



INFORMATION TECHNOLOGY EXPERTS, INC.

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Business Trends

The Future of VoIP Is Now!

Change in the telecommunications market is happening rapidly, and it seems that VoIP is destined to replace traditional telephony as we know it. **Read on** to learn how making a phone call may change soon.

Ask an Expert

Online Back-ups vs. Tape Drives

Back-up systems get a new convenient face with the newest systems available. **Read on** to learn more on how online back-up systems could be a new data storage option.

Client Highlight

One-of-a-Kind Engineering

A successful Loveland engineering firm uses ITX infrastructure for a seamless business practice. **Read on** to learn more about Landmark Engineering.

ITX News

ITX signs 11 new customers

ITX adds Help Desk to efficiently serve customers

ITX hires Dave Nadeau as Director of Commercial Software Operations

The Lighter Side

In need of a laugh or a light-hearted dose of trivia? Take a break...and enjoy!

The Future of VoIP Is Now!



VoIP (Voice over Internet Protocol) phone systems are becoming increasingly popular, easier to implement, and have tremendous potential.

What is VoIP and why should I care?

Rather than using traditional, analog phone lines, VoIP utilizes your computer network, and the Internet, to send packets of voice data. With VoIP, phone calls are digitized and transmitted the same way as e-mail,

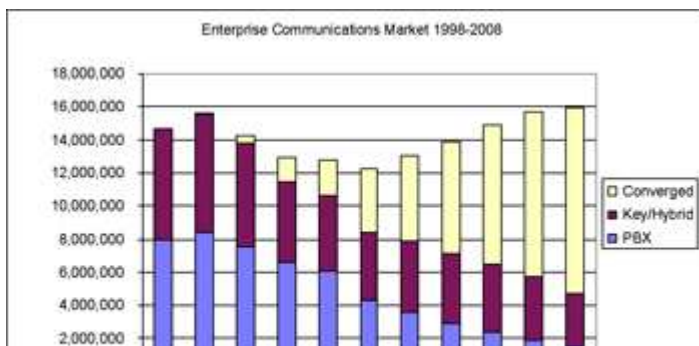
web pages, or network data – offering feature-rich services at lower costs.

Government agencies and businesses are switching to VoIP for several reasons, including:

- **To save money.** For example, when a new employee joins the company or relocates an office, typical legacy systems require an outside technician to visit the building and physically re-wire phone lines – at costs ranging from \$100 to \$300 each. However, with VoIP, the employee simply unplugs the phone from the network and replugs it into the new location. A single administrator manages "Moves, Adds, and Changes" (MACs) by accessing the VoIP software (using web & GUI interface) and within a few clicks, a MAC is complete.
- **To eliminate many long-distance charges.** Think of VoIP as a digitized voice e-mail – and sending an e-mail is free. Commonly referred to as "toll bypass," calls between interconnected offices (cities), via your data network, are not subject to long distance charges.
- **To get cool features utilizing digital voice.** Voice mail shows up in your e-mail; your phone interfaces with Outlook enabling calendar integration (when you go to a meeting your phone automatically goes into meeting mode); find-me-follow-me; and message recording all are part of *Unified Messaging*, which simply put, is a communications solution that unifies a single message providing users with one central point of access to all their voice, fax, and e-mail messages.

The Analysts Agree

With the advent of pure IP systems, (shown as Converged in the chart), growth has increased dramatically and in 2004 pure IP systems surpassed legacy PBX systems – as the following statistics illustrate.



"VoIP & Networks 101" Free Lunch 'n Learn Seminars

Given quarterly – next session,
December 2006

Moot House Restaurant

**Click here to register and
to enter our quarterly drawing
for an iPod Nano**

(must be present at seminar to
win)

To learn more about our VoIP
services, click here:

[http://www.itxfc.com/html/
Comm/VoIP.htm](http://www.itxfc.com/html/Comm/VoIP.htm)



Definitions of VoIP Geek-Speak

Traditional PBX: Analog phone systems that move phone calls around by utilizing 100 year-old technology.

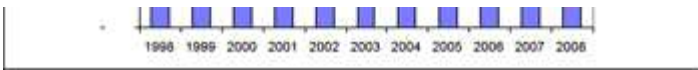
Pure IP: Digital phone system that digitizes analog speech into bits to transmit them along with data bits over a unified network.

Bit: The smallest unit that analog voice signals can be broken down into. A bit is either on or off, a one or a zero.

Hybrid VoIP: A traditional / legacy PBX with a VoIP card added. Allows for some VoIP functionality and can allow toll bypass. Does not lower MAC charges, maintenance costs remain, offers less features, and may require significant upgrades.

Packet: A unit or "manageable chunk" of voice data into which complete messages are divided to be routed across the Internet or other TCP/IP network.

Packet switching: Newer, more efficient technology used for IP communications on the Internet, by which data is broken into packets



- 23% of midsize and 14% of small businesses have adopted VoIP (Infonetics Research, May '06)
- Small business adoption rates will **triple** by 2010 (Infonetics Research, May '06)
- Via a survey, almost 50% of executives from 1,200 global enterprises say their organizations currently use IP telephony in some or all of their locations

Independent Research Compares VoIP Providers

When considering VoIP, look at the Total Cost of Ownership. When assessing overall value, assume a seven (7) year lifespan of the system and consider the following:

- Component costs
 - Capital: IP PBX, phones
 - Operational startup: planning, installation, initial troubleshooting
 - Maintenance: labor costs for maintaining equipment plus percentage equipment maintenance paid to vendor

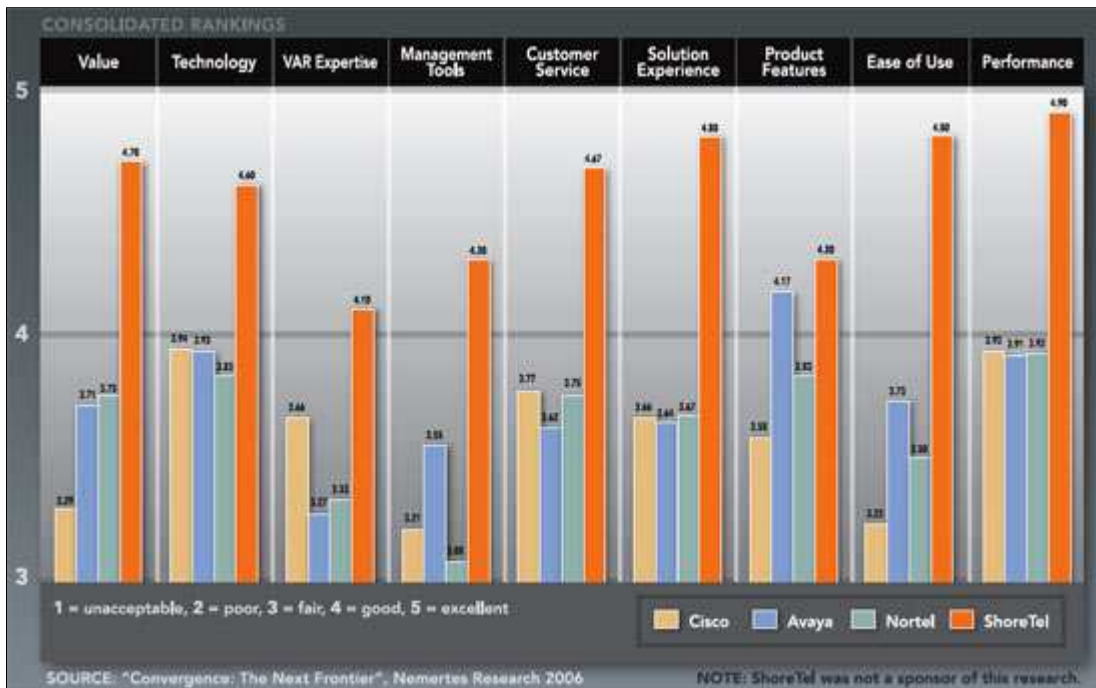
Also consider **all** of the aspects of a VoIP install – not just the initial investment. As the chart below illustrates, there are nine (9) attributes to consider when evaluating VoIP providers.

which data is broken into parts called packets. Different packets can take different routes to the destination, arriving out of order. They are reassembled into the original order at the destination.

PoE (Power over Ethernet): A method of sending electrical power over Ethernet cable to alleviate the requirement to plug equipment into an electrical outlet or other power source.

QoS (Quality of Service): A guaranteed or predictable level of bandwidth, transmission speed, and freedom from dropped packets, delay, jitter, and error that is necessary to ensure adequate performance of particular applications.

Softphone: VoIP software that runs on our desktop, laptop, or handheld computer and provides an onscreen telephone interface to allow you to make phone calls through your computer using its speakers or headset and microphone without a traditional telephone handset.



Improving Call Center Operations

IP telephony offers interesting options for call centers & help desks because Internet connectivity provides the opportunity to put operators anywhere – and to save costs, more companies will rely on an increasing number of remote agents working from home, rather than a corporate center.

Such distributed "centers" can be established overseas, or even distributed across a city or state, saving costs by allowing call center agents to work at home. An increasing number of call centers now

use VoIP, and it will continue to grow, allowing these businesses to access a previously untapped labor source.



The Future is Now

For mobile phone users, new dual-mode phones are now available that switch between cell phone and VoIP phone. These new gadgets monitor for the presence of Wi-Fi hotspots, and switch to VoIP mode from cell mode when a wireless network is detected.

Some expect the next step in this evolution to be the total replacement of cell phone networks with wireless networks and VoIP. This will be made possible by WiMax networks – broad-area networks much faster than what we have today – capable of transmitting video and audio.

Meanwhile, the increasing speed of broadband is likely to spawn a move toward VoIP video phones. Viewing television and movies over a broadband connection is the next likely step, and there will almost certainly be devices and applications developed that have yet to be conceived.

Are you ready to implement VoIP? Call the experts at ITX at (970) 282-7333 or visit www.itxfc.com.

Online Back-ups vs. Tape Drives

Over the past few years there have been dozens of back-up systems available to consumers and businesses, with interfaces that are not always user-friendly and software that is prone to error and plagued by hiccups.



Online back-ups, or network storage, have not really taken off **yet** – but are gaining momentum. One reason is concern about privacy, data security, and trust. Plus, many tend to be cautious about storing and accessing critical data remotely.

Tape drive back-ups becoming obsolete

Currently, a widely-used solution is on-site tape drive back-up systems, which can be slow and cumbersome. Tapes are subject to mechanical and thermal failure, as well as human error. Restorations, when needed, can also be a hassle. The software and storage hierarchy can be difficult to navigate, and it can be hard to find and restore just one file.

If tapes are stored on-site, the back-up offers no protection against disasters like theft, earthquakes, fire, or flooding – as the businesses and residents of New Orleans learned last year. Other problems include drive failure, users getting tired of scheduling back-ups, swapping out tapes, and the hassle of moving tapes off-site for safety purposes.

Convenience of On-line Backups

A major selling point to on-line backups is that remotely backed-up data can be accessed and downloaded anywhere. After Katrina when workers left New Orleans to work from other parts of the country during the city's recovery, they could access their data from almost anywhere.

More recently, there are trends away from tape-based, on-site backups, and toward a new generation of faster, more reliable, affordable, convenient, and user-friendly on-line backup systems. Much of this has been driven by the falling cost and increasing availability of high-speed Internet connections.

Still, some prospective users have valid questions, including:

- How stable is the company you use as a back-up service?
- Will they be in business next week? Next year?
- How safe and secure are your files?
- Do they have a disaster recovery plan?
- Is the data encrypted?

ITX's Role

ITX now offers customers the best of both worlds – the convenience of a simple, easy to use, automated, off-site backup service from a well-established local vendor.

ITX's in-house back-up service is Web-based and encrypted, and files are password protected. ITX carefully examined several available back-up options and picked a software interface for the back-up system that is very user-friendly. ITX installs the software on servers, and the customer determines which files to back-up and when.

**Definitions of On-line Backup
Geek-Speak:**

Once the software is installed and configured, it performs reliably and automatically. Once a back-up is done the



Data encryption:Encryption is a secure process for keeping your sensitive and confidential information private. It is a process by which bits of data are mathematically jumbled with a password-key. The Encryption process makes the data unreadable unless or until decrypted.

Data redundancy:Information that is duplicated and separately stored in case of hard system crashes or hardware failure. If one copy is destroyed, a second (redundant) copy is available for restoration.

File Transfer Protocol (FTP): A very common language and method of file transfer from computer to computer across the Internet. FTP is a way to login to another Internet site for the purposes of retrieving and/or sending files.

Storage array:A collection of disks or tapes from one or more commonly accessible storage systems that are controlled by software.

Once a back-up is done the system sends an email confirming the process is complete, and notifying of any errors that occurred. For example, if a file is locked or open while the back-up is under way, those files were not backed up.



A full or incremental back-up can then be scheduled for important files whenever and as often as desired. If any of the backed-up information is needed later, accessing it is a simple process. Just select whatever information is needed off the server using the interface provided.

The data is encrypted and sent via FTP to a server, then written to a storage array. For data redundancy purposes, the data on the storage array is written to tape via a tape vault as redundancy in case of hardware failure.

Backup Recommendations

How often should data be backed up, and what data should be backed up? That varies by customer, but ITX has some general recommendations.

It is important to regularly back up critical data (i.e., accounting databases, email, CRM databases, SQL databases, etc.) – mainly the files that keep a business running. Programs are not typically something ITX recommends backing up – as they are easily reinstalled from the original software disks.

ITX recommends backing up your critical data, in full, at least once a week. More often than that is something we also recommend in some cases. In addition to the once weekly full back-up, you should do an incremental back-up daily, and sometimes more than once a day.

For more information on back-up programs, contract the experts at ITX at (970) 282.7333 or visit www.itxfc.com.

One-of-a-Kind Engineering

Landmark Engineering of Loveland, Colorado is a full-service, multi-disciplinary engineering design firm. Since 1969, the company has served clients seeking design and engineering services. The company is the only one of its kind in northern Colorado, and it provides one-stop site design services for building projects in the area, and beyond.

Landmark has more than 30 professionals in six disciplines, including planners, civil engineers, surveyors, architects, and geotechnical engineers. Together, they provide a complete spectrum of services, including:

- civil and structural engineering,
- land planning and entitlements,
- survey,
- architecture,
- landscape architecture,
- geotechnical and material testing,
- survey mapping, and
- construction management.

*"Almost all the work we do is automated in some way, so our machines and our network are incredibly important to us," Merritt said.
"Basically, ITX keeps us working."*

The One-Stop Shop

According to Ken Merritt, Sr. Vice President and Director of Planning, the company prides itself on providing clients with all the necessary site design and architecture needs they have, under one roof. "We provide a full complement of design services, including planning and engineering," he said.

The company's major emphasis is on land development for residential and commercial projects, and they have a unique specialty in cemetery planning and design. While the firm's focus is primarily on the Front Range, it does work statewide plus Minnesota, Florida, and California.



When it comes to their computer technology, Landmark relies on ITX to fill the role of day-to-day IT specialists for the company.

"Almost all the work we do is automated in some way, so our machines and our network are incredibly important to us," Merritt said.
"Basically, ITX keeps us working."

"Most all of the work we do is based on staying connected to technology. We're highly dependent on AutoCAD and LANdesk for CAD work, so staying on-line and keeping everything up and running is very important. If our network, machines, or any of our technology goes down, our production comes to a screeching halt."

For more information on Landmark Engineering, visit their new Web site at www.landmarkengineering.com or call (970) 667-6286. For more information on ITX, and how their IT services can help your business thrive, visit www.itxfc.com.

ITX signs 11 new customers

Information Technology Experts, Inc. (ITX) has announced that 11 local businesses have recently hired ITX to serve as their IT support providers. Some new customers include: Brinkman Partners, New Vision Charter School, Happy Canyon Wine & Spirits, and Cellular Junction.

IT support for ITX customers range from network design and administration, network security, desktop and end-user support, hosting, software and database development, and VoIP.

"Customers have several choices when deciding who to hire as their local IT support provider, and we're thrilled that these six respected businesses saw the value in signing with ITX," said Mai Tran, ITX President & CEO.

About ITX

ITX is northern Colorado's leading full-service IT support provider. Founded in 1996, ITX has 120 employees and posts a 31% annual average growth rate. ITX serves over 140 commercial and government clients from offices in Fort Collins, Denver, Colorado Springs, and client locations nationwide. ITX core competencies include: network administration, database & software development, network security, hosting, and VoIP/telecommunications.

ITX adds Help Desk to efficiently serve customers

Information Technology Experts, Inc. (ITX) today announced the recent addition of Help Desk Services where customers have a centralized number to call for support. The Help Desk will be locally staffed full-time and a robust database will be used to create tickets, facilitate scheduling, and keep track of calls and resolution.

"ITX has grown to the point where we need a full time help desk to support our customers and track issues from a central database. We know this new service will better organize the call queue, document what we do, and quickly satisfy our customers in real time," said Mai Tran, ITX President and CEO.

ITX hires Dave Nadeau as Director of Commercial Software Operations

Information Technology Experts, Inc. (ITX) today announced the addition of Dave Nadeau as Director of Commercial Software Operations. Dave will manage and market ITX's rapidly growing software and database development staff and projects. Before joining ITX, Dave served as a Business and Commercial Banking Officer with Home State Bank. His technology and software expertise hails from management and engineering positions at Hewlett Packard, Motorola, Intel, Lockheed, and the U.S. Air Force. Dave holds an M.B.A. from The University of New Mexico, and a B.S. degree in Electrical Engineering from Rensselaer Polytechnic Institute.

"I'm thrilled to take on such an exciting role in a dynamic and growing company like ITX," said Dave Nadeau. "The opportunity for growth in both products and services in commercial areas is tremendous."





Job Interview

Reaching the end of a job interview, the Human Resources Person asked a young engineer fresh out of MIT, "What starting salary were you looking for?"

The engineer replied, "In the neighborhood of \$125,000 a year, depending on the benefits package."

The interviewer said, "Well, what would you say to a package of 5 weeks vacation, 14 paid holidays, full medical and dental, company matching retirement fund to 50% of salary, and a company car leased every 2 years -- say, a red Corvette?"

The Engineer sat up straight and said, "Wow! Are you kidding?"

The interviewer replied, "Well Yeah, but you started it."