Over the past decade, network technology has advanced and converged to the point where it is now not only possible but also cost effective to integrate communication systems. Using an IP backbone, today’s UC technology platforms can converge a company’s voice, teleconferencing, video, video conferencing, e-mail and instant messaging (IM).

“Unified communications reins in the complexity of all the different communication methods,” says Info-Tech Research Group senior analyst Jayanth Angl. “It also simplifies the user experience.”

This convergence of communication systems into one overarching framework offers benefits beyond minimizing the number of separate systems the IT department must manage. And that in itself is a huge advantage.

The move to the digital realm allows businesses to impose rules-based behavior onto their communications. This makes it possible to determine electronically not only who is at work and who is not, but who is at their desk, and whether they are on the phone or working at their computer or too busy to be interrupted.

Additionally, UC provides a mechanism for routing information automatically to the people who most likely can act on it. And, of course, it allows teams scattered around the globe to work face to face, minimizing miscommunication and increasing productivity.

It’s certainly true that converged networks in and of themselves can deliver significant cost and operational efficiencies. And it’s the conferencing and collaboration applications that run on these converged networks that are providing organizations with significant bang for their buck.

**What Is Unified Communications?**

There is no single, universally accepted definition of “unified communications.” Because there are so many different communication mediums and so many ways to connect them to one another, manufacturers and vendors tend to define unified communications according to the particular equipment and services they offer.

But more crucial to understand is that there’s no single one-size-fits-all tool that you buy or install to achieve UC, says Mark Roberts, vice president of partner marketing for Polycom. Instead, unified communications reflects more an approach to the use of communications technologies than a particular set of systems.

“But it’s the conferencing and collaboration applications that run on these converged networks that are providing organizations with significant bang for their buck.”

Unified communications, then, is about giving employees access to exactly the technologies they need to connect with one another and with those outside the organization, at exactly the moment they need it. And it allows staffers to manage these interactions in real time — as if they were in all places at once.

In many cases, firms will start with IP telephony as a base. They will then add a layer of video technologies, instant messaging, mobile phone applications, teleconferencing and other Internet-based communications strategies atop that Voice over IP (VoIP) foundation.

“IP telephony is a first layer of that definition,” says Laurent Dinard, senior product manager for collaboration software at ShoreTel. “UC allows functions that go beyond that expectation to enhance user connectivity, to better collaborate and to speed up the decision-making process — and possibly a layer of features that enable mobile users to continue to be efficient while they move from one place to another.”
Building Bridges

Chances are your company is already using several of the technologies that make up a UC system. According to a report by the Aberdeen Group, two-thirds of businesses are utilizing five or more UC-constituent applications, such as IP telephony, software-based voice communications, IM, voicemail, presence, telework and video conferencing.

“Most companies tend to have islands of disparate communication systems scattered throughout their organization,” Roberts says. “So the conversation isn’t really about implementing unified communications, it’s about connecting those islands.”

How companies bridge their disparate communication services depends a great deal on each company, says Michael Helmbrecht, director of product management at LifeSize Communications.

“You have to think about the objectives you’re trying to achieve: Who are your users? What are you trying to do?” he adds. “Especially with video and voice applications, you need to think about the quality of experience, too. If the quality is there, if it is immersive and feels real, users will want to use it.”

That’s important because UC is not just about installing hardware; it’s about connecting people in a way that feels natural to them. “UC needs to be tied into the way an organization already communicates,” Helmbrecht adds.

It’s an art of sorts to meld workplace dynamics seamlessly with easy-to-use tools, he says. The technology should disappear in essence, Helmbrecht points out, which means finessing both processes and IT until the UC service mix is just right.

Conferencing and Collaboration

Organizations of all sizes are looking for ways to streamline processes, eliminate redundancies and cut costs. UC conferencing and collaboration solutions remove physical barriers by providing users a more effective and productive means of interacting with each other, partners and customers.

Conferencing and collaboration applications in a UC environment provide a more effective and productive means of interacting with others. The new infrastructure opens up a whole new world of productivity, particularly when it comes to audio, web and video conferencing.

Of the three conferencing technologies, audio conferencing is the most basic way of enabling staff to conduct meetings more conveniently and efficiently. It offers one of the easiest ways to communicate with three or more participants, in different locations, at the same time.

A step up from audio conferencing is web conferencing. This solution is designed to conduct presentations or meetings over the web, also known as webinars. Participants typically sit at their own computers and are connected with other participants. Web conferences can include various multimedia components, including audio, document sharing and IM connectivity.

Video conferencing provides organizations with the most powerful means of communication. Whether it’s a desktop video chat through a webcam or a high-level board meeting conducted with a dedicated telepresence system, video conferencing can help organizations improve productivity, extend a company’s reach, reduce travel expenses, shorten sales cycles and enhance working relationships.

One powerful way that UC increases productivity is through the power of presence. The ultimate form of presence is face-to-face communication — being literally present.

UC simulates this experience in various ways, ranging from telepresence — real-time, high-definition streaming video and audio that brings individuals or whole rooms of people together, regardless of distance — to more simple means of knowing where someone is and what they are doing.

Increased presence engenders greater trust and intimacy, Helmbrecht notes. It’s hard to overestimate the significance of being able to look into the eyes of the person with whom you’re doing business.

Presence also makes for more effective transfer of information. Video conference attendees can share slides and documents, see each other’s physical gestures and gauge the response of the person or people with whom they are speaking. “Telepresence compresses the distance between you and an expert,” Helmbrecht says.
Historically, the three types of conferencing have been deployed in separate infrastructure silos. Users had to decide in advance which conferencing method (or combination of methods) to use.

The user interfaces were different and confusing for each method, and they usually required separate access IDs and passwords. Also complicating matters, separate, often specialized, equipment was needed for video conferencing. This environment restricted the use of the most appropriate format and also added significant staff and administration cost.

UC has effectively eliminated this siloed approach. Depending on a company’s needs, each of these conferencing solutions can be employed to great advantage over a UC network.

**Better Work Through Communication**

When implemented in a way that feels natural to users, UC will start showing benefits right away, Polycom’s Roberts says. “Companies are used to measuring return on investment over several years,” he explains. “With unified communications, payback happens within 12 months.”

Some of that payback is financial, of course, but not all of it. “These systems are not incredibly expensive,” Roberts continues. “It only takes the cost of a couple of big business trips to pay for them” — as evidenced by an American Express study that found the average domestic business trip costs over a thousand dollars per person (international trips were four times as much).

Unified systems are also easier for IT departments to manage than several discrete systems. This can mean lower costs in worker time, equipment maintenance and lost productivity.

But UC’s real return on investment is less measurable — and maybe more important — than just the direct financial savings. Integrated systems vastly increase the opportunities for collaboration and the speed with which work gets done.

“UC enables workers to collaborate in a way that achieves more in the same or less time,” says LifeSize’s Helmbrecht. For example, video conferencing “drives higher engagement, people focus instead of multitasking. It’s an immersive, realistic experience and generally leads to faster decision-making and more effective communication.”

Of course, not all of the benefits of UC are quite so esoteric. UC also simplifies daily interactions, making employees whose jobs require communication more productive.

“For a sales person in the field, being able to communicate in any form is absolutely vital,” says ShoreTel’s Dinard. “You have to handle questions from customers, receive quotes from your home office and you may have questions for their product manager.”

If an employee has to do these things by phone, most of the time that means leaving and following up on voicemail messages. That’s exactly what you don’t want.

“With unified communications, you can flag the phones of the people you need to speak with so you get notified when they’re available to take your call,” Dinard says. “Or you can communicate via IM while you’re handling another phone call.”

For mobile workers such as outside sales agents, mobility features are crucial. To ensure maximum efficiency, smartphone-equipped workers can travel armed with access to the same resources as their deskbound colleagues.

**Planning and Implementing UC**

Implementing UC begins with an assessment of existing assets and how they are being used. Although heartier voice or video applications might require the upgrade of some infrastructure and network components to support greater bandwidth, often a great deal of existing infrastructure can be integrated into the new system.

Typically, the decision to move toward unified communications often comes when the maintenance contract on an existing telephone private branch exchange (PBX) system is up for renewal.
“Renewing the contract on a system installed five or more years ago may not make sense,” says Dinard, “because you actually may save money right away by switching to IP telephony. In fact, the money spent to maintain a system invented a couple of years ago is more than if you just move to a new system — and often can justify the installation of more advanced systems.”

Aside from budgetary and infrastructure concerns, though, it’s important to keep in mind the behavioral aspects of your company’s workforce and the work it has to get done. Factors to consider include:

- Problems that need solutions: If decision-making is too slow, for example, a video application where team members can collaborate face to face might speed decision turnaround.

- Distance between offices: A company with offices spread across the country — or the world — will benefit from tools like room-to-room video conferencing that let teams get the most done in the two- or three-hour overlap between the end of the workday in one time zone and the beginning of the day in another.

- Age of the workforce: Young workers (under 30) tend to be far more comfortable with immediate, text-based communications than older employees, who in turn are often more comfortable working over the phone than their younger counterparts.

Done well, unified communications has the potential to vastly improve employees’ productivity and interaction, while minimizing costs and simplifying IT managers’ lives. “This is one of the first times that the hype is matched by the product,” says Roberts. “It’s that good.”

Five VoIP and UC Best Practices

1. Time your implementation to replace aging equipment. To maximize IT spending and staff time, many IT departments time a Voice over Internet Protocol (VoIP) implementation to coincide with a network upgrade or replacement of a Private Branch Exchange (PBX).

2. Consider your need for outside expertise. VoIP may require a major infrastructure upgrade. If your staff doesn’t have the skill set, consider hiring a third-party service provider to perform a network assessment and installation.

3. Migrate to new phone numbers, if possible. It will speed up the VoIP implementation.

4. Train your users. To reduce help-desk requests, familiarize users with the new IP phones. After implementation, make sure experienced telecommunications technicians are onsite to troubleshoot and answer questions.

5. Roll out unified communications in phases. Don’t introduce 10 new features simultaneously and expect users to pick them up immediately. Give users time to get accustomed to VoIP, then introduce another tool, such as instant messaging.

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