't have is a decent shot at a good education."

Even with all the concerns, the people behind OLPC are continuing to do what they do best — bring technology to the masses and give school children in the poorest communities an opportunity to freely explore, experiment and express themselves. Surely a noble cause.

For more information about the OLPC project, visit http://www.laptop.org/.

Nancy Grover
Regional Manager
AT&T Corporate Information Security

"There are multitudes of people in rural or suburban areas who have plenty to eat and reasonable accommodations. What these people don't have is a decent shot at a good education."

AT&T Yellow Pages Mirrors Societal Changes

The addition of a new heading... happens only after the Headings Product Team determines that a critical mass of businesses is active in that industry and that chances are strong for future growth.

Livery stables were all the rage in the late 19th century, when the nation's first business directories started rolling off the press. Fast-forward to today, when animal chiropractic services, online schools and meal preparation companies have become so popular, the nation's largest publisher of Yellow Pages directories by revenue has created new categories for them.

The addition of a new heading is not taken lightly at the company. It happens only after the Headings Product Team determines that a critical mass of businesses is active in that industry and that chances are strong for future growth. It's tough to make the cut: Relatively few of the many proposals that the Headings Team receives annually from sales people and advertisers are ever approved. This year, 36 new headings were added to the book. (See complete list below.)

AT&T Yellow Pages 2006 Heading Additions:

Animal Chiropractic
Assisted Living In Home Care
Assisted Living Products & Services
Attorneys-Child Custody Law
Attorneys-Motorcycle Accidents
Attorneys-Trucking Accidents
Business Valuation
Carpets & Rug Binding
Ceramic Equip & Supplies Whsle
Churches-Association of Free Lutheran Congregation
Churches-Emerging Postmodern
Churches-Seven Churches of God in Christ
Concrete Wall Contractors
Dentists-Family Dentistry
Dentists-Teeth Whitening Services
Engineers-Retaining Walls
Glass-Bullet Resistant
Home Improvements Disability Contractor
Immigration Services
Meal Preparation
Off Road Vehicles
Off Road Vehicles Parts & Equip
Paving Stones Concrete Contractors
Photographers-Sports
Post Cards-Collectible
Pottery Instruction
Project Management
Real Estate Staging Service
Schools Online
Stair Lifts
Surrogacy Information & Services
Virtual Tours
Water Blasting Equip & Services
Water Lines Installation Replacement & Repair
Water Stores Retail
Wheelchairs Parts & Accessories

AT&T Tops Competitors in Leading Analyst's U.S. Carrier Assessment

According to Yankee Group's 2007 U.S. International Carrier Scorecard, AT&T topped a large field of telecommunications service providers — including Verizon Business, Orange Business Services, Qwest, British Telecom, NTT, Global Crossing and Sprint — in a study that analyzed the competitors' apparent capabilities vs. stated customer objectives.

Yankee Group identified and measured the leading carriers relative to their apparent capabilities to meet enterprises' demands for increasingly flexible services. The areas examined included business and services infrastructure, Service Level Agreement (SLA) strategies, network reach, ability to deliver consistent services on a global basis, service mix and migration alignment. AT&T ranked the highest overall because of its proven ability to deliver high-end professional and communications services to large multinational companies.

In Yankee Group's summary scorecard, AT&T was the only telecommunications provider to receive the highest rating ("superior") in four categories: business and services infrastructure, SLA strategies, network reach and service mix.

According to Yankee Group's U.S. International Carrier Scorecard, the recent BellSouth merger has given AT&T the potential to fully integrate wireline and wireless services on its own infrastructure, further advancing its competitive position.

"AT&T ranks the highest in our overall scorecard, because it has put the capabilities together to deliver high-end professional and communications services to large multinational companies," noted H. Paris Burstyn, director of Communications and Converged Services, Enterprise Research, Yankee Group.

"Our position in this Yankee Group Carrier Scorecard represents a continuation of the industry's validation of our business strategy," said Mark Keiffer, Chief Marketing Officer, Business Services, AT&T. "We continue to work very hard to deliver the most powerful business networks, applications and capabilities that drive real value for our global enterprise customers."

"AT&T ranks the highest in our overall scorecard, because it has put the capabilities together to deliver high-end professional and communications services to large multinational companies."

FROM THE ARCHIVES

Photo courtesy of SBC Archives and History Center, San Antonio, Texas

San Diego Information Operator Showing Carousels of Listings (1930s)

Helpful Numbers and Web Sites

Area Code Information
http://areacode-info.com/

Area Code Look Up
http://www.my-areacode.com/

AT&T Account Manager (registration required)
http://www.att.com/accountmanager

AT&T BusinessDirect®
1-800-221-0000 Hot Line
http://www.att.com/businessdirect

AT&T Corporate Contact List
http://sbc.com/contactus

AT&T Customer Support
http://sbc.com/help

AT&T Local Service (repair desk)
1-800-829-1011

AT&T Product Information
http://ask.sbc.com

Billing Inquiry – West
1-800-891-1800

California Public Utilities Commission (CPUC)
http://www.cpuc.ca.gov

Carrier Verification
1-700-555-4141 – Long Distance
1-805-700-4141 – Local

DSL
1-877-722-3755

E-Bill
1-888-700-5422

FOCUS
http://www.thefocus.org

Internet Safety
http://sbc.com/safety

Knowledge Network
http://www.kn.pacbell.com/products/discounts.html

Local Calling Area Mapping
http://localcalling.sbc.com/LCA/lca_input.jsp

Managed Internet Service
1-888-613-6330

North American Numbering Plan Administration
http://www.nanpa.com/

Priority Repair
1-800-332-1321

Repair
611

Up2Speed Newsletter
http://sbc.com/up2speed

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