

**IP Telephony Secrets Your Equipment
Vendor Won't Tell You.**

Presented by OneStream Networks and Citel.

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Introduction

The growth of IP telephony in both the consumer and enterprise market segments has created not only buzz around the productivity and cost benefits of the technology, but a dizzying array of equipment and service offerings so expansive and complex, enterprises have a difficult time sifting hype from the meaningful impact Voice over IP (VoIP) can have. OneStream Networks and Citel have produced "IP Telephony Secrets Your Equipment Vendor Won't Tell You" in an attempt to provide reality-based answers to questions for enterprises planning their IP telephony migration, for those who are in the process of deploying IP telephony, and for those who have deployed IP telephony and now seek to maximize the benefits of a converged voice and data network.

The macro benefits of Voice over IP that enterprises are attempting to achieve fall into three primary categories:

1. Operational Cost Savings
2. Application Integration
3. Worker Productivity Enhancement

Enterprises are often led to believe that a complete change out (referred to as a Rip and Replace) of existing digital PBX equipment is the most effective way to realize these benefits. This can be a misnomer.

At its core, IP PBX technology enables convergence of voice and data networks, whereby voice simply becomes another application on the data network. IP-PBX technology also enables flexibility, scalability, customization, and many new features not available on previous generation digital PBX and key system hardware. Some of these new features include: "Click to Call," "Find Me/Follow Me," Unified Messaging, and others—all of which enhance the business case for VoIP migration.

That said, many IP telephony equipment vendors "bundle" complete solutions (including handsets, call controller servers and software, and LAN infrastructure) as a package for marketing, cost economics, and purported compatibility reasons. But the cost of the entire migration package (including media servers, software, new handsets, new or upgraded LAN and wiring infrastructure, power over Ethernet (POE), network security, and user retraining) can substantially dilute the business case, economics and productivity benefits for IP telephony with every incremental dollar proposed and spent.

In the end, many components of an “end-to-end VoIP migration solution” are simply unnecessary to obtain the most substantial benefits of IP telephony in a sensible, managed way that will serve the often conflicting motivations of enterprise IT *and* Finance departments.

The remainder of this white paper is designed to arm all stakeholders in the VoIP migration plan with meaningful advice in plain language, to use during the significant and ultimately necessary process of deploying a converged voice and data platform. The goal is to design and deploy a voice and data platform that:

- Increases competitiveness and productivity
- Reduces cost
- Is scalable with the growth of the enterprise

The section that follows provides a summary of “IP Telephony Secrets Your Equipment Vendor Won’t Tell You,” which is followed by a section that explains each secret in more detail, as well as a Conclusion.

The Secrets in Summary

Secret 1: We'll tell you to obtain a LAN assessment prior to migrating to IP telephony, but you may not need one.

Before your enterprise spends time and money on a Local Area Network (LAN) assessment, start by asking whether you really need one. Migration options on the market today can enable you to achieve most of the key benefits of VoIP without having to spend time, money, and resources upgrading the LAN infrastructure in your enterprise.

Secret 2: Selling you brand new IP phones is pure margin in my pocket, but may do nothing to improve your business.

Visit an enterprise that has deployed current generation IP phones and observe how they are used. Users make calls, take calls, put callers on hold, and transfer calls. This is more or less what they did with the PBX phones they replaced. Despite claims that large color screens are useful business tools and contributors to the increased productivity benefits of VoIP, and despite the claim that IP phones can “auto-relocate,” fundamentally, an IP phone is just a new PBX phone—and an additional sale to the vendor.

Secret 3: You may not need new IP phones in the future, either.

With the convergence of fixed and mobile devices, plus the improvement in “unified communications” environments, today’s IP phone may be a purchase you can bypass altogether. The applications and devices you’re going to deploy in just a few years time may look and work differently (and cost much less) than today’s generation of IP phones.

Secret 4: I'll try to sell you on a “Pure IP” VoIP deployment, but Hybrid is probably just fine for your needs.

In practical reality, there is no such thing as a “pure IP” deployment of VoIP. Virtually every VoIP deployment includes analog phones in some locations and/or TDM (Time Division Multiplexing) interfaces to the PSTN (Public Switched Telephone Network). All VoIP deployments are hybrid—it’s only a matter of degree.

Secret 5: Deploying new IP phones is a lot more complex than plugging a cord in the wall.

If your enterprise plans to deploy IP phones on your VoIP network, there is a near certainty that a new or upgraded LAN will be required. Even if Cat5 cabling is up-to-date, Power over Ethernet (PoE), as well as new Ethernet switches, will likely be required.

Secret 6: You don't need to get rid of your existing PBX to obtain many of the benefits of VoIP.

The most substantial benefits of VoIP come from enterprise integration on the Wide Area Network (WAN):

- Having a single dialing plan, single voice mail system, and central administration for your entire company
- Making “free” calls among your sites
- Being able to support telecommuters

With today’s migration options, all of these benefits can be obtained by using your existing PBX.

Secret 7: You should buy your PBX on a standard buy cycle, and you should continue buying it from me.

A “normal” PBX replacement generally happens when one of the following three (3) events occurs:

1. The enterprise moves
2. The enterprise outgrows the current PBX
3. The PBX breaks

Today’s migration options provide a compelling business case for almost any organization to migrate to VoIP and start enjoying the many benefits VoIP brings—without waiting until the PBX reaches the end of its usable life. And because of the flexibility and multi-vendor interoperability offered by many IP telephony platforms, enterprises can leverage their buying power by utilizing multiple vendors.

Secret 8: You can use your digital PBX phones on another vendor’s IP PBX.

Current VoIP migration options enable you to retain your existing digital PBX phones while changing out the PBX itself for a Session Initiation Protocol (SIP)-based solution. You can even combine multiple vendors’ phones into a single SIP-based enterprise voice network.

Secret 9: The process of a complete Rip and Replace VoIP migration can be disrupting to your business.

Installing new phones causes business disruption. In some cases, there will be physical disruption (noise and dust) caused by the need to pull new Cat5 cable. In all cases, there is the disruptive effect of having to go into every workspace and disturb the desktop to swap the phone. Once the phone swap is done, users have to be re-educated (or re-educate themselves) in how to use the new devices. The new phones do the same things; they just do them with different buttons.

Secret 10: You can host your IP PBX remotely, and pay much less.

An IP-PBX is a piece of software on a server—very much like a web server. You may find that your business needs are better served by having a carrier run that software and server for you rather than by having that software and server sitting in your office.

The next section explains each of the “Secrets” in more detail.

The Secrets in Detail.

Secret 1: We'll tell you to obtain a LAN assessment prior to migrating to IP telephony, but you may not need one.

One of the considerations an enterprise must evaluate when deploying IP telephony is the effect of additional voice traffic on the existing data network. This evaluation is commonly called a "LAN Assessment." LAN Assessments are generally not free, although certain manufacturers and service providers will waive fees as a part of an overall product or service and installation price package.

If the LAN infrastructure is not adequate to handle the additional security and Quality of Service (QoS) requirements for IP telephony, VoIP applications and services may not operate properly and can expose the enterprise to unnecessary performance and security risks. The LAN Assessment will measure, for example:

- The current network performance, availability, and scalability
- The amount of bandwidth available both on an average basis and a peak (or burst) basis
- Other QoS requirements

Not surprisingly, enterprises often learn that their existing LAN infrastructure is not ready for the additional demands of voice when combined with day-to-day data traffic, as well as the growth in other high bandwidth applications (such as video and other multimedia applications)—all vying for an increasing portion of available bandwidth.

LAN infrastructure upgrades can add significant additional per seat costs to the total cost of the VoIP investment. In addition, enterprises commonly use a data communications vendor (for LAN infrastructure) and a telecommunications or interconnect vendor (for voice telephony infrastructure). Essentially, these two vendors compete for the same business in a premise-based IP-PBX deployment. It is important to understand their long-term motivations and be certain the solutions proposed are best for the unique circumstances of your enterprise.

New technologies enable enterprises to deploy VoIP and avoid LAN Assessments (including the predictability of the additional LAN upgrade expense) by running the VoIP network over the existing digital PBX telephony wiring infrastructure and by avoiding taxing the existing LAN with voice traffic. By utilizing digital and analog handset gateways, existing Cat3 wiring and patch panel infrastructure is utilized to carry voice traffic through the gateway and a router directly to the IP-PBX, whether it be on premise or hosted at another location. In enterprises where the majority of existing digital PBX handsets are combined with a small number of IP handsets (for executives or other departments), the impact on the existing LAN may not be as significant as

with a wholesale upgrade to new IP handsets. In either scenario, avoiding LAN infrastructure upgrades enables enterprises to migrate to IP telephony more cost effectively.

Secret 2: Selling you brand new IP phones is pure margin in my pocket, but may do nothing to improve your business.

Many claims have been made about the inherent superiority of IP phones versus traditional TDM-based PBX phones. These claims typically revolve around two specific concepts:

1. The automatic relocation of a device from station-to-station
2. The enhancement of a small browser screen on the phone

Automatic relocation (auto-relocation) refers to the ability of a user to change offices or locations by unplugging the phone, moving to a new location, plugging the phone in, and using the device as if at the original location. IP phones have this capability, provided the LAN is configured in a way to support it. What is also true, but less widely known, is that the same capability has existed in many digital PBX systems for years.

The idea that auto-relocation is a new capability is a misconception. But there is a good reason why it is not widely known that many TDM-based PBX systems have the capability—it is generally not enabled. Most companies do not want users relocating from station-to-station on their own, for obvious reasons. And for many users, lugging a desktop handset from location to location is inconvenient.

The second commonly claimed benefit of IP phones is the availability of a small browser built into the device, very similar to the browser on a typical Personal Digital Assistant (PDA). In theory, people will use these small screens to access weather reports and stock quotes or to trade instant messages. This is also a practical misconception. First, IP phones with built-in browsers are often substantially more expensive. Consequently, most enterprises deploy lower cost phones without this functionality to the majority of users. Second, IP phones with a limited capability browser are typically sitting next to laptops or PCs equipped with large, full-featured browsers. In this environment, there are very few applications that favor a small, proprietary browser over a large, full-featured one.

Most of the cost and productivity enhancements offered by an IP-PBX occur at the server, or “call controller” level, not at the handset level. In many cases, existing digital PBX handsets can be “VoIP enabled” via digital or analog handset gateways to support most next generation features offered by the new IP-PBX platform. Gateways provide a translation mechanism between the unique signaling of existing digital PBX handsets already installed on the desktops and the signaling of a new IP-PBX. When gateways are utilized, the existing digital PBX is removed from the phone closet and is replaced by an on-site (or premise) IP-PBX or a hosted IP-PBX from a service provider.

SIP is a growing standard offered by a number of leading IP-PBX developers and manufacturers as a common “language” to support a variety of end point devices regardless of manufacturer. With such gateway devices, features of the IP-PBX are mapped to the buttons and displays of the existing digital PBX handsets. In most cases, the change from a digital PBX to an IP-PBX is transparent to the handset users, unless new functionality is added. Features that require complex displays (such as multimedia messaging and video) are supported on desktop or laptop PCs, offering more screen capacity and processing power than even the most sophisticated IP handsets.

At the end of the day, the “best” phone for the enterprise may be the one already paid for and installed on a user’s desk.

Secret 3: You may not need new IP phones in the future, either.

For years, the business telephone handset was virtually the only device suitable to support the primary enterprise communication application: voice. This exclusivity was partially based on practicality and partially based on tradition. However, the notion of a “telephone handset” and its capabilities has changed dramatically. IP telephony developers and manufacturers have broadened the definition of “end point” by offering products ranging from desktop handsets with feature sets mimicking low-end laptops to “softphones” that effectively eliminate the desktop handset altogether. Softphones enable users to connect a wired or wireless headset to a PC or laptop, and the Softphone application emulates the functionality of a PBX display on the screen, as well as integrates messaging and other applications. Even further, PBX functionality once reserved only for landline phones (such as Automatic Call Distribution, four digit dialing, and call queuing) has extended to mobile devices—cellular phones, PDAs, etc.—utilizing public WiFi, WiMAX, or cellular telephony networks that blur the distinction between wired and wireless connectivity.

Depending on features, new enterprise-grade IP handsets with browser displays and multimedia capabilities range in price from \$250 to \$600, depending on the manufacturer. Lower priced IP handsets can be obtained for substantially less, but with limited features and questionable quality. In addition to handsets, the costs of associated infrastructure (PoE wiring drops, installation, LAN upgrades, etc.) should not be underestimated, because they often comprise 60 to 70 percent of the total IP telephony migration cost, based on a 50- to 500-station deployment.

All have their place in the enterprise environment, depending on the job function of the user. For example, to call center workers spending the majority of their working hours in front of a PC or terminal screen, the headset and Softphone combination can be the most effective. Users have a comfortable headset for making or receiving calls over a long period of time. System Administrators have fewer devices to maintain and have increased flexibility to change features or configurations on the user’s desktop or laptop.

For office workers with consistent day-to-day phone use, but who are not tied to a phone for long periods of time, a desktop handset may be the most effective—for the very reason it has been effective for the better part of a century. When a call needs to be placed, the user picks up the phone and dials. When an incoming call arrives, the user picks up the phone and talks. For these users, a handset with PC or laptop functionality may be considered overkill. The PBX handset is for making and receiving phone calls. Multimedia applications can be pushed to the desktop or laptop screen, with a much larger viewing area and more processing power.

For mobile workers or “road warriors,” the primary device for voice communications can change from day-to-day or within a day. When the user is at home or in a remote office, a traditional telephone handset can be used for voice communications. On the road, a mobile phone or WiFi-enabled PDA can be used. How applications are delivered (whether to the desktop, laptop, or PDA screen) is largely based on convenience and location at the time.

In each one of these instances—call center employee, office worker, or road warrior—users can obtain the benefits of next-generation IP telephony services and applications largely without the purchase of a new IP handset, thus saving considerable cost and limiting business disruption caused by the need to train users on new devices and features.

As enterprise adoption of IP telephony grows, end points will also evolve. Will softphone technology proliferate to the screens of PDAs and mobile devices? Will desktop handsets be replaced by softphones supported by multimedia laptops and desktops? IP telephony, still in its infancy, leaves many of these questions unanswered. As such, enterprises may want to consider extending the life of their existing PBX handset and wiring infrastructures until these questions are answered, basing their investment decisions on a solid, productivity- and applications-based business case rather than simply on the aesthetics and cosmetic appeal of a new IP phone.

Secret 4: I’ll try to sell you on a “Pure IP” VoIP deployment, but Hybrid is probably just fine for your needs.

Some manufacturers of IP-PBX infrastructure claim there is a greater level of cost savings, efficiency, and user productivity with an “all IP” (or “pure IP”) VoIP deployment. In reality, this is very difficult and an often impractical goal to attempt to achieve.

In reality, enterprises have a number of different types of “phones” on their voice networks. Desktop handsets are used in offices, call centers, and reception areas. Fax machines used in office pools are often not integrated into the PBX system, relying instead on dedicated analog circuits. Single line phones are often used in common or reception areas and also often rely on analog circuits. Upgrading or enabling all of these devices to operate on the VoIP platform can

add unnecessary complexity and cost to the VoIP platform, with questionable gains in cost savings or productivity.

Enterprises should consider the increased incremental cost and the diminishing economic return of integrating the last few devices (such as fax machines and single line phones) to the VoIP network. As a result, many enterprises leave such devices on the existing voice platform and still obtain the benefits of IP telephony on the remainder of the network.

Secret 5: Deploying new IP phones is a lot more complex than plugging a cord in the wall.

LAN infrastructure manufacturers understand the impact of adding voice telephony and other converged communications applications to the performance and security of the enterprise LAN. In many cases existing LAN infrastructure is completely suitable for an enterprise's data requirements but not suitable for an enterprise's data requirements combined with the addition of voice telephony. As such, VoIP upgrades offer a profitable opportunity for LAN equipment manufacturers to "re-sell" and replace existing LAN infrastructure.

Most office workers in all but the most bandwidth intensive application environments achieve maximum productivity with the 10/100 Ethernet infrastructure in place today. In other words, most enterprises of 50-500 employees have few bandwidth bottlenecks at the LAN level. Upgraded LAN infrastructure with PoE has limited applicability at the laptop or desktop level. It is generally designed and deployed to support new IP phones with multimedia screens and browser functionality that the vendor often package in the same proposal. LAN upgrades present a perfect opportunity for the vendor to sell high margin LAN infrastructure with even higher margin IP phones or to use discounts on IP phones to reduce the total cost of a LAN upgrade. It can be argued that neither a new LAN nor new IP phones have a significantly positive impact on the overall performance or productivity advantages of the VoIP applications to which they are connected.

If all the benefits of VoIP can be obtained without new LAN infrastructure and without new IP phones, enterprises can focus their business case evaluations on the features and costs of an IP-PBX, converged applications, and deployment strategies—without the additional complexity.

Secret 6: You don't need to get rid of your existing PBX to obtain many of the benefits of VoIP.

Many enterprises have made substantial investments in their existing PBX infrastructures, with complex Automatic Call Distribution (ACD), Interactive Voice Response (IVR), call recording, and call queue functionality. In many cases, this existing investment prevents enterprises from

migrating to IP telephony over the near term. These enterprises already realize the complex application benefits available with IP telephony, but those applications are often custom developed for a specific enterprise. In other words, the PBX infrastructure in place at an enterprise's headquarters location is not going to be taken out-of-service any time soon.

Are there still areas where the enterprise can benefit from IP telephony? Absolutely. IP trunks can be used to reduce recurring operational expenditures. VoIP adapters can be used to connect remote locations to the primary PBX over IP circuits.

IP (or SIP trunks) can be used to reduce operational expenditures through lower recurring costs and more efficient use of channels, to provide a similar amount of throughput for significantly less cost. However, the benefits generally end there; and enterprises do not obtain any of the application integration benefits of VoIP with this strategy alone.

VoIP adapters are used to distribute the applications and resources of a centralized digital PBX to remote locations over an IP circuit, whether the remote location is across a city or half way around the globe. With this technology, remote locations do not need separate PBX or key systems. The VoIP adapter is installed in the phone closet next to the existing phone system patch panels, and digital PBX handsets are connected to the patch panel. Users then have the ability to dial four digit extensions anywhere in the enterprise, utilize the ACD and IVR systems, as well as obtain the benefits of a unified dialing plan negotiated at the headquarters.

More recent deployments are combining the use of SIP trunks with VoIP adapters to achieve substantial operational cost savings across the enterprise, as well as local presence at each branch location, without having to negotiate individual contracts with local PSTNs. This approach also allows an enterprise to achieve a greater level of business continuity across locations, by centralizing hardware and access resources at a central, managed location with redundant power and other protections.

Secret 7: You should buy your PBX on a standard buy cycle, and you should continue buying it from me.

Most digital PBX hardware has an expected life of seven to nine years, although several manufacturers have built hardware and handsets so well that the effective life can extend well beyond a decade. The substantial market for refurbished digital PBX handset hardware by some vendors on auction and other business purchasing websites validates the quality of much of the digital PBX equipment that has been manufactured. While some enterprises are eager to change out phones as the next generation becomes available, many find both economic and consistency reasons to maintain handset infrastructure to or beyond its expected life. When is the right time to change out, upgrade, or replace your existing digital PBX infrastructure?

Telecom equipment companies term this the “PBX buy cycle.” As a result of several considerations outlined below, the right time to change out, upgrade, or replace your existing digital PBX infrastructure can vary widely from enterprise to enterprise. The following are the most common factors that contribute to the “PBX buy cycle:”

- **Accounting and Depreciation**—Certain accounting standards and practices in the United States and elsewhere provide depreciation schedules for enterprise office equipment, depending on how the equipment is purchased and financed. Commonly, a PBX is entered into service upon installation or first use; and a schedule is set forth on the depreciation of the equipment over time.

Enterprises should consult tax planners to take depreciation schedules into consideration as a part of the total cost of VoIP migration. If the installation of a new IP-PBX is completed during the current schedule, enterprises may have to accelerate the depreciation of the existing LAN and PBX equipment.

- **Key Event or Outgrowth**—Often, an enterprise makes a major change or upgrade in telecommunications or data communications hardware triggered by a significant event: relocation into a new building, a substantial funding event, a merger, or an IPO. In any case, these events can tax the line and station capacity of the PBX and require an enterprise to purchase a PBX with greater capacity. IP-PBX platforms are software-based and generally have significantly greater capacity than their digital PBX predecessors.
- **Repair**—Digital PBX hardware is complex and changes often. Aside from normal wear and tear, components, cards, and interfaces can fail, just as any other piece of IT gear or office equipment. Although many PBX manufacturers support older PBX hardware with software upgrades and extended warranties, repair of such systems reaches a point of diminishing economic return over time.

When combined with the operational cost savings of an IP-PBX and productivity benefits of application integration and new features, enterprises should consider migrating to an IP-PBX even outside of these events and should attempt to leverage as much of the existing infrastructure and knowledge base as possible.

Secret 8: You can use your digital PBX phones on another vendor’s IP PBX.

Historically, digital PBX and key system infrastructure has not supported interoperability among manufacturers’ platforms. Phones from one PBX manufacturer generally cannot be used on the

PBX platform of another's, and vice versa. In some cases, phones from a single manufacturer cannot be used among different PBX model types.

The reasoning behind this lack of interoperability is relatively simple. Enterprise PBX manufacturers utilize unique signaling between phones on desks and the PBX in the wiring closet, to enable features specific to that model of PBX. Feature sets are used as competitive differentiators from one PBX platform to the next. As such, historically, manufacturers have not been motivated to create open standards to enable interoperability.

The advent of SIP communications in IP-PBXs turns this notion upside down, instead creating an open environment for interoperability among manufacturers, as well as end user devices, whether they be PBX phones, mobile devices, or desktop and laptop computers. SIP is a common standard supported by many IP-PBX, handset, and application developers and manufacturers who are providing a growing set of common features supported across the VoIP platform. Customization can then be focused more directly on the unique needs of the enterprise. This is a positive development for enterprise VoIP buyers, because it encourages competition and increases value by allowing developers to focus on applications and services that enhance the business case for VoIP.

SIP also enables enterprises to use existing PBX phones on a new IP-PBX platform. Because SIP is a common language, digital and analog handset gateways can be utilized to bring PBX phones from a number of different manufacturers onto a single IP-PBX, with tremendous flexibility in programming and customization. This allows enterprises to obtain all the benefits the IP-PBX offers without requiring a new LAN infrastructure, Power over Ethernet, or new IP handsets. The result is an IP telephony deployment that is significantly less expensive and time-consuming than a full Rip and Replace VoIP installation.

Secret 9: The process of a complete Rip and Replace VoIP migration can be disrupting to your business.

Enterprises that have made a change from one PBX to another, either as a result of relocation, growth, or merger, know the process can be time-consuming and disruptive to the operations of the entire enterprise. A full Rip and Replace VoIP migration can be even more disruptive, as additional steps of LAN Assessment, cable and Power over Ethernet upgrades, and new handsets add complexity. The physical disruption of pulling new Cat 5 cable and the station-by-station installation of handsets can also disrupt worker productivity.

In addition, after installation, the training of users on new handsets and features adds cost and time and is often given less than ample consideration in the overall business case.

To maximize the benefits of operational cost expenditure reduction and application integration, time should be invested in business processes that make the enterprise more competitive as a result of the additional flexibility of the IP-PBX.

Secret 10: You can host your IP PBX remotely, and pay much less.

The most radical departure from the digital PBX environment to the IP-PBX environment is the nature of the equipment itself. Digital PBXs are large, complex pieces of equipment hanging on the wall of the phone closet with station cards, line cards, and other connectors that bring together lines from service providers, extensions from users, and other hardware or software for voice mail, call distribution, and so on. In other words, it is an inherently hardware-based system. In contrast, at its core, an IP-PBX is a piece of software that resides on a server. Connections between end user stations and the outside world are routed through gateways, routers, and LAN switches through the IP-PBX server that powers PBX functionality as well as basic services such as voice mail and call distribution.

Because an IP-PBX is essentially software on a server, integrating the VoIP platform into an enterprise's existing web and database applications is more straightforward, thus enabling next generation feature integration between voice and data platforms.

And this brings us to the next question. If an IP-PBX is simply software on a server, can it be hosted at an off-site location and supported by a third party? The answer is a resounding YES; and a growing number of mainstream service providers, Internet Service Providers (ISPs), and an entire new category of entrants offer Hosted IP telephony (or IP Centrex) services not only to small or branch offices, but to large corporations, educational institutions, and healthcare facilities.

Hosted VoIP allows an enterprise to take advantage of all the application, productivity, and cost efficiencies of IP telephony, as well as gain a high level of customization, but with the additional advantage of utilizing an outside party to manage (or "host") the entire platform, much the same as a web site or e-mail server is hosted. In hosted deployments, the IP-PBX server is often maintained in a temperature controlled, managed environment with redundant power and high speed IP connections, thus ensuring a level of availability and survivability an enterprise would normally find too costly to maintain—all for a per month or per user fee.

Hosted IP telephony allows an enterprise to focus on the day-to-day operations of its business, rather than on the installation, implementation, business disruption, and training of a VoIP migration. In addition, IT staff can focus on performance of the LAN infrastructure to support both existing applications and services, as well as the new converged applications and services offered by the Hosted IP telephony provider. Digital and analog handset gateways can be used

to connect existing handset and wiring infrastructure to the Hosted IP service provider, thus making this method of VoIP migration one of the most transparent and cost effective available.

The Conclusion follows on the next page.

Conclusion

Massive marketing budgets and clever messaging have created a perceived conventional wisdom on the most effective strategies for migrating to IP telephony. Many of these strategies have a greater impact on the bottom line of the infrastructure supplier than on the enterprise actually deploying an IP telephony platform. ROI, TCO, and Operational Expenditure analyses aside, Voice over IP has much to offer enterprises both from a productivity and an application integration standpoint. The benefits are real, and they are making enterprises more connected and competitive every day. In addition, system integrators and application developers are finding new ways to converge mission critical applications truly with the voice platform—to improve customer service and response times to employees, suppliers, and partners.

But the offerings can be complex and confusing, and there are often other motivations to selling VoIP infrastructure beyond those that can have the greatest impact on an enterprise. As such, all functional groups expecting to utilize and gain benefit from the VoIP platform should be involved in the process of selecting and deploying it. These groups should recognize that enterprises may already have much of the required infrastructure in place to deploy VoIP quickly and cost effectively, basing investment decisions on the business case within the enterprise rather than on the offering of the equipment manufacturer. Doing so ensures not only a successful migration to IP telephony, but also cost and productivity benefits that can positively affect the enterprises' long-term growth and competitive market positioning.