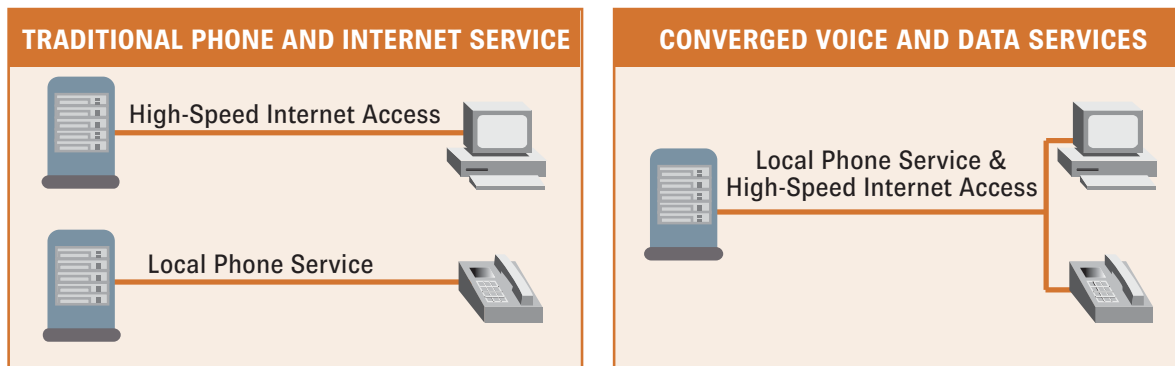


VOICE OVER IP (VoIP) TELEPHONY: BENEFITS FOR BUSINESSES

Voice-over-Internet Protocol, or VoIP service, has been talked about for a number of years, but is now being adopted by businesses in the mainstream in order to save money as well as deploy powerful new capabilities for end-users. Recent product launches by RBOCs and long-distance carriers, as well as an onslaught of "network convergent" companies offering both voice and data services, are successfully penetrating a range of industry sectors. This paper will explore the benefits of VoIP technology to businesses as end-users, as well as steps for acquiring service.



BENEFITS OF VOIP TELEPHONY

FEATURE-RICH VOICE SERVICES

VoIP technology makes the most eye-catching features viable for both small and large businesses-transforming telecommunications in much the way Windows now supercedes DOS on a PC. With VoIP telephony features, the user can simply click on voice messages that have been delivered to the computer, listen to them (in the form of .wav files), forward, delete and respond to them, all with simple mouse-clicks. This simplifies the commands associated with voice features and enables users to access familiar point-and-click commands from an intuitive Web interface.

MULTI-SITE CALL MANAGEMENT

VoIP attendant features make managing calls for single and multiple locations simple. From a central location, a receptionist can monitor and answer calls for multiple locations. This helps eliminate missed calls in remote offices that may not be fully staffed, and allows for central handling of all calls. VoIP services provide employees with extension dialing between locations, and provide call routing flexibility to help ensure that important calls are never missed. VoIP business phone systems can screen calls according to established priorities, and simple commands can enable calls to follow a user with "find-me/follow-me" features that even enable calls to ring to multiple locations simultaneously.

COST SAVINGS

By combining voice calls over the same infrastructure that delivers Internet connectivity, businesses can save money. Most companies have high-speed Internet connections, and also have separate phone lines. Consolidating all this over one high-speed Internet connection reduces the number of leased phone lines, resulting in substantial cost savings for small and medium-sized businesses. In addition, Hosted PBX solutions eliminate onsite phone equipment (key system or PBX), often providing significant cost reductions.

STEPS FOR ESTABLISHING VOIP

To achieve convergence, companies can purchase an on-premises Internet Protocol enabled phone system (IP PBX). Or they can lease a hosted PBX service (similar to traditional Centrex, but IP-enabled and with advanced PBX features) through which telecom equipment is housed by the supplier and features are delivered remotely. Hosted telecom services are gaining in popularity-especially with small to medium businesses. The hosted solution requires less capital and expense commitment since pricing is usually based on a 'per seat' fee, can be implemented quickly, requires less in-house technical expertise, and is infinitely scalable to meet business growth. Additionally, hosted PBX solutions integrate many components such as Voice Mail, Unified Messaging, Conferencing, and Auto-Attendant which normally require separate "boxes." IP PBX solutions are popular with larger enterprises that can afford the capital and expense commitment of a new IP PBX purchase, and have in-house technical expertise to support ongoing maintenance of the system.

In the past, businesses would seek phone services from local phone companies or more recently, from long distance companies. They would buy equipment from value-added resellers or PBX vendors, and would then purchase Internet services from Internet Service Providers (ISPs). With converged technology, businesses have options for choosing the best provider for voice telephony services. All the major RBOCs and all the major long distance companies have either announced VoIP services or have announced plans for VoIP services. Many smaller service providers are able to better serve businesses with customized solutions and a more personal touch. Internet Service Providers are a logical choice for expanding an existing business relationship, and new-breed providers are a welcome alternative to the larger players.

IS AN IP TELEPHONY SOLUTION RIGHT FOR YOUR BUSINESS?

Is your current phone system more than five years old?

Most PBXs are fully depreciated after 5 years, creating a no-loss situation, and faster ROI to switch to VoIP telephony.

Do you have separate bills for high-speed Internet access, local phone lines, and long distance services?

The consolidation of these services provides dramatic cost reductions. VoIP telephony is best suited for businesses that already have or need high-speed Internet access.

Do you spend considerable money on changes to the configuration of your PBX?

This is important for companies who have either increased or decreased in size, as each move, add or change (MAC) can cost companies money.

Do you have telecommuters or a remote work-force?

The futuristic productivity-enhancing features of VoIP technology can dramatically impact your remote work-forces' behavior. Features such as 'Find me' or 'Follow me' will ring multiple locations until a person is found. Likewise, a telecommuter can plug in at home and receive calls as if in the office.

CHOOSING A QUALITY PROVIDER FOR VOIP SERVICES

When choosing a provider for Voice over IP services, there are some important factors to consider. Operating an IP network effectively requires a team with extensive experience in IP technology including but not limited to routing architectures and policies. Adding VoIP as a service adds new issues such as NAT Traversal and end-to-end Quality of Service. With user expectation of VoIP performance and availability comparable to the PSTN, all VoIP components must be deployed in a redundant, carrier-class manner to ensure the highest quality and availability. This includes geographic diversity, load-balancing, and clustering as well as being housed in a physically secure, multi-homed, and climate controlled environment. Choosing a provider with PSTN & voice expertise on staff who understand the criticality of handling voice trunks will also ensure the success of a switch to VoIP services. Finally, many providers of VoIP utilize the public internet for a low-cost solution. This is not a commercial grade solution; seek a provider using only private internet transport for the highest quality service.

ADDITIONAL ITEMS TO CONSIDER

Many people still think there are quality concerns with VoIP technology. In reality, however, the technology has evolved dramatically in the last few years. Early VoIP applications were focused on large volumes of international long-distance minutes. Since these international routes delivered immense savings, they became very popular. With increased volumes, the international telecom marketplace gained first-hand experience engineering and designing VoIP networks to maximize call quality. Vendors also were able to test systems and evolve a more mature technology. Currently, standards bodies such as the International Telecommunications Union and the Internet Engineering Task Force are working together to define common equipment standards for interoperability. To ensure your company doesn't experience quality concerns, confront service providers with questions about trouble-handling procedures and quality assurance procedures.

There are issues and standards still to be ironed out in the new VoIP world, including those related to "E911". Given the ability to have your phone number mapped to an Internet address, if you were to call 911 while out of town on business, the emergency response system would not know where you are physically located. This problem is not new, and remains an active issue in the wireless industry. Several solutions are currently being tested and analysts believe that a resolution is not far off. Most telephony service providers will provide a software-based solution to input your address and update as needed. It's important to understand the process and procedures for smooth E911 handling when considering VoIP service.

There is also an important regulatory issue to be resolved. Since VoIP calls are delivered over the Internet instead of through the public switched telephone network, they are unregulated. A recent instance involving Vonage and the Minnesota Public Utilities Commission (PUC) makes the point. Vonage offers a residential VoIP solution that has experienced sustained growth and, as a result, they have captured the attention of regulatory agencies. In an attempt to collect taxes and surcharges, the Minnesota PUC claimed that Vonage should be regulated in the same manner as any telecom company. This decision was overturned on the basis that Vonage provides information service, not telecom service. This has caused interesting reactions throughout the industry-with healthy debate on the topic. Regardless of future rulings, experts agree that regulatory issues will not hinder the adoption of this revolutionary technology-nor impact the end-user experience.

SUMMARY

VoIP telephony is rapidly becoming a mainstream service, already in use by cost-savvy businesses in all sectors. Cost reduction is the driving force for this rapid adoption, with productivity-enhancing features as beneficial side-effects. Most businesses will find substantial improvements in the features offered with their voice services, call management flexibility and cost savings by making the switch. The question of whether to switch to VoIP telephony solutions for most businesses is not if, but when.

ABOUT LIGHTEDGE SOLUTIONS

LightEdge Solutions is a leading provider of fully-managed network and business services for small and medium sized businesses in the Midwest and Southwest. LightEdge is dedicated to technology leadership and best-in-class service and support. With its Service-on-Demand offering, LightEdge provides fully-managed network and business application services, allowing businesses to focus on their core business, gain competitive advantage and scale for growth. LightEdge is headquartered in Des Moines, with offices in Cedar Rapids, Kansas City, Minneapolis, Omaha and Phoenix. For more information, visit LightEdge's Web site at <http://www.lightedge.com>.