Voice over IP and Productivity

How IP Telephony Enables Experts and Support Staff to Be Seemingly Everywhere at Once

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Productivity on the Rise

In the middle of last year, productivity increased at rates characterized as "breathtaking." Economists had already documented broad productivity growth in the services sector rivaling that in 1995, ending decades of stagnation.

Experts agreed about the reason for the productivity pickup: IT infrastructure investments are starting to pay off and deliver to the people-intensive services sector what electrical power and factory automation had done for manufacturing long ago.

This momentum has carried over to the Internet Protocol (IP) telephony market, where early adopters of Voice over IP (VoIP) will tell you, "You haven't seen anything yet."

When voice is running over IP networks, it gains the location independence of data. Suddenly people are connected, independent of the phones they happen to be near at the moment. Virtualization becomes a reality, as specialists and support staff can be seemingly everywhere at once, providing a "local" touch and enabling organizations to optimize their human resources.

Traditional telephony often has the opposite effect on productivity. According to Sage Research, nearly three-fourths of business calls end up in voice mail, and the average employee wastes the equivalent of a couple of days each month playing telephone tag. By implementing a good VoIP system, organizations are recapturing a big chunk of this time and improving communication among employees and with partners and customers.

IT Staff: Productivity Gains Begin At Home

When an organization embraces IP telephony, the productivity gains for its IT staff are immediate and measurable. Suddenly, there is the potential for a single voice system distributed across all locations -- one that can be administered and managed remotely from a Web-based interface by in-house staff.

OneUnited Bank quickly discovered this after unifying voice communication across its nationwide branches under one VoIP umbrella. A motley collection of disparate, incompatible and often obsolete phone systems -- a common result of almost any growth-by-acquisition strategy -- was discarded, along with expensive Centrex service.

The multi-site network is now managed as one system under a single management interface that controls the switches, voicemail system, auto-attendants and ACDs. After about 10 hours of training, an NT administrator who knew nothing about phones could be entrusted with the entire network, replacing a whole series of local service contracts.

Such outside service providers are expensive, and can take days or even weeks to process orders for simple moves, adds and changes (MACs). With a distributed VoIP system, MACs can be handled in minutes with a few mouse clicks by the in-house staff, often in much less time than it used to take to interface with the service providers.

This productivity gain spills over into the broader employee base by greatly facilitating "recurrent workspace relocation." In our increasingly mobile society, the average knowledge worker is moved three times a year, and a lot of productivity is lost when newly moved or newly hired employees have to wait days or weeks to get a fully functioning phone line.

A true VoIP system is inherently distributed, leveraging the peer-to-peer architecture of IP. The ideal voice platform is highly flexible and yet offers network professionals an almost plug-and-play simplicity that makes it easy to bring up new sites or alter existing ones.

The Leveraging Power of Location Independence

A distributed architecture enables the sharing of enterprise resources -- including specialized knowledge workers -- across geographically separated sites. OneUnited Bank was able to reduce staffing requirements for answering phones in its branches by three full-time equivalents.

Similarly, IP telephony enabled Muzak LLC, the world's leading provider of music and messaging for commercial and retail environments, to increase the number of calls that can be handled by auto-attendants. A team of six receptionists was reduced to 1.5.

When a VoIP system incorporates "presence" intelligence, receptionists can very easily check the status of people before transferring calls to them. Consequently, fewer callers end up getting bounced from extension to extension and leaving multiple voice mail messages to which employees then must respond. Paging systems at the various locations can be tied into the IP voice system, giving receptionists another option for reaching key people.

A good VoIP system integrates easily with data applications and enterprise databases, providing receptionists and administrative assistants with information that takes caller ID to a whole new level. They can monitor incoming calls and make sure important people get special treatment.

Experts Can Be Everywhere

The productivity benefits of IP telephony's location independence extend far beyond receptionists and other support staff.

Regional financial institutions that can't afford to staff each location with investment counselors and other experts can now let these individuals float from branch to branch and appear to be everywhere. Their extensions and full set of desktop phone features automatically follow them wherever they sit down and log in to the enterprise network.

"The investment reps are just blown away by it," says Drew Lawrence, IT director for Summit Credit Union. "No one needs to know where they are. Callers just dial their four-digit extension or spell their name, and the calls are routed to them."

Human expertise comprises an even bigger proportion of the total resources available to professional-services firms, so they are prime candidates for VoIP. The same individual can be the "local" project manager for widely dispersed clients. A virtual presence can be established near each client. The client dials a local number, and the call is automatically routed to the project manager's desk -- wherever that might be.

Sometimes an actual physical presence must be established, such as a temporary facility at a construction site. With a distributed VoIP infrastructure, the enterprise voice network can be extended to these new locations very quickly, as long as a broadband connection is available. For example, an IP-enabled temporary office was quickly created for the president of Anchorage-based Lynden Air Cargo when he had to spend three weeks in Seattle receiving chemotherapy.

IP phones make it very easy to "hotel" visiting employees. The phone extensions are associated with people instead of the physical telephone devices. The visitors just log in, and their calls start ringing at the temporary desk.

Significant advances in soft phone technology are now extending location independence even further. Mobile employees with laptop can now carry an enterprise-class phone with them and use it from a branch office, a temporary facility, hotel rooms, hotspots or home. Provided they have an adequate Internet connection, they simply log in over the enterprise VPN, and the voice system recognizes them and starts routing calls accordingly.

A native, fully distributed IP voice system provides complete feature transparency among sites. Calls can be picked up, parked, transferred and conferenced across locations as if everyone were in the same building, so employees can be fully productive from anywhere.

Saving Time With Unified Communication

Unified communication is a key benefit of IP telephony, and can boost productivity for employees at all levels. The ideal IP voice system's primary interface is an intuitive personal call manager screen, which is integrated tightly with Outlook. By typing a few characters of a person's name into the call manager, they can call people from their Outlook contacts. They can also visually scroll through voice mail messages in their e-mail inbox and decide which ones merit immediate response.

Unified communications can also be integrated with converged conferencing, allowing users to instantly share a document with anyone at any time by providing participants with a simple URL.

Measuring Productivity Gains

While economists have been able to quantify productivity growth across entire industry sectors, individual companies still struggle to come up with their own numbers. However, they have little doubt about the productivity impact that IP telephony is having.

"I can't measure the productivity increases; I just know they are there," asserts one business executive. Others take it a step farther and observe that traditional phone systems are now limiting productivity.

Two-thirds of the VoIP users surveyed last year by Sage Research said IP telephony was giving their companies a competitive edge. This finding was confirmed by Forrester Research, which reports that early adopters see the potential VoIP has for streamlining business processes.

The simple truth is that productivity gains can be achieved much more easily -- and sometimes even effortlessly - with IP telephony. The optimal VoIP system is designed from the ground up to integrate with the data infrastructure and exploit all the capabilities of IP.


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