IP Telephony Can Revolutionize Business Communications

IP Telephony can dramatically improve business communications, but enterprises have chosen to use it for basic telephony functions today. Over time, enterprises must rethink how they use "voice" applications.

The business case for most new IP Telephony systems has revolved around cost savings or the end-of-life of current systems. The result is that most enterprises implementing IP Telephony have performed one-for-one replacements, from equipment and functional perspectives. They have removed their old digital or analog phones and installed IP phones to provide basic dial tone. IP Telephony systems have far greater capabilities and can dramatically change the way business communications takes place.

We believe the radical changes that new IP Telephony systems can provide are too complex for most enterprises (that is, for typical users) to absorb, so they revert to functions and capabilities they are comfortable with. Over time, through tiny incremental steps, they will move forward.

A key enabler to these systems is the new architecture. Unlike today, with voice as a separate infrastructure — that is, separate wires, hardware (PBX) and software — IP Telephony is an application that resides on the converged data network. Placing all of its functionality in software reduces the complexity required to deliver new services, functions or capabilities. The reality is that almost all capabilities the new IP Telephony applications will deliver could have been implemented on current PBX systems — however, it would have been very costly and complicated to implement. Such is the challenge of providing value at a reasonable cost and complexity.

Perhaps the best examples are the call center and the contact center. Through the use of computer-telephony integration, interactive voice response, automatic call distributors, speech recognition and a complex integration process, enterprises have been able to provide sophisticated, integrated voice/data applications that enable them to deal efficiently with callers.
cost of these systems, however, was more than $2,000 to $3,000 per seat, which limited the deployments to a small group of users with job functions that focused on continually using the equipment (to maximize its return on investment). In the IP Telephony world, all of these telephony functions would be moved into software, which will dramatically change the price equation for these capabilities.

In Figure 1, the shaded area shows the applications that we believe will succeed.

Figure 1
The Value of IP Telephony

There is a direct relationship between the value an application will provide to an enterprise and the amount of effort the enterprise must expend in implementing it. Using great effort for low-value applications is clearly a poor strategy. For example, instant messaging has flourished because it required little investment from a technical (download a software client), individual (easy user interface) or management (usually no business case is required) perspective — yet it has provided significant value to the individual. As we look through the versions of IP Telephony and the capabilities they will provide, there is a constantly increasing organizational impact that will drive or hinder the implementations, based on the value their capabilities will provide. Some of the typical voice applications that will be included in v.1 of IP Telephony systems are toll bypass, branch office functions and all capabilities that were

Examples:
• V.1 Apps. — IP/PBX, basic call functions, branch offices, toll bypass
• V.2 Apps. — call center functions, messaging, administration tools, reports
• V.3 Apps. — advanced unified communications, application integration functions
previously on PBXs. The v.2 applications will include contact center suites, messaging administration and reporting tools. In v.3, unified communications and business application integration will occur.

The call center example is easy for most enterprises to envision, but still it is a complex and longer-term outcome of the move to IP Telephony. Most enterprise implementations will be more focused on short-term, easy-to-implement-and-cost-justify capabilities. The challenge will be to balance the functional improvements against the complexity of integrating with current systems, and the complexity of user training. If the new capabilities are too difficult to use, then users won’t utilize them — no matter how much value they provide.

However, most early adopters have insisted that the new IP phones function exactly the same as the analog or digital phones they are replacing. Thus, if the enterprise is doing a one-for-one swap of phone systems, then the business case must be made on cost savings — however, there remain many untapped capabilities that the enterprise must start using. The primary reason why enterprises fall back to cost-justifying new systems, based on savings, is because the value equation associated with new capabilities is often difficult to quantify, and it is different from enterprise to enterprise, depending on how each does business. This makes "savings" a better-understood and easier justification.

How should enterprises unlock the full potential of IP Telephony systems without radically transforming their users? We believe it will occur in small steps from "power users," who will permeate their experiences and learned knowledge throughout the organization.

The enterprise must not overwhelm its users with the new capabilities. Instead, providing these capabilities to users over time, against the backdrop of current functionality, will enable users to move at their own pace.

Power users will be the first to make the leap, as soon as the infrastructure is in place and they discover how the new functions work. Their subsequent demonstrations and training will disseminate through the enterprise — this is, the classic "diffusion of technology" model.

As the new capabilities become ingrained, they will change the way enterprises communicate. Each enterprise will use these capabilities differently, and will derive different kinds of value from each. For example:
Enterprises will have the ability to collaborate in real time via voice, video, chat, "whiteboarding" (data) or a combination of these as easily as they collaborate via voice today. This will change collaboration processes, travel for meetings and result in greater participation.

Presence applications are already affecting business communications as a stand-alone process. Coupling voice, collaboration and data into presence applications will add even greater value to functions that are "time affected" in the real-time enterprise.

Unified communications will enable users to move between voice and data interfaces to communicate with others, regardless of the mode of communication.

As voice becomes an application, its application programming interfaces can be embedded in business applications (for example, enterprise resource planning and supply chain management) so that voice "transactions" can occur as easily as data transactions do today.

**Bottom Line:** We don’t expect enterprises to make huge leaps overnight toward totally new communication processes with IP Telephony. This can be dangerous and result in user revolt. Small trial groups of motivated users (that is, "power users") who are willing to experiment and learn will share their positive and negative experiences — essentially acting as advocates to promote the new processes throughout the enterprise. We advise enterprises to understand the potential, prepare the infrastructure, think beyond a one-for-one replacement and slowly train the staff on the new capabilities. Most of all, however, enterprises should be innovators, understanding the capabilities that will benefit their businesses the most, as well as the potential endgame for their businesses.