The Hidden Benefits of VoIP Revealed

Less than a decade ago, in the "bad old days" of telephony , plain old telephone service (POTS) was the standard for both consumer and business telecommunications. POTS—an analog, voice-grade telephone service—runs on the public switched telephone network (PSTN), a global network of public, circuit-switched telephone networks. Available since the late 19th century, POTS remained largely unchanged for decades, and is still in widespread use by both consumers and businesses.

But, as the market began to change in the mid-2000s with advent of IP telephony, a more versatile and less expensive new technology was poised to disrupt the market landscape. VoIP (Voice over Internet Protocol) relies on existing broadband Internet access, as users make and receive telephone calls in much the same way as they did via PSTN. The difference with IP telephony centers on the fact that calls travel on the Internet, rather than the PSTN.

The appeal of VoIP is straightforward: By converging voice and data into a single, unified network, businesses can lower costs and increase productivity. This scaled-down infrastructure "is easier and less expensive to maintain," CDW's VoIP and Beyond report explains. "Furthermore, migration can be gradual without abandoning legacy systems. While VoIP offers benefits to businesses, the technology comes with a promise to alter the way businesses do business."

VoIP's Secret Weapons

More than just a cheaper replacement for legacy voice systems, VoIP moves voice out of its traditional IT silo in the enterprise environment. And with that move comes the opportunity for businesses to grow and expand in ways that traditional voice solutions never allowed. As CDW explains: "Now [VoIP is] becoming another application on the network and therein lies a large number of efficiencies." Hidden benefits of VoIP include the "ability to provide rich media services. …and with proper IP connectivity, VoIP offers number mobility with a phone device capable of using the same number virtually anywhere." And perhaps the most potent arrow in VoIP's quiver is its ability to enable Unified Communications (UC), which in turn will feed the growing popularity of the virtual workplaces.

Reaping the Rewards of Rich Media

A legacy phone system's strongpoint is the delivery of voice and fax service. However, "the demand of users is much higher than that, as shown in today's rich media communications through the Internet," says Enterprise Networking Planet's Patrick Park. "People check out friends' presence (such as online, offline, busy), send instant messages, make voice or video calls, transfer images, and so on." VoIP enables rich media service, integrating with other protocols and applications. Among the rich media benefits are:

Presence: Presence (also known as telepresence) will be "the dial tone of the future," Blair Pleasant, co-founder of UCStrategies.com says. Presence provides real-time notification of users' current availability and ability to communicate. Pleasant explains the mechanics of presence: "Servers gather presence information from various sources and provide unified presence information to end-users or applications."

Unified messaging (UM): UM integrates voice, fax, and email messages with message notification. UM provides users with access to their messages, anywhere, anytime, from any device. With UM's store-and-forward capabilities, "most UM products add a variety of advanced call and message management functions, including desktop call-screening of inbound calls, find me/follow me, live reply or call return, and cross-media messaging. New presence capabilities mean that the need for UM systems to act as answering machines is being reduced, and the value of UM is moving toward enhanced, real-time connectivity with individuals," Pleasant says.

Speech access and personal assistant: Personal assistants (or virtual assistants) allow users, via speech commands, "to access their inbox, calendar, directory and so on," Pleasant explains. "Personal assistants provide intelligent screening and filtering of messages and let users navigate their schedule, calendar, contacts, outbound dialing and so on, in addition to their UM system."

Business process integration (BPI): By integrating with business processes and workflow applications, UC reduces the "human latency" that stalls business processes in need of human input or communication. "In many business processes today," Pleasant explains, "work comes to a standstill until someone can provide information needed to proceed to the next step. UC can reduce this delay by contacting the next person in a sequence of steps, or by initiating an ad hoc meeting or conference call to settle an issue. By communication- or voice-enabling business processes and applications, communications can be initiated within the application, making it easier to notify and interact with others to resolve a problem."

Back-office applications such as customer relationship management (CRM), enterprise resource planning (ERP), sales force automation (SFA), and supply chain management (SCM) are some of the applications that can be UC-enabled. For example, businesses can replicate CRM by using the number from an incoming customer call to identify the caller and then look up the customer's history. Thus, an agent can answer a call with all needed customer information on his or her screen.

BPI can also, for example, enable someone reviewing a document or spreadsheet to contact the document's author when additional information is needed. By mousing over the author's name, the reviewer can check the author's presence status, then initiate a click-to-call conversation.

A manufacturing exception system, for example, can detect an issue, escalate the situation as needed, then notify the appropriate contacts via any communication mode. Responsible parties can be brought into a conference call to resolve the issue immediately.

Road Warriors Call the Shots

As a fixture of modern life, smartphones play an important role in both personal and organizational productivity. Staffers today "take it for granted that they will be able to have a conversation with anyone at any time, no matter where they happen to be at the moment," according to CDW. Mobile VoIP is also getting a big push from the Bring Your Own Device (BYOD) trend. Workers are demanding advanced enterprise VoIP services for their smartphones and tablets as well as video and collaboration functionality, regardless of whether those devices are corporate-issued or personally owned.

"While so far, VoIP has been driven largely by the likes of cable companies that want to disrupt the incumbent phone companies, the next big VoIP boost is going to come from mobile [VoIP]," according to Om Malik, executive editor of the GigaOM technology blog.

In-Stat backs up Malik's sentiment, estimating that, by the end of 2013, mobile VoIP users will number 288 million. In its report, "Mobile VoIP—Transforming the Future of Wireless Voice," In-Stat projects that more than half of these users will be associated with online mobile VoIP providers; less than one-third will utilize mobile VoIP with 3G MVNOs or mobile operators; and 11 percent will engage WiMAX/LTE operators.

Helping to drive adoption will be mobile VoIP dual-mode handsets (WiFi plus cellular) with well over 400 million units projected to be shipped in 2013. "This will enable a lot of people to use VoIP over WiFi, which will guarantee a great audio quality and a faster connection," says Andrei Piftor, communications manager at Nimbuzz. "All the technological improvements will make it more and more natural for everybody to use mobile VoIP rather than [to make] a carrier call."

UC Brings It All Together

Unlike most other technologies, Unified Communications (UC) is not a specific solution per se, but a strategy enabled by various products that helps organizations to collaborate and communicate more effectively and efficiently. By leveraging VoIP-enabled UC technologies, businesses can boost employee interchange and help optimize business processes.

Pleasant explains is succinctly: "UC integrates real-time and non-real-time communications with business processes and requirements based on presence capabilities, presenting a consistent unified user interface and user experience across multiple devices and media types. … UC enables people to connect, communicate, and collaborate seamlessly to improve business agility and results."

UC enables conferencing and collaboration, which includes audio-, video- and Web conferencing, as well as capabilities such as shared workspaces, whiteboarding, file-sharing, and document-sharing. Among the technologies in the collaborative portfolio, Pleasant sees Web conferencing as the fastest-growing in popularity. Web conferencing brings collaboration to the desktop via a Web browser and an Internet connection, "allowing participants to view presentations and other documents while participating in a real-time conference. Voice communications can take place over the Internet or through a separate audio conferencing bridge. Another collaboration component is shared workspaces, which enable participants to view, share, edit and save documents and files."

UC in the Real World: Imagine arriving at the office each morning and taking care of all of your emails, voicemails, and other communications in a fraction of the time you spend responding and reaching out now. Picture yourself connecting with colleagues, customers, and partners when and how it's most convenient for you. Imagine how much of your workday you could salvage from the many interruptions that stanch your productivity, so you could spend the bulk of your time in the office getting actual work done. Now picture a strategy that not only helps you achieve all this, but also enables you to collaborate faster, more effectively, and more efficiently with your staff and customers. These are the potential benefits of UC.

As Technet's Microsoft Small Business blog explains, UC adoption allows you to "stop being interrupted and instantly bag some increased productivity." Being in control of your communications enables you to handle all your communications all at once, at a time that suits you.

This is beneficial in two ways: "Firstly, you can bundle up all those calls, emails and texts and deal with them in one go, which is handy," according to the blog. "But, more importantly, UC uses the concept of 'presence.' If you've ever used Instant Messenger or Facebook Chat, you've already used presence. With one or more customizable presence options ('online,' 'do not disturb,' 'be right back,' etc.), you can inform contacts of your availability before they phone or write."

Although it sounds somewhat counterintuitive, presence allows clients, staff, and partners to feel more connected to you, even when you are displaying your virtual "do not disturb" sign. When others gain insight to your availability, they can reach out knowing when you are receptive, instead of calling you blindly and hoping to get through.

The Virtual Workplace: Tomorrow's Office, Today

Companies (especially SMBs) with employees who work from home can now appear as authoritative as—and compete with—the largest multinational enterprises, while affording teleworkers anonymity. "On the occasions when you take calls at home, you might prefer customers not to have your home phone number. By giving out only your presence details (i.e. a name) or a mobile which cascades down to a home phone number, there's no need to give out home/personal details at all," according to Technet.

Greg Brashier, COO of hosted PBX provider Virtual PBX, sees the growing trend of virtual workers fueling the move toward VoIP solutions. His company surveyed more than 600 SMB owners and employees about their use of virtual offices, and found that more than 60 percent of respondents work from a virtual office almost all the time, while another 27 percent work two to 10 days per month outside the office. Fifty-seven percent of survey-takers indicated that half or more of their workforce uses a virtual office during a typical month.

The survey revealed that today's virtual worker is tethered to his or her cell phone, with 87 percent of respondents saying they use their mobile devices for business communications. Also popular are VoIP phone lines, used by 25 percent; and computer-based VoIP soft phones, used by 20 percent of respondents. As Brashier interprets the data, this means vendors will move toward support for a portfolio of devices that includes VoIP phones, mobile devices, traditional analog phones, or a blend of all three.

Conclusion

As VoIP extends its reach into businesses, enterprises and small-to-midsize businesses (SMBs) will benefit from the cost savings and simplified management inherent in the technology. The days of basic, old-fashioned voice/fax capabilities are long gone, now that IP-powered telephony has moved to the forefront. Today, companies can reap the well-known rewards of VoIP, and gain competitive advantage with VoIP's "secret weapons":

- Rich Media
- Mobility
- Unified Communications
- Virtual Workplaces