As we bring this truly transformational year to a close, I want to thank you for your outstanding contributions and your continued confidence in AT&T. With so many exciting new developments in our business, I want to emphasize two things that haven’t changed:

First, you can count on AT&T to continue to earn your trust.

And second, you have our commitment that we will continue to support our Consultant Liaison Program. The new AT&T is Number One in serving business customers. We have a superior network, global reach, the best customer care and proven ability to integrate services. Providing you and our mutual customers with world-class solutions and support is key to our continued success.

It was clear when the SBC/AT&T merger was announced that we had an unprecedented opportunity to lead the industry’s transformation and build a new generation of solutions for business customers. Now, we have everything we need to make our vision a reality – the network, the products, the people, and especially our partnership with all of you.

I hope you’re as enthusiastic as I am about the opportunities that lie ahead.

We know you’re counting on us – and you have my promise – you can continue to trust AT&T to deliver for you and your clients.

Robin MacGillivray
President, AT&T West Business Communications Services
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This has certainly been a year of change, and some of those changes have occurred in our own CVSG! In August our editor, teammate and friend Craig MacDonald retired from the company after almost 27 years of service. We wish him well in following his dream of writing, researching and lecturing about the Gold Rush era. Elaine Tipping has come on board as our new UPDATE editor, and we welcome her in supporting us with many new and creative ideas.

Another change is our liaison support in Northern California. After five years with our team, Bree Nimitsilpa has moved on to another group in the company. Her replacement is Mike Aaron. Mike comes to our group with a wealth of enthusiasm, knowledge and experience. Learn more about Mike in his article on page 7.

Our long time readers will notice that the UPDATE format has been – well – updated. Following our August issue, we conducted a survey asking your opinion about communications from the AT&T Consultant Vendor Sales Group. We listened, and have made what we believe are positive changes. Please see the results from our survey on page 14.

Changes are a constant in our industry too. “The Evolving Network” (page 12) takes a look at some of these changes. We also have some tips on how to deal with the bad guys who hack and hijack e-mail accounts (page 8). We’ve included some case studies to help you understand how to upgrade and increase your customers’ operating efficiencies. And of course, our own Tom David provides in-depth information about OPT-E-MAN in “Data with David” (page 4).

In the midst of all these changes, our mission has remained the same: to help you and your customers be more successful. Please give us a call at 1-800-552-5299 if you have any feedback, comments, questions, or need assistance.

We look forward to a successful 2007.

Kari Aguinaldo
CVSG Leader
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READ THE WORLD OVER
The focus in the telecom industry is rapidly shifting from voice to data as carrier networks migrate from circuit switched to packet switched. As bandwidth requirements increase, customers continue to want more cost-effective and higher bandwidth services across a metropolitan area. Ethernet, the favorite protocol of Local Area Networking, is becoming the generally accepted protocol in Metropolitan Area Networks (MAN), providing transparent connections at continually higher speeds. A MAN is characterized as intra-city in nature, about 75-80 miles in length, with bursty traffic. Ethernet is an easy technology to manage, it’s flexible, cost-effective and it provides scalability, which is a feature not easily provided by any other service available today.

As the power of applications, PCs and workstations increases, the need to connect them at higher speeds becomes greater. High-speed interconnection of LANs and Dedicated Internet Access are great applications that can take advantage of the benefits of Ethernet. Customers who have multiple locations within a metropolitan area, and users running bandwidth-intensive applications such as large file transfers for database storage and retrieval, distance learning streaming technologies, medical imaging, CAD/CAM applications, disaster recovery/Storage Area Networks, Internet access or video, would benefit from Optical Ethernet Products.

(Read more about a California hospital’s OPT-E-MAN® solution on page 14.)

Optical Ethernet Metropolitan Area Network (OPT-E-MAN®)

AT&T has an extensive optical infrastructure and provides metro area connectivity known as Optical Ethernet Metropolitan Area Network (OPT-E-MAN) to link customer facilities in a single managed transparent LAN service. This service was introduced in 2003 and is now offered in 41 metropolitan areas within the legacy SBC 13-state territory. OPT-E-MAN is an advanced, packet and fiber-based Layer 2 transport that acts as an Ethernet bridge to transparently interconnect multiple customer local area networks within the same LATA (intraLATA), and may also be used as an underlying Dedicated Internet Access transport.

OPT-E-MAN supports nearly any data transport configuration—point to point, point to multi-point, or multi-point to multi-point—using physical and virtual connections to meet specific business needs. AT&T will provision logical point to point connections (OPT-E-MAN Basic) and multi-point connections (OPT-E-MAN Basic Plus) based on customer needs for data flow of traffic, applications, prioritization, and desired bandwidth usage. Connections to the service range from 5 Mbps – 1 Gbps, providing flexible bandwidth increments (5, 10, 20, 50, 100, 250, 500 and 1000 Mbps) to support customer requirements. OPT-E-MAN supports two grades of service (GoS). Bronze GoS is suggested for traffic with more latency toleration such as general data traffic, Internet access, etc. Silver GoS is suggested for more critical applications with low-latency requirements such as VoIP. Customers can connect to OPT-E-MAN using a switch, bridge or router.

Customers best suited for this service have a need to connect multiple locations and include medium and large business customers in all industries including the public and private sectors. Vertical markets include government, education, health care, financial, retail, and high tech, as well as Internet Service Providers and Application Service Providers.
Benefits
Simplification and Convenience of Network Architecture

OPT-E-MAN is provisioned over a fiber facility to the customer premise and provides an Ethernet interface that can increase bandwidth dramatically – e.g. 10/100 Base T interface can support from 5 Mbps to 100 Mbps without a new interface being installed.

By connecting via Ethernet, there is no requirement to incorporate a separate protocol or interface. The native Ethernet frame structure is preserved. A single handoff from AT&T to the customer adds convenience and simplicity to the network architecture. OPT-E-MAN allows IT managers to maintain connections without introducing new or additional protocols.

AT&T will install and maintain all equipment needed to provide direct connectivity to the customer’s existing equipment using standard connectors. As a result, for customers, it appears as if all equipment for their network is in the same building or campus – the transfer of data across the MAN becomes completely transparent. This simplifies network operations and allows for rapid deployment and service provisioning once service is installed. The AT&T Enhanced Network Operations Center (ENOC) will monitor the network 24 x 7, providing the customer a fully maintained and managed network solution and simplifying network management and administration as well as reducing cost.

Cost-Effective

OPT-E-MAN provides the customer with a widely available, well understood technology, reducing their operational costs for training, employees, maintenance and administration, as well as capital costs for equipment. Additionally, OPT-E-MAN is very price competitive when compared to Frame Relay and ATM services at equivalent bandwidth levels and contract terms.

Ethernet interfaces are less expensive because fewer physical interfaces, servers, and routers are necessary. For most customers, this service will be “plug and play” on their existing equipment. By utilizing standard interfaces to provide direct compatibility to the customer’s existing equipment, there is no need for up-front investment in expensive CPE. Further cost savings are derived from ports – 100 Mbps for instance on an Ethernet router are 10–20 times less expensive than OC-3 ports on SONET equipment. In addition, most business IT managers are familiar with the Ethernet protocol while Telco services such as ATM and even dedicated services are less ubiquitous. In the IT world, additional training costs are virtually eliminated.

Ethernet requires less equipment, service and operational expense. Because Ethernet is the dominant standard in the LAN arena, demand continues to drive down hardware prices. Many customers will eliminate the need to purchase expensive servers and internetworking equipment, such as bridges or routers, at remote LAN sites. Additionally, because most corporate networks are using Ethernet, companies will be able to save additional expenses in training, management, and administration expenses.

OPT-E-MAN allows customers to add bandwidth as their needs grow so in essence, customers only pay for what they use.

Here are four instances when scaling will prove beneficial to customers:

- Changes in business patterns: change in the number of employees, applications, business conditions, mirroring, or database replication.
- Seasonal/anticipated events: sales, promotions, holiday credit validation, school registration, and sports events.
- Unanticipated events: data analysis, research, back-up service, disaster recovery, or software development.
- High volume traffic: during the school year/school day vs. during school holidays or summer vacation.

Customers in a traditional non-managed service incur costs in dollars and man-hours when purchasing, maintaining and managing their own networks. With OPT-E-MAN, the customer has no costly software or equipment to own and/or grow obsolete, no engineers to hire, and no

Continued on page 6
continuous training requirements.

**Network Flexibility**
Greater network flexibility allows the customer to add new locations with ease. In addition, changing the capacity of bandwidth between existing locations is easier and faster. OPT-E-MAN is easier to administer than existing Frame Relay/ATM Private Line networks because it eliminates burdensome PVC management.

**Reliability and Security**
Higher reliability and security is made possible by the 24x7 ENOC monitoring and the use of Multi-Protocol Label Switching (MPLS) in the core architecture. MPLS is transparent to the customer, and allows for configuration of a dedicated logical connection for each customer. Ethernet Virtual Connections (EVCs) provide logical point-to-point dedicated connections between two customer locations. Virtual LANs (VLAN) are assigned to the EVCs to ensure security of customer traffic.

The dedicated MPLS tunnel adds a level of security to customer traffic and offers enhanced Grade of Service parameters. This enables AT&T to make the product robust, help segregate customer traffic by establishing a secure EVC over a shared infrastructure, and to support many customers efficiently by allowing scaling to meet customer needs more effectively. Additionally, MPLS allows for support of Service Level Agreements (SLA) and provides redundancy in the core, traffic engineering and fast-reroute.

**Superior Network Performance**
The OPT-E-MAN services provide guaranteed bandwidth through the MAN at the native speed of the customer application(s). The service also offers the ultimate solution for customers experiencing bottlenecks in the WAN. In addition to higher bandwidth options and scalability, the services are secure and reliable.

**Service Level Agreements**
All SLA’s are found in both the state and federal tariffs with associated credits. Packet Delivery Rate, Latency and Jitter SLA’s are offered on an end-to-end basis, including the local loop. AT&T provides an Availability Service Level Agreement of 99.95% per month, and service outage credit is offered if the customer’s service is disrupted. OPT-E-MAN Basic and Basic Plus have a Service Level Objective of a 4-hour mean time to repair end-to-end, including the local loop, per month.

The Bronze Grade of Service (GoS) provides a Packet Delivery Rate of 99.5% and Latency of 27 ms one way. Silver GoS provides a Packet Delivery Rate of 99.9% and Latency of 18 ms one way and Jitter of 12 ms.

**Pricing**
Service is priced on a per customer location basis due to the nature of the service. Two main rate elements are required at each customer premise: Basic Connection (port charge) and Committed Information Rate (CIR). The Basic Connection charge is inclusive of the port, transport and interface. The Basic Connection consists of either a 10/100 Base T connection or 1 Gbps connection. There is no premium price placed on the Basic Plus ports (multi-point). The CIR charge is for one of eight available bandwidths. Charges vary based upon the Bronze or Silver Grade of Service and length of term (1, 2, 3 or 5 year). In addition, for terms of 2, 3 or 5 years, one time non-recurring charges are waived. If additional EVCs per connection/per location are needed, the customer will not incur an additional charge per EVC according to the Grade of Service selected.
Physical Network
The diagram on page 6 shows a high-level view of the AT&T Optical Ethernet environment. The Cisco 7600-based Ethernet Optical Core is surrounded by Cisco 3550 devices at the customer premise which are owned and operated by AT&T. For enterprise location connectivity (Transparent LAN, or TLS*) such as that shown at the extreme left and right sides of the diagram, optical transport provides the physical layer connectivity between standalone customer locations and a location housed in a Multi-tenant Unit. Similarly, ISP backbone connectivity (top) provides the basis for Dedicated Internet Access, as well as connectivity to AT&T’s managed Layer 3 VPN services.

*TLS is simply a high-speed connection between two or more LAN segments across a metro or wide area that gives users the appearance of being connected to the same local area network. It provides an all-Ethernet model that simplifies the handoffs between the local and transport environments, yet is perfectly capable of transporting Layer Three protocols such as IP.

Summary
Many customers today utilize transport and packet-based services as a means for interconnecting two or more locations. This interconnection is done via bridges and routers. It can be quite expensive, and does not provide a lot of flexibility. OPT-E-MAN provides the means for customers to migrate their current LAN topologies to a faster standard that is low cost, simple and flexible. It offers reliable and secure network architecture with an MPLS core, integrates seamlessly with pre-existing infrastructures, scales to LAN speeds, supports the most common enterprise applications and supports all topologies.

Tom David
Liaison Manager
AT&T Consultant/Vendor Sales Group

Welcome Mike Aaron
I am very excited about joining the Consultant Vendor Sales Group. Working in a variety of positions with the company over 18 years, I’ve discovered I really enjoy working with creative business people. Building bridges between clients, consultants and AT&T seems like the natural next step for me!

I started with Pacific Bell Directory in 1988, working with new business start-ups. I spent two and half years in that department, then received my first promotion. My first official day as a Manager was the day after the Loma Prieta earthquake. I was the only Manager who made it into the Walnut Creek office that day. Talk about trial by fire! My first executive decision was to assign one person to answer calls, and to leave the rest of the lines open for emergency calls. We were really isolated for a while, but the team really banded together that day, and we all supported each other. In many ways, it was a great way to start a new job! But I don’t want to repeat it.

After nine great years with that team, I was ready for new challenges. I moved to Pacific Bell’s Consumer organization and became an Escalation Manager for Executive Complaints. It was very gratifying to work through complex issues directly with customers. I learned a lot about the power of listening, and I developed a strong belief in staying with an issue all the way to the end.

Then it was on to the Business side of the house. I supported the Alarm, Answering Service, Third Tier Carriers and Enhanced Service Providers. Working with this very specialized group of customers taught me a lot about unique applications for our products and services, which I believe will be very helpful in this next stage of my career.

On a personal note, I was born in Spokane, Washington, and I’ve been in California for 25 years. I originally came here to go to college. I ran track in high school, and was offered scholarships in Florida, Hayward, San Jose, and Sacramento. I chose Sacramento because many of my friends decided to go there. It was one of the best decisions of my life. I graduated from CSU Sacramento in 1987 with a Communications degree. I also have an AA in Business Management. I have two children and two granddaughters who bring great joy to my life.

I look forward to working with you, and to being a part of this great CVSG community.

Mike Aaron
Liaison Manager
AT&T Consultant/Vendor Sales Group
When someone uses your email address to send messages, but you can still log into your account and access and use your email, you have been hijacked.

My friend Alan recently called his Internet Service Provider (ISP) with a cable-modem problem, and when he was asked to verify the email address associated with his account, he learned he’d been hacked. So when Alan called to ask me what, if anything, he could do, we had to first determine whether he had truly been hacked, or if he was a victim of an email hijack.

**Email hacks versus email hijacks**

When someone uses your email address to send messages, but you can still log into your account and access and use your email, you have been hijacked. Hijackers use valid email addresses that are not their own as the return address when sending out spam. That way, it looks like the message came from a person other than themselves. They get these addresses from a variety of sources, including databases they can purchase, or by sending out viruses and worms that infect computers, which causes the infected computer to send out additional spam or viruses.

But when an email account is hacked, the email password is changed so the account owner can no longer log in to their account and access their email. The hacker can also change the “secret question” used to help retrieve forgotten passwords, locking the owner out completely.

**What the bad guys do with hacked accounts**

In Alan’s case, he had never used the email associated with his ISP account, even though it had been active for several years. And he had no idea what the password was. So, after asking his ISP to reset the password, Alan and I logged in and within seconds, we could see that he had definitely been hacked. In fact, it looked as though his account had been compromised soon after it was created, with the hacker using the main account for his personal use, and sub-accounts for sending spam and messages to other hackers. Most people don’t know that many email accounts allow users to create and use sub-accounts so each member of a family can have a unique email address.

In all, Alan’s hacker created eleven sub-accounts with names like speed4U, hackerboy, hack1, and more. The sub-accounts even had instant message screen names associated with them. The sub-account inboxes were filled with thousands of “can’t be delivered” messages, making it pretty clear the accounts were used to send out spam messages. There were also many messages from what appeared to be other hacker-types, with cryptic meeting notices, phone numbers, and even a few system administration tips.

The main email account was even more telling about Alan’s hacker. The inbox was filled with bank statements, airline itineraries with travel from San Francisco to Russia and Poland, and email from professors and students of Russian literature. The hacker had also used Alan’s account to sign up for numerous Unix and investment newsletters. And he even used the email address to apply for membership in the “Good Sam Club”, a camping organization. But what was most disturbing were the numerous emails from Alan’s ISP thanking the hacker for contacting them and letting him know that his reported trouble had been resolved. Alan never once contacted his ISP about any of those issues.

So, in addition to getting free email with friendly, helpful support, email hackers get other added benefits from hacking someone’s email account – like conducting criminal activity, which will never be traced back to them. Instead, the authorities could come knocking on the doors of victims like Alan.
Additionally, hacked emails can cause the account owner all kinds of other trouble, for example:

- Spam or viruses can be sent from the hacked account, which could damage the victim’s or their company’s reputation and credibility.
- Email addresses and entire domains can be put on blocked lists. If the email belongs to a company, this could impede business.
- Some accounts are tied to the owner’s billing information, giving the bad guy access to all sorts of personal information.
- The hacker can also gain access to personal information in the owner’s profile, including addresses, phone numbers, gender, birth date, work and school addresses.
- The hacker can gain the ability to make changes to the victim’s service.
- Hackers can also play games by sending disparaging email to people you know, and of course, they’ll think it was you.

Alan was somewhat lucky, as he had never used this account. If he had, there could have been all kinds of banking information, receipts, credit card numbers and other personal information in his inbox, sent file, and deleted folder. The hacker would have had access to all of that, too.

**How email hacks happen**

Hackers hack into email accounts the same way they hack into computers. They have been known to:

- Crack weak passwords by using scripts to try different password combinations with email addresses.
- Hack into ISP servers to steal passwords.
- Steal passwords using a virus or keylogger.
- Or, as in Alan’s case, set up the account with a default password that was never changed.

**What to do if your email is hacked**

- Call your ISP, tell them what happened and have them reset the password immediately. Free services may not have customer service numbers, but typically have a “forgot your password?” function.
- Reset your password to something difficult to guess.
- If you can’t get your password reset, get a new email account.

**How to keep this from happening to you**

- Cancel all unused email accounts and check the ones you use on a regular basis to ensure that no unwanted sub-accounts have been created, and that no other suspicious activity is happening.
- Don’t abandon email accounts. If you abandon an account, it can be hacked and used by others. Close or delete unused email accounts instead. Most of the free email services now have delete features, but it can take up to 30 days for the mailbox to be fully deactivated.
- Don’t use “remember me” when logging in. If someone else walks up to your computer, or up to a computer you used in an Internet café or office, they can log in without knowing your password, and lock you out of your own account.
- Try not to use free email accounts for anything important. If your free email account, and all the information in it, went away tomorrow, you could have some big problems.
- Choose a good complex password by using a combination of upper and lower case letters, numbers, and/or special characters whenever possible. Change it often.
- Remember your secret answer. Don’t treat this lightly. The answer doesn’t even have to be true, just something you’ll remember.
- Change the default password immediately, even if you don’t plan to ever use the account – Something Alan probably won’t forget to do in the future.

**Nancy Grover**

Regional Manager

AT&T Corporate Information Security
The evolution of AT&T BusinessDirect® has been both exciting and constant. As communication networks have become an increasingly integral part of businesses’ operations and processes, electronic customer service that provides critical levels of visibility and control has become essential. The cornerstone of AT&T’s commitment to meeting this critical service evolution is AT&T BusinessDirect, which delivers efficient and effective capabilities to AT&T business customers, 24/7.

AT&T BusinessDirect’s suite of over 300 productivity-enhancing applications enables customers to reroute network traffic in real time, test circuits, report and track service problems, place orders and check status, pay bills electronically, and perform other customer service and network management-related tasks. Customers can do all this by leveraging systems and information that previously would have been accessed only by AT&T personnel. In this way, business processes are more transparent, and transactions are far more efficient, with flow-through capabilities to back-end systems versus human intervention.

AT&T recently expanded its global reach with the launch of AT&T BusinessDirect Map International. Now, customers can graphically view and manage their network operations, inventory, and complexities in 88 countries with a click of a mouse.

The AT&T BusinessDirect eBill tool was recently enhanced to include wireless billing. Customers can now manage all of their telecom expenses in one tool. With eBill, they can view AT&T invoice details, analyze billing data via standard or custom reports, make inquiries and request billing adjustments, view payment history, and pay bills all in one place.

By putting advanced networking tools into the hands of our customers, AT&T is giving businesses real-time, end-to-end visibility into their cross-application environments to help them cut costs, gain market share, and link with their customers more effectively.

AT&T BusinessDirect was named Best Enterprise Customer Portal in 2005 by the Yankee Group for the second consecutive year with the unique distinction of being the only carrier to receive “Superior” ratings in all categories. And, its click-to-chat functionality, which allows users to speak to a live AT&T Representative, was most recently named the TMC Communications Solutions 2005 Product of the Year.

Plans are in place for AT&T to launch its next generation of tools that take AT&T BusinessDirect from the PC to alternate access devices like PDA’s, thereby increasing the mobility of customer service.

Each month, users conduct over 3 million transactions using AT&T BusinessDirect. Users are diverse, ranging from large multinational organizations with broad global network support needs to businesses with more targeted service requirements.

“"We will continue to leverage technology, enhance the portal’s robust suite of tools and deliver the best online experience to our customers around the world.”

Robert Sloan
Vice President
AT&T eSales & Service
When Staff Can’t Get To Work

The human resource side of disaster planning was brought into sharp focus after the July 7th, 2005 bombings in London. According to Ross Armstrong, Senior Research Analyst at the Info-Tech Research Group, a firm of IT industry analysts, “Most planners think about IT downtime or loss of power but don’t consider situations in which the technology is working but their employees can’t reach the office.” Info-Tech set out the following recommendations in the aftermath of the bombings:

• Ensure that the plan specifically identifies “key employees” who require system access, and define how they will gain remote access to critical systems in the event they cannot reach the workplace. This could include enabling home computers for corporate access or issuing laptops.

• Set up a VPN for PC access. Utilize remote teleconferencing and the ability to call forward business phones to home numbers.

• Make it a policy that laptop users take their PCs home nightly, even if they don’t intend to do work at home that evening.

• Enable network administrators and system operators to do as much remote management as possible. In addition to line workers, IT operational staff need remote system access to ensure business continuity.

Take this short quiz to test your contingency planning IQ.

Quiz
Test Your IT IQ

1
According to a recent survey, what percent of companies have ever had to suspend key business operations as a result of a disaster?

☐ 3 %
☐ 12%
☐ 28%
☐ 19%

2
Which of the following is a benefit of moving an in-house data center to an Internet-based hosting environment?

☐ Network redundancy
☐ Uninterruptible power supplies
☐ 24/7 support
☐ All of the above

3
Which of the following could allow companies to achieve a high level of functionality during a pandemic?

☐ Employee vaccinations
☐ Not letting employees leave the premises
☐ Working with masks on
☐ Enabling employees to work remotely

4
Businesses face many different kinds of emergencies. Should businesses have a single business continuity plan or multiple plans for each emergency?

☐ Single plan
☐ Multiple plans

5
Which of the following is the most significant threat to businesses today?

☐ Hackers
☐ Viruses and worms
☐ Natural disasters
☐ SPAM

6
All the business continuity planning in the world won’t mean anything without awareness and buy-in from which of the following?

☐ Local or state government
☐ Building management
☐ Employees
☐ Local law enforcement

Answers on page 19
The telecommunications network, the central nervous system of our wired and wireless world, is becoming something more. The signs of network evolution are everywhere. The network is no longer just a passive means of transferring information from one place to another; it is the key enabler of new forms of collaboration (such as web conferencing), new business models (such as on-line auctions), new forms of globalization and outsourcing, and new forms of computing.

Data can now be transferred at bit-rates dramatically greater than ever before. Voice and data networks are converging, so that a single integrated platform can replace the specialized private networks of years past. Wireline and wireless access protocols are coming together, so that a reliable network connection is no longer dependent on location. And a “call” is no longer a connection restricted to a single device. Today, a call is coming to mean a continuous voice, data or video interaction with one or more participants, that can be seamlessly handed off between devices. Today’s networks are also easier to manage, and allow for better reporting on traffic and usage. Computer services can be delivered using Internet Protocol (IP) technology, which allows for dynamic traffic management and load balancing. All these changes mean the network can support an unprecedented degree of globalization for large enterprises.

**What is the Network, Anyway?**

The traditional view is to consider the network only as a means of access and transport, a complex but essentially passive assemblage of copper, fiber and switches. In this view, the network’s role is simply to move data from one place to another, and it’s only expected to deliver two things: speed and reliability.

Even in this role, though, the network is becoming more intelligent and more agile. Networks are like chocolate cakes, built on multiple layers of components and technologies. At every layer, new technologies are increasing flexibility and agility.

At the lowest layer we have the pure physical transport of bits and bytes. This “photonic mesh layer” is something that’s becoming reconfigurable with the use of optical components that allow for rapid modification of network routes. One step above, the “SONET layer” is beginning to use technologies such as Virtual Concatenation and Link Capacity Adjustment to enable bandwidth on demand. Bandwidth increments can be provisioned in less than 10 seconds, and customers will only need to pay for the bandwidth they use. Finally, intelligent routing of IP traffic, through technologies such as AT&T’s Intelligent Routing Service Control Point and MPLS fast reroute, can add even more flexibility and control.

In addition, a new, more expansive view of the network is emerging. In this view, the network is evolving into an intelligent repository of content, functions and applications – a distributed computing utility and the foundation for a global computing grid. Network-centric hosting, content distribution, massively multi-player online gaming, and software-as-a-service provide glimpses of how the network will evolve.

When its full potential is understood, the network can be seen as a vast array of integrated hosting centers, intelligent edge devices, dynamic routing logic and embedded business rules. It can support many computing tasks that once would have been assigned to dedicated processors. In fact, this kind of network can support all kinds of processing activity, from large-scale batch programs for biomedical research to transactional applications for day-to-day business.

This evolution has been under way for some time. In late 2005, AT&T celebrated its 10th anniversary in the Internet hosting business. In the past decade, AT&T has established thirty Internet Data Centers (IDCs) on four
continents. This part of the business has also evolved beyond simple “hosting.” The IDCs today provide a large, highly-secure infrastructure for distributed computing. That means companies now have new options for doing business. New distributed architectures, combined with new and emerging business models, are enabling more flexible options.

**New Service Opportunities**

As an example of the possibilities, consider the use of Radio Frequency Identification (RFID) technology, in which small chips can be used to tag everything from individual items to pallets of goods. RFID systems are very network-centric applications, and natural candidates for distributed processing and utility delivery. Readers collect tag data, edge servers do event filtering and caching, tracking information is transferred across the network, and network-based information services enable improved supply chain management. AT&T’s new network-based RFID service will include end-to-end management, from readers to reports, and RFID data can be fed from the network directly to a customer’s ERP and supply chain management systems.

Other network capabilities will provide the foundation for complex services built using service-oriented architectures that enable the rapid assembly of modular components. These components will include functions such as micro-payments, user authentication, natural language translation or presence and location services. Utilizing the network as a computing utility will reduce the time to market for any network-related offerings, such as the delivery of content to cell phones, new services based on seamless mobility, and a broad range of software applications offered as network-based services. The same will be true for offerings such as high performance computing for engineering, scientific and medical communities.

**Looking Forward**

Virtually any application can run on a network-based architecture; an optimal end-state combines service-oriented concepts with a network-enabled distributed computing environment. The next generation network will mean major changes in the IP services business, with true utility pricing models that enable new kinds of services.

The evolution of the network will mean greater flexibility and control, emerging technologies for management, orchestration, and optimization and new pricing models.

In the end, new technologies allow for new possibilities, but new business models are needed to bring those possibilities to life.

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CVSG Survey Results

As you read in Kari’s Corner, change is in the air. And from cover to cover, you’ll see change in this issue of UPDATE. Over 100 of you took time out of your busy schedules to give us your opinions and ideas in response to our CVSG Communication Survey. Many of your suggestions are reflected in this issue of UPDATE, and we’ll be making additional enhancements in future editions.

The survey was quite detailed, and you gave us a wealth of information with your responses – far too much to cover comprehensively in this newsletter. Here are some of the highlights:

When asked about the most helpful communication vehicle to you – your overwhelming favorite is interaction with your Liaison Managers, either by telephone or e-mail (76%). Not at all surprising – our Liaison Managers are the best in the business! Tied for second is UPDATE and various websites, and finally, our streaming media broadcasts.

You told us that most of you (69%) prefer to read UPDATE in print rather than online. We’ll keep providing access digitally as well as in print, because we know you like choices.

When it comes to your preferences on articles, you show the diversity that makes up the consultant community. 63% of you want very technical articles, and 42% of you want less technical articles. But whatever the technical level, you overwhelmingly (91%) want the article to be short and concise! You’ll find a blend of articles this quarter, and we will be adding a “Quick Tips” segment in our next issue.

We are very pleased to see that 90% of our respondents say the information in UPDATE helps you to recommend AT&T products and services. We will continue to provide industry information as well as AT&T-specific product information to continue that trend.

The majority of you said you would like to see more consultant columns and opinions. And 18 respondents said they would be willing to write an article. If you are one of them, please contact Elaine Tipping directly (elaine.tipping@att.com) to discuss upcoming issues!

Thank you for your support and your suggestions. Many of you took this opportunity to say very kind things about our team and our company, and we appreciate it! Please continue to share your thoughts, either through your Liaison Manager or by e-mailing elaine.tipping@att.com.

California Hospital Upgrades Data Network With AT&T Services

AT&T and El Camino Hospital have reached agreement on a new data services contract. Under the terms of the five-year contract, AT&T will be the primary data services provider, delivering AT&T OPT-E-MAN® service and Internet service to the newly opened three-story 66,000-square-foot Melchor Medical Office Building on the hospital campus. Additionally, AT&T will supply managed security services, such as intrusion prevention, enhanced firewall administration and network management.

AT&T OPT-E-MAN service is an optical broadband Internet access solution that will be implemented in the Melchor Medical Office Building to consolidate and aggregate network access. In addition, the dedicated Internet connection will provide extensive reach 24 hours a day and will provide secure and consistent Internet access to the specialty clinics and practices located within the building, whose tenants rely heavily on Internet access for clinical, billing and research purposes.

Together, these services deliver a converged solution that will enable El Camino Hospital, a not-for-profit hospital ranked as a quality patient-safety leader in California and the United States, to provide top network services to the researchers, doctors and nurses it attracts from the surrounding Silicon Valley area. By using AT&T’s security and management services, the hospital can provide its tenants greater assurance against security risks, such as virus outbreaks. Additionally, by outsourcing all design, implementation and maintenance, El Camino Hospital will consolidate and reduce operational costs.

"With ongoing campus modernization and the addition of the Melchor Medical Office Building, we needed a provider capable of designing, implementing and maintaining a technologically advanced communications network," said Ken King, vice president of facilities, El Camino Hospital. "We are confident that the solution provided by AT&T will support secure electronic communications by delivering reliable access to patient records as well as the Internet."
At&T Launches Remote Home Monitoring Video Service Nationwide

AT&T Home Monitor Background

The AT&T home monitoring service is an innovative, IP-based offering that will help customers to stay more connected to their homes and families while they are away. The service enables customers to use personal computers and Cingular wireless devices to access high-quality, streaming digital video and other real-time information from their homes—virtually any time and anywhere.

The AT&T home monitoring service combines live and recorded video (non-audio) capabilities with a range of environmental sensor options to provide customers with a powerful, flexible toolkit to help them stay connected to the people and things they value most. The service allows users to remotely control lighting in their homes, and can provide a range of alerts and reports on home conditions, such as motion, door and window activity, water leakage, and temperature changes. Users can easily customize alerts and actions based on their specific needs. For example, a user can program the service to send a text message alert to a cell phone when motion is detected in an area of the home, while at the same time automatically turning on lighting and recording video of the same area.

Service Feature Overview

The AT&T home monitoring service enables customers to receive live or recorded video (non-audio) over virtually any Cingular wireless device that is capable of Internet connection. Customers can also access live or recorded video over any broadband-enabled PC, and receive customized alerts from a variety of optional sensors and other equipment.

The high-quality video camera included in the AT&T home monitor service package allows users to control features remotely from nearly any broadband-enabled PC. Users can pan and tilt the camera, and capture still photos remotely.

The service comes with a starter package of equipment which includes:

- Two power modules that enable device connectivity via home power outlets
- A wireless door/window sensor
- A wireless gateway for connecting equipment to a home network
- All needed software and instructions

Customized, Programmable Service Alerts and Options

The full power of the AT&T home monitoring service is realized with fully programmable service functions, which can be easily established and updated via any broadband-enabled PC. The service can be set to deliver a wide range of alerts to a user’s cell phone, based on specific parameters set by the user.

Additionally, the service enables users to combine their cameras and sensors to deliver specific reports and actions under a variety of circumstances. For example:

- If motion is detected in a specific room, a user can program the service to automatically turn on a lamp and begin recording video of the room, while also sending an alert to the user’s cell phone.
- If a user wants to be notified when children arrive home from school, the service can send an alert, allowing the user to pull up a live video feed.

The new service is an example of the ongoing AT&T strategy to deliver a new generation of converged, IP-based services that enable customers to access critical applications and information virtually anytime, anywhere, and using any device.
I have a laptop, three USB drives, a digital camera and extra media chips. I have a cell phone. I don’t have an iPod® or MP3 player, a Blackberry® or a PDA, mainly because I don’t want to have to replace any of them until I decide that I want to. I also don’t want to lose what I store on those devices.

What are the security issues? Often, the information we store on these devices is worth more than the hardware itself. We keep personal and business information on them; we keep digital pictures and music; we keep contact lists and appointments. You can store copies of your tax return on your phone or camera if you choose. You can copy pictures and music to your laptop. If the pictures are your only copies or you spend days downloading and organizing music, losing them can be a bigger deal than losing the device – because you can easily replace the device. If what you keep on these devices is confidential, you also have to worry about insecure wireless capabilities or spyware.

Protecting a Laptop

Laptops are different than other portable devices we carry; they’re heavier and more expensive, which creates some unique problems. Including the installed software, the average laptop could cost $1,000 to $2,000 dollars. That doesn’t include the time it takes to configure, or the value of lost files.

For a portable device, a laptop is awkward and bulky. It’s convenient to have your laptop when you’re in a conference room or sitting on a plane. It’s inconvenient when you need to step out of the room for a minute or you have to go through airport security.

Even in the US Department of State headquarters building, an unattended laptop was stolen from a conference room. A locking cable long enough to go around a conference table is impractical; but there are not many options – lock it out of sight, carry it, or accept the risks.

Protecting Other Small Electronics

Cameras, cell phones, MP3 players, USB drives and PDAs are all easy to carry around. They don’t have the inconvenience factors that laptops do. They don’t get in the way when you go to lunch or need a break. If you have to replace one you will probably wind up with a better model for the same or less money than the lost one. If you don’t keep any valuable or irreplaceable information on a device you’re probably not going to pay attention to any security strategies. Just as with a laptop, if you’re willing to accept the risk, at least evaluate what you have stored on the device.

Protecting the Information

Let’s face it, it may not seem worth the effort to protect something that’s easy to replace. No matter how annoying it might be to lose an electronic device, we usually compensate with the joy we get from buying a newer model. On the other hand, the information, pictures, music collection, contact information, book draft or term paper are not so easy to replace. Let’s take a look at protecting the information on the devices. It’s not necessarily difficult, and can really minimize the pain of a lost or stolen item.

Backing Up Your Files

A friend of mine spent most of the last 12 months writing her first book. Around the end of chapter 10, someone broke into her home and stole her laptop while the family was out to dinner. This was a book for which she
had received an advance, and for which she had a deadline.

I had advised her to buy a USB drive and make backups, but she didn’t. Fortunately she had emailed chapter by chapter to her husband so that he could review and proof read for her, enabling recovery of the first 9 chapters. Even though she only “lost” chapter 10, it represented several weeks of hard work. She had purchased a warranty on the laptop, and was able to replace it at no cost. And she now has a 128 megabyte USB drive, plenty for her book, and backs up her work every day. She carries it with her wherever she goes.

Backing up any electronic device has always been one of the most important and most ignored security tasks. Most portable devices come with removable memory chips or sticks that can be copied into a computer using an inexpensive chip reader. From there, you can copy the files to a backup chip, a USB drive, a CD or DVD. A 2 gigabyte USB drive costs $50 to $60 on sale. Backing up your information has never been easier, or less expensive.

**Encryption**

Encryption makes data illegible to unauthorized users. It’s not a fix-all, but it does have its place. Some USB thumb or keychain drives require a password to store or read encrypted information. On these, you can create one area or partition with security and one without. As long as you remember your password, you alone can access confidential files or folders.

If you plan to store information you don’t want others to see on a PDA, buy one with encryption and use it. You probably don’t need this level of security on your music player, cell phone, or camera.

For laptops, Microsoft® includes Encrypting File System® (EFS) in Windows XP®. Note that it takes time to learn how to use EFS and that it’s not the default setting.

**Wireless Capabilities**

The wireless capabilities we can carry around with us make staying in touch easy. Most laptops come with built-in 802.11 wireless adapters. Other electronics come with Bluetooth wireless capability. These devices are often designed to work “right out of the box” with no security protection enabled.

Unfortunately, malicious people with bad intentions and wireless proximity detectors prowl public Wi-Fi areas trying to gain access to laptops and PDAs. Taking a few precautions can help keep them out of your data:

- Run a software firewall.
- Set your adapter not to permit “Peer to Peer” network connections. That means your device should only communicate with an access point or router, not directly with another computer.
- Encrypt your wireless sessions with Wireless Protected Access (WPA) or WPA2 if possible. Otherwise, use Wired Equivalent Privacy (WEP), which is less secure but more commonly available.

Losing personal information to an identity thief can be very painful. Take the time to secure your wireless capabilities before your privacy is compromised. You won’t have to regret it later.

**Jerry Hinek**  
Senior Business Security Manager  
AT&T Information Services
AT&T Inc. has completed the acquisition of USInternetworking, Inc. (USI). The transaction complements AT&T’s existing managed services capabilities and paves the way for the company to tap into the burgeoning applications market with new offers for businesses of all sizes.

AT&T concluded the transaction after the two companies received all necessary approvals. In September, AT&T announced it would acquire USI for approximately $300 million in cash and assumed debt.

IDC market research and advisory firm IDC estimates that application management services represented a $20.4 billion market worldwide and a $9 billion market in the United States in 2005, and expects both markets to continue to experience growth. (Source: IDC, Worldwide and U.S. Application Management Services 2006-2010 Forecast Update, Doc #203607, Sept 2006).

“This transaction strategically aligns USI’s software and eBusiness management services and consulting expertise with AT&T’s existing portfolio of enterprise hosting and managed services,” said Forrest Miller, AT&T Group President. “We look forward to combining USI’s technology and expertise in applications management with AT&T’s global reach, networking expertise and extensive hosting capabilities, which will broaden the range of solutions we offer our customers.”

USI specializes in managed enterprise software solutions and on-demand services. It provides software management and outsourcing services for widely-used popular business software from companies like Oracle, PeopleSoft, Siebel, Microsoft, IBM WebSphere and Ariba. The company also develops, hosts and manages customized eCommerce solutions.

“USI’s depth of experience, innovative and proprietary technologies, and client-centric approach position us solidly as a market leader in delivering managed applications services,” said Andrew A. Stern, who will remain as USI’s chief executive officer. “Our clients and prospective clients have responded favorably to the acquisition. By combining our capabilities with AT&T’s market access and complementary service offerings, we will be able to introduce new capabilities and service offerings more rapidly, without detracting our focus on delivering individualized client service.”

Business customers also will benefit from access to a single source for Internet data center facilities, IT infrastructure, network consulting and IT management services.
**Answers to IT IQ Test**
*from page 7*

1. According to a recent survey, what percent of companies have ever had to suspend key business operations as a result of a disaster?

The correct answer is “28%”.

The likelihood of having to suspend key business operations as a result of a disaster is far from remote. 28% of CIOs and senior IT executives polled by AT&T in a recent global survey admit that they’ve suffered from a disaster in the past. A surprisingly high percentage of those respondents still don’t consider business continuity planning to be an organizational priority, even when previous disasters cost them $100,000 or more in revenue a day.

2. Which of the following is a benefit of moving an in-house data center to an Internet-based hosting environment?

The correct answer is “All of the above”.

When a busy, mission-critical data center outgrows its current facilities, or when it becomes difficult to achieve the desired performance and reliability in an in-house data center, relocating to a specialized Internet-based data hosting environment is becoming the most attractive option for more and more enterprises.

3. Which of the following could allow companies to achieve a high level of functionality during a pandemic?

The correct answer is “Enabling employees to work remotely”.

CSOs should look at their current telecommuting policies as a strategic advantage in case of a business shutdown. Do you have the capacity to have 80 percent of your employees working from home? Do they have access to all the information assets they’d need? The answers to these and other questions could make a big difference if a pandemic or other disaster prevents your employees from coming to the office.

4. Businesses face many different kinds of emergencies. Should businesses have a single business continuity plan or multiple plans for each emergency?

The correct answer is “Single plan”.

AT&T recommends that businesses develop one plan with the ability to deal with multiple contingencies. If you know what’s important to your company and what’s needed to ring the cash registers, then you have the basis for 80% of your plan. The remaining 20% of your plan is reserved for activities specific to a particular type of crisis. AT&T works directly with business customers to develop network designs that are appropriate to support specific business continuity requirements.

5. Which of the following is the most significant threat to businesses today?

The correct answer is “Viruses and worms”.

Viruses, worms, and spyware have been evaluated as the most significant threats to organizational cyber security, according to the 2006 AT&T Business Continuity Study. All told, 78% of IT executives surveyed agree that viruses, worms, and spyware are the three most significant threats to their networks, followed by “hackers” at 43%. Other threats to cyber security include SPAM (37% in 2006 versus 44% in 2005), an internal accident (27%), and internal sabotage (23%). Just 1% said that the threat of natural disasters taking down their network is one of their most significant concerns when it comes to cyber-security.

6. All the business continuity planning in the world won’t mean anything without awareness and buy-in from which of the following?

The correct answer is “Employees”.

While it’s important to coordinate your business continuity plans with local government agencies and building management, it’s critical to communicate your plan to employees. Steps include ensuring that employees know where to receive information and updates; ensuring that mission-critical employees know their role in the plan and have access from remote locations; and making sure that your plan can be executed by alternate employees when regular employees cannot be reached.

CSOs should look at their current telecommuting policies as a strategic advantage in case of a business shutdown.
Helpful Numbers and Web Sites

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

Area Code Look Up
http://www.my-areaencode.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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