ROADMAP TO UC PROJECTS THAT REAP REWARDS

Unified communications offers tremendous potential for business benefit, but IT managers have often struggled with identifying tangible ROI. This e-book provides a roadmap for building a UC business case and offers practical strategies for implementing short-term projects with long-term payback, establishing metrics for ROI evaluation, and setting the stage for adoption of richer collaboration capabilities in the future. **BY IRWIN LAZAR**

GETTING STARTED ON THE ROAD TO UC

PLANNING FOR UNIFIED COMMUNICATIONS DEPENDS FIRST ON UNDERSTANDING YOUR BUSINESS AND WHAT YOU WANT TO ACHIEVE, THEN MAPPING THAT TO WHAT UC CAN DO FOR YOU. THAT REQUIRES A CLEAR PICTURE OF WHAT UC INVOLVES AND CAN ACCOMPLISH.

UNIFIED COMMUNICATIONS (UC) has been *the* buzzword in enterprise collaboration over the last year or two as vendors, service providers and IT managers have viewed UC as a way of removing stumbling blocks on the road to effective collaboration. But UC has been a tough sell for many enterprise IT leaders who struggle to build a tangible business case to justify investment, especially in light of the current business climate, in which Nemertes Research finds that projects require a positive ROI of 12 to 36 months to gain funding (with heavy emphasis on the "12 months" side of

the equation).

Thus the goal of this e-book is to provide IT leaders with a common framework for UC discussion, an overview of the tools they need to identify UC use-cases with tangible benefit, approaches to quantify specific benefits of UC adoption, and ways to plan for emerging technologies that add value to the UC architecture.

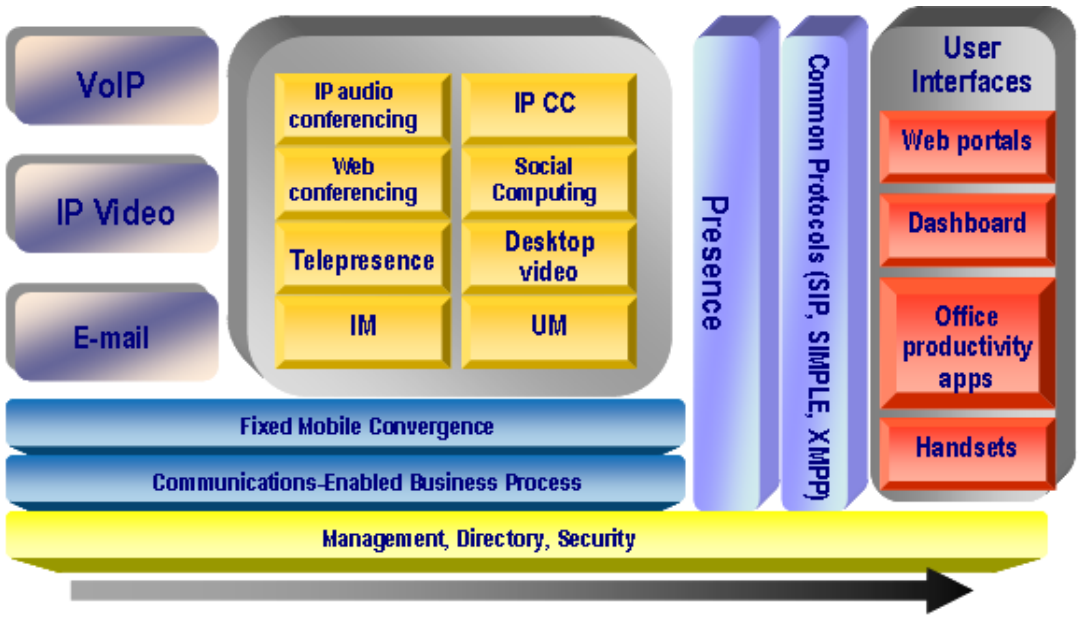
Before delving too deeply into the "why" of UC, it's worth spending a few minutes looking at the "what." Despite (and perhaps as a result of) vendor marketing efforts to boost UC awareness, we at Nemertes Research find a great deal of confusion concerning exactly what is, and what is not, UC.

We find two key goals of unified communications:

■ **To integrate disparate communications applications** such as voice, video, conferencing and messaging applications into a common set of user interfaces accessible across fixed and mobile devices.

The Components of UC

The diagram illustrates the many components of UC and how they fit together to construct a unified communications system.



SOURCE: NEMERTES RESEARCH

■ **To integrate those applications into business processes**, giving individuals and teams the tools they need to communicate within the constraints of specific operational requirements. The extensible nature of UC allows IT architects to embed communication and collaboration capabilities throughout the suite of business process applications.

The Nemertes UC architectural model defines the following components:

■ **UC applications:** The services that employees can use to communicate and collaborate, both internally and externally. Most organizations start with voice over IP (VoIP), video and email, building in additional applications such as video, unified messaging, social networking and Web conferencing as they evolve their deployments.

■ **Presence:** The "glue" of unified communications, enabling applications to share information about user status and availability.

■ **Common protocols:** The standards for linking various services to one another, as well as to external applications via gateways or application interfaces.

■ **User interfaces:** The methods that provide access to various UC services. Interfaces may be standalone desktop or mobile clients (i.e., a real-time communication dashboard such as IBM Lotus Sametime, Microsoft Office Communicator, or other client) or they could provide UC services access via a portal, office application (such as Microsoft Office or IBM Lotus Notes) or through custom-written applications designed for a specific organization, vertical or job function.

The key goals of UC are to integrate disparate communications applications and to further integrate those applications into business processes.

■ **Gateways:** To external systems, such as legacy PBXs, public instant messaging, external wireless networks, or business applications via Web services or service-oriented architecture (SOA) frameworks.

■ **Management, directory and security services:** The core infrastructure to support UC. This includes security, network and performance management and optimization, along with directory and identity services. ■

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APPS THAT YIELD BENEFITS NOW

IN TODAY'S ECONOMICALLY CHALLENGING ENVIRONMENT, MOST ORGANIZATIONS ARE OPTING TO START WITH PROJECTS THAT PRODUCE A RELATIVELY LARGE AND QUICK PAYBACK FOR THE INVESTMENTS THEY REQUIRE. WE DISCUSS SEVERAL SHORT-TERM UC PROJECTS AND THE BENEFIT VERSUS COST THAT THEY DELIVER.

IN LIGHT OF the current recession, IT managers are struggling to create business cases to justify UC adoption. Business benefits for UC are often difficult to quantify. Arguments such as "improved worker productivity" don't resonate with enterprise IT or line-of-business managers looking to reduce bottom-line expenses or increase top-line revenue. Instead, IT leaders look primarily to short-term ROI (12 to 36 months) to justify any new spending. Creating a successful business case for UC applications therefore requires identifying ways for UC to reduce operational spending as

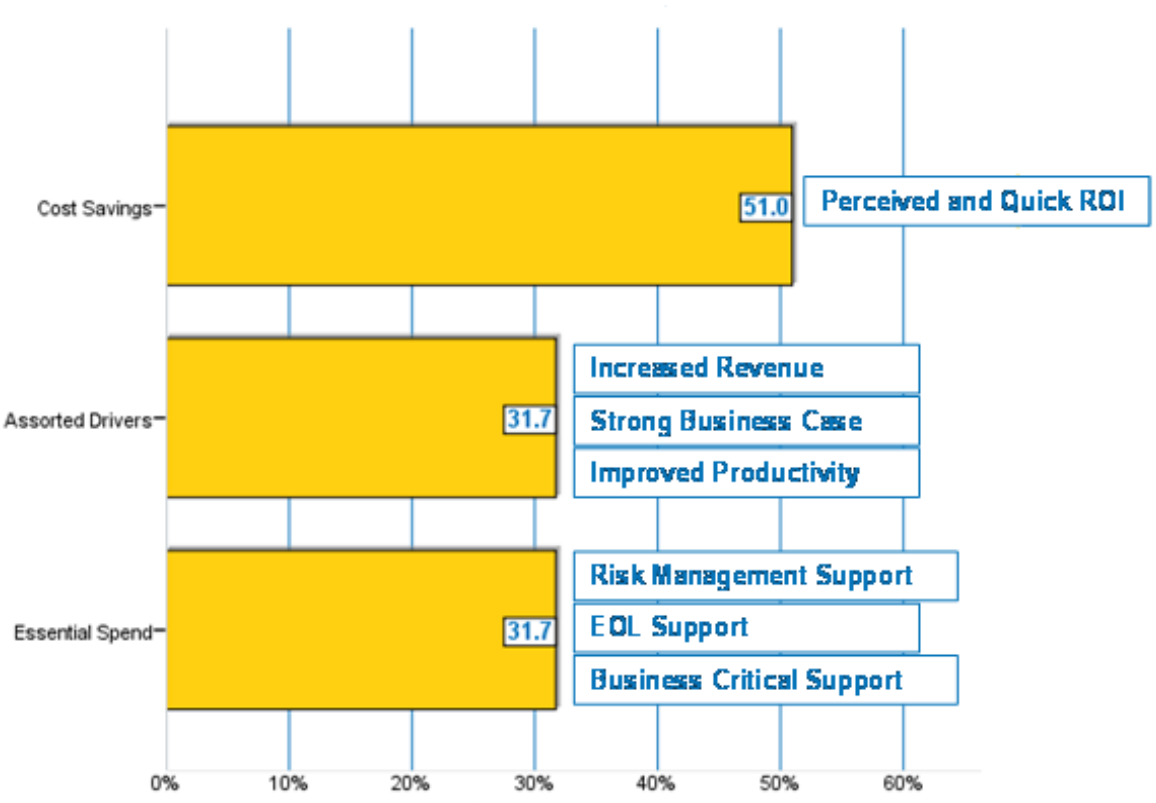
well as opportunities to use UC to drive either top-line revenue growth or bottom-line cost savings by improving business processes. The second approach requires a standardized way of measuring the value that UC brings to the organization.

Using UC to drive cost savings out of current operations requires a detailed analysis of telecom spending patterns combined with capabilities of UC applications to discover opportunities for savings. Through our interviews with hundreds of IT leaders, Nemertes has uncovered numerous examples of using UC to drive down operational spending. These include:

- **In-house conferencing systems:**

What Compels You To Make an IT Purchase?

Today's IT departments are very careful about making investments, and more than half of our research sample reported the most important reason for a purchase was short-term ROI.



SOURCE: NEMERTES RESEARCH

Most organizations rely on hosted audio and Web conferencing bridge services, often billed on a per-line or per-user basis, plus per-minute usage fees. By bringing these services in-house, integrated with a VoIP system or a desktop "buddy-list" client to enable meet-me conferencing, organizations can eliminate the need for hosted services. One research participant noted that his organization eliminated 90% of its audio conferencing budget by moving to an in-house solution, even after adding more telecom trunks for external callers. Other participants have noted 30% to 50% cost savings compared with hosted Web conferencing services. While audio or Web conferencing alone aren't strictly UC, audio conferencing savings are increasingly the key driver for deployment of UC platforms that integrate Web conferencing, audio conferencing, video and chat into a seamless set of applications.

■ **SIP trunking:** SIP trunking is emerging as an advanced communication service with significant potential to reduce telecom costs and improve service flexibility. SIP trunking eliminates the on-premises gateway for connecting enterprise telephony systems with the Public Switched Telephone Network (PSTN), essentially moving the IP-to-TDM gateway into the service provider network. Many SIP trunking providers offer services to route incoming and outgoing calls based on policies or load, as well as virtual-number services to provide local dial-in numbers outside of operating regions.

According to Nemertes' research, 53% of companies are using SIP trunking today, planning to use SIP trunking services in the next two years, or evaluating SIP trunking for eventual deployment, with adopters reporting savings of anywhere from 20% to 60% on PSTN access costs. Like conferencing, SIP trunking by itself is not UC, but adoption of SIP for PSTN trunking sets the stage for wider use of SIP for system interconnectivity and connecting to external partners or services for real-time collaboration across company boundaries.

SIP trunking adopters report savings of anywhere from 20% to 60% on PSTN access costs.

■ **Unified messaging:** Unified messaging represents a subset of unified communications, focusing on management and integration of voice, fax and email messages into a single user inbox accessible via desktop or mobile clients, or via a phone-based user interface.

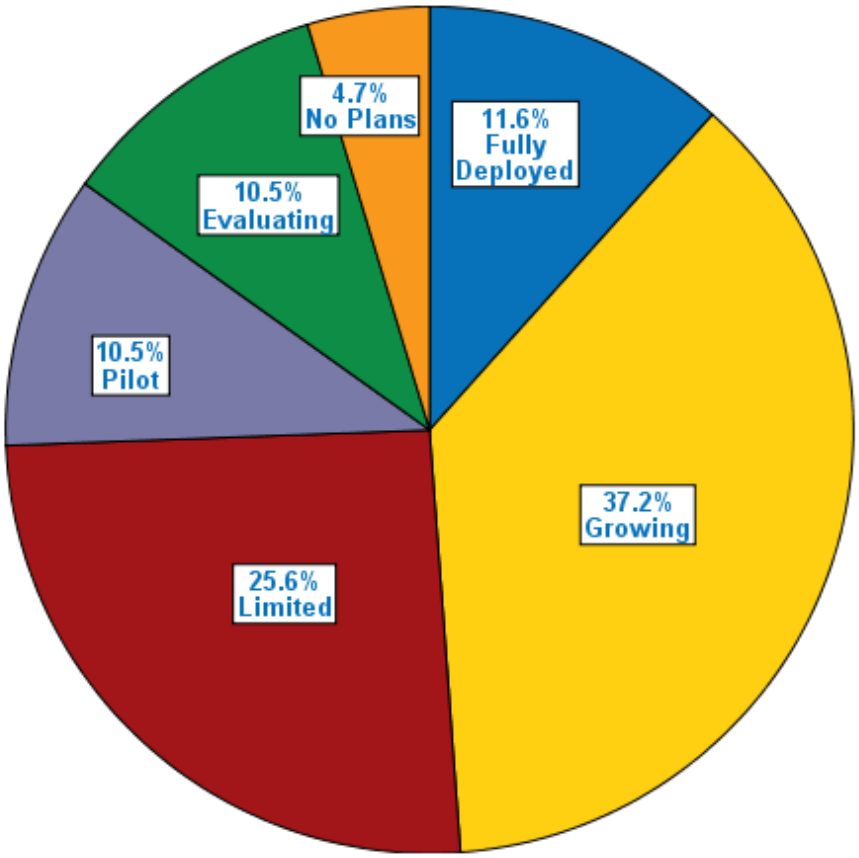
■ **IP telephony:** While many larger companies have slowed their IP telephony rollouts, choosing to prolong the use of existing endpoints for as long as possible, few companies have no plans at all to deploy the technology.

IP telephony offers significant potential for cost savings from reducing long distance charges by trunking calls across the WAN and simplifying existing infrastructure by centralizing call servers. Bringing IP to the desktop offers opportunities to further reduce costs by leveraging existing LAN infrastructure.

We also continue to see adoption of IP telephony soft phones for

VOIP State of Deployment: All

New IP telephony rollouts have slowed recently, according to Nemertes Research statistics, but adoption is still widespread, with most enterprises enjoying limited deployment or continuing to expand their IP telephony implementations.



SOURCE: NEMERTES RESEARCH

remote/traveling workers and in contact centers as a way to reduce per-agent setup costs by eliminating dedicated desktop phones.

■ **Video conferencing:** Interest in video conferencing continues to grow, with many organizations justifying investment either in response to decreasing travel budgets or as a way to justify travel budget reductions. Nemertes continues to see strong interest in telepresence, high-definition, and desktop video to interface with other systems across all verticals.

In the case of telepresence, there is an opportunity for substantial benefit despite high up-front costs. Approximately 28% of companies are deploying or planning to deploy telepresence. Typical deployments are limited, with only a handful of rooms located in large office locations. But with the mean price of a room deployment hovering around $250,000, plus ongoing costs for bandwidth and management, how can organizations justify such an expense, especially in light of shrinking or flat IT budgets? The answer is simply that executives perceive a great deal of value in meeting via telepresence versus room-based, desktop, or audio conferences. Telepresence, unlike other meeting technologies, is perceived as a suitable replacement for in-person meetings, especially for senior executives.

One research participant told us that, to his organization, telepresence is the new "corporate jet," especially now that travel by actual corporate jet is often seen as an unnecessary luxury.

Telepresence can produce value on a company-wide basis as well. One global energy company is cutting its entire executive travel budget by 15% to fund its telepresence initiative, with a payback period of less than two years.

■ **Supporting virtual workers:** IT leaders see investments in collaboration services as a key requirement for supporting the growing virtual workforce (more than 85% of companies are increasing the number of teleworkers). UC applications such as instant messaging, integrated voice, Web conferencing, presence and desktop video can overcome the distance barriers that often hinder collaboration among distributed workers.

IT managers using UC to support teleworkers report tangible benefits, including improved employee retention via support for more flexible work schedules and improved customer service by leveraging time zones to extend hours to enable customer support outside of local operating hours. They can also enjoy reduced costs by using UC to hire workers outside a company's physical operating location and reducing the actual office space they need in expensive facilities. ■

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HOW TO QUANTIFY UC'S BENEFITS

BUSINESSES INTERESTED IN UC, ESPECIALLY THOSE INVOLVED IN QUICKLY GETTING INFORMATION TO CUSTOMERS, CAN USE MODELS TO DETERMINE HOW MUCH THEY WILL BENEFIT BY INTRODUCING UC INTO THEIR ENVIRONMENT.

WHILE ALL THE technologies in the previous chapter offer opportunities to reduce ongoing operational costs, it is perhaps UC's capability to streamline business processes for tangible gain that offers the biggest opportunity for benefit. But applying UC to improve business processes is a complex challenge that first requires discovering end-user demand for UC applications.

Nemertes finds a strong shift away from IT pushing new technology in the hope that users will find its benefit and IT is instead working as a partner to help educate line-of-business

managers on emerging UC technologies and the potential benefits. In most cases, the low-hanging fruit for UC is to improve real-time collaboration to speed decision making.

FINDING EXPERTS FAST SAVES MONEY

An approach to quantifying UC's benefits in improving specific business processes is called Just in Time Fetch the Expert (JITFTE). This model is most applicable for organizations that place a heavy emphasis on reactively or proactively getting information to customers, often with geographically dispersed support teams. In these organizations, effective customer interaction is critical to overall business success. For example, investment managers might need to apprise their clients quickly of events that might affect their portfolios. Community banks might need to answer specific questions about mortgages or consumer or business loans. Closing a sale might require involvement of an individual with specific vertical or product knowledge who is located in a separate geographic region.

In these scenarios, UC helps improve close rates by giving customer-facing persons faster access to individuals or groups possessing specific subject-matter expertise. Salespeople can locate experts in rapid time to help close a sale. A tech support agent can find someone with specific expertise to answer a customer's question.

Marginal improvements = Significant savings

New IP telephony rollouts have slowed recently, according to Nemertes Research statistics, but adoption is still widespread, with most enterprises enjoying limited deployment or continuing to expand their IP telephony implementations.

Consulting Projects							
Average Project Size	Typical Project Margin	Typical Close Rate	Number of Projects Bid Per Year	Bottom-Line Value of New Projects to Consulting Firm	Incremental Impact of Increasing Close Rate by 1%	Incremental Impact of Increasing Closing Rate by 2.5%	Incremental Impact of Increasing Closing Rate by 5%
$250,000	60%	75%	75	$8,437,500	$8,550,000	$8,718,750	$9,000,000
Marginal Improvement					$112,500	$281,250	$562,500

Without JITFTE, the game of phone tag ensues, with the customer-facing employee taking notes, locating an expert, getting an answer, and calling the customer back—a process that reduces the likelihood of success, potentially puts a company at a competitive disadvantage, and costs money in lost time and efficiency. Presence-enabled unified communications serves to virtualize corporate resources, enabling individuals to find the experts they need, regardless of location, and quickly link them into a call, Web conference, video conference, or audio bridge.

JITFTE examines the business benefits of improved communications and collaboration by looking at specific business processes, such as sales cycles or length of time required to complete a customer inquiry. The goal of this approach is to determine whether the application of unified communications technologies can shorten these cycles, leading to such tangible benefits as increased sales or higher customer retention and satisfaction rates.

The JITFTE model can be applied to any organizational process that can benefit from faster access to information or subject-matter experts. In a healthcare scenario, an organization operates a phone-based "Ask a Nurse" program that fields calls from individuals who want advice from nurses. Key challenges include staffing the contact center and responding to patient inquiries as quickly as possible.

In this particular example, the company saved $11 million by using UC to enable virtual agents instead of building a new fixed contact center to meet expansion requirements. The organization implemented UC capabilities, including instant messaging and voice conferencing coupled with presence awareness, and realized the following tangible benefits:

> UC helps improve close rates by giving customer-facing persons faster access to individuals or groups possessing specific subject-matter expertise.

- **Increased throughput of contact centers.** By leveraging UC, nurse agents can use presence information to quickly find experts able to assist with patient questions. Measurable benefits include increased contact center throughput, reducing staffing requirements and reducing the need to expand contact-center capacity.

- **Faster response time to patient needs.** Increased ability to quickly

respond to patient calls, conference in medical experts, or use instant messaging to talk to physicians leads to faster resolution of patient requests without requiring physicians to call patients, improving customer satisfaction.

■ **Ability to support distributed workers.** By using IP-based communication services to enable telecommuting, organizations can avoid opening new contact centers and hire workers in regions with lower employment costs.

■ **Integration with medical records systems and Web conferencing applications** for groups of nurses and doctors to quickly access and jointly review patient data, speeding diagnosis and response times.

MEASURING PRODUCTIVITY IMPROVEMENTS

Return can be quantifiable, as demonstrated in the JITFTE scenarios, or organizations can quantify improvements in productivity. For example, an organization can demonstrate that elimination of phone-tag as a result of presence-enabled communications reduces the time workers spend chasing one another down and retrieving voicemail messages by 30 minutes per employee per day. Take an example organization with an average $30 per-hour salary, and this translates into potential cost savings of $15 per employee per day. Again, using our 10,000 employee scenario, this translates into a savings of 123 hours per employee per year (based on 245 work days in a year), for a total annual savings of $36.75 million. Of course, this assumes that the time saved is used for other productive purposes. If we assume that only 50% of the saved time is reused for productive business activity, we still see a positive annual return of approximately $18.37 million.

> The goal of JITFTE is to determine whether UC can lead to tangible benefits, such as increased sales or higher customer retention and satisfaction rates.

In the short term, the results are clear: UC offers IT managers the ability to reduce operating costs while also contributing to increasing top-line revenue, all through improving the ability of workers to collaborate more easily. ■

PLANNING FOR FUTURE SUCCESS

ONE OF UC'S MANY BENEFITS IS THAT SOLID PLANNING WILL ALLOW YOU TO BUILD ON INITIAL APPLICATIONS AND IMPLEMENTATIONS TO EXPAND COMMUNICATIONS CAPABILITIES INTO THE FUTURE. SPECIFIC APPLICATIONS AND SERVICES SHOULD BE ON YOUR LONG-TERM RADAR.

WE'VE SEEN HOW approaches such as Just in Time Find the Expert (JITFTE) can improve business processes by allowing frontline workers to quickly access the expertise they need to find the answer to a challenge. But just how do organizations gather knowledge about who the experts are for particular processes, products or services? That's where enterprise 2.0 technologies come in. Enterprise 2.0 defines social computing applications that take advantage of the collective knowledge of the organization to enable workers to classify themselves, or classify one another based

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on criteria such as expertise or helpfulness. Via social computing, an organization can build a repository of worker skills that is constantly updated by direct employee input.

Combining social computing with

> Web 2.0 social networking concepts allow workers or customers to tag one another as experts on a particular product, service or issue.

JITFTE finds experts and leverages their value. Instead of pre-defined, static roles, organizations can take advantage of Web 2.0 social networking concepts to allow their own workers or customers to tag one another as experts on a particular product, service or issue. They can use customer- or employee-driven rating systems to determine the "go-to" people for particular issues. Consider an approach where rather than just randomly going to the "dishwasher servicing" group and asking who is available to assist on a call, a customer service agent could search a social networking system for a specific model or type, quickly find all those tagged as experts in that product, see ratings from customers and other staff members, and use presence and UC dashboard capabilities to start a conversation or link that expert to a customer call. In this example, Web 2.0 concepts lead to demonstrable business benefit, supporting the concepts of JITFTE and creating real revenue opportunities for the organization, in addition to enhancing all the other benefits of UC in process and capacity improvements.

BRIDGING PUBLIC AND PRIVATE NETWORKS

Another area to watch with respect to UC is the blurring of public and private networks, as well as enabling collaboration outside the company. We're already seeing companies leverage public social networks to put status and click-to-call capabilities on sites such as Facebook. Skype is entering UC architecture discussion via its Skype for SIP offering. Beyond integration with public services, Nemertes sees considerable interest both from end users and vendors in creating capabilities for seamless collaboration with external partners. Capabilities can be as simple as scheduling meetings through a Web-based service or leveraging SIP or H.323 gateway services for presence sharing and call set-up for audio or video conferences.

But external connectivity raises concerns around interoperability. In the telepresence world, multipoint

external conferences aren't possible, and they won't be any time soon because of a lack of agreed-upon standards for features such as multi-

The use of SIP, while offering a common framework for UC interconnectivity, actually further complicates integration.

channel audio or switching screens to an active speaker. The use of SIP, while offering a common framework for UC interconnectivity, actually further complicates integration because SIP's flexible nature enables vendors to adopt their own proprietary methods for session establishment and management.

Finally, IT leaders should keep abreast of cutting-edge technologies that may soon become part of the UC portfolio. Video conferencing continues to improve, and high-definition video is rapidly moving to 1080p at 30 frames per second, while some vendors are even demonstrating 1080p at 60 frames-per-second capabilities. Desktop high-definition video is increasingly available, and new video codec standards such as H.264 Scalable Video Conferencing (SVC) offer high-quality video over poor or unreliable network connections. New virtual reality capabilities such as shared whiteboards, touch-sensitive desktops and interactive walls are quickly becoming part of telepresence suites. Holographic imaging and virtual reality rooms are entering test labs. Virtual reality helmets are emerging as potential endpoints. Along with virtual reality rooms, these offer the potential for participants to fully immerse themselves in a meeting without leaving their desks. ■

STEERING CLEAR OF UC GOTCHAS

ANY ROADMAP ENCOUNTERS BUMPS ALONG THE WAY. LEARN ABOUT THE KEY CONCERNS FACING UC IMPLEMENTATIONS AND HOW YOU CAN AVOID THEM. FOLLOWING THESE BEST PRACTICES FOR FACING NETWORK INTEGRATION, MANAGEMENT, COMPLIANCE AND PRIVACY CHALLENGES WILL PUT YOUR UC PROJECT ON THE RIGHT PATH.

DESPITE ALL THE potential benefits that UC brings to the table, there are important areas that, if not addressed, can torpedo any UC project. Be sure to include the following areas in both your short-term and long-term UC planning, or face being sidetracked in your deployment.

- **Ensure adequate UC IT training:** IT executives are experiencing challenges in finding those well trained in UC implementation and management. IT managers increasingly rely on managed service providers to assist in supporting their UC implementations, but we continue to hear of concerns

extending beyond hiring their own staff to finding qualified VARs, consultants, and even vendor engineers.

■ **Compensate for lack of management tools:** IT architects cite the lack of tools that allow them to manage and troubleshoot performance of UC applications, especially video and interconnections such as presence sharing. In many cases, engineers still rely on packet capture and manual examination of flows to determine problems—a long and arduous task that requires technicians to possess a solid understanding not just of message flows but also of vendor proprietary extensions to SIP.

■ **Lock down UC security:** Applications with external connectivity, such as SIP trunking, soft phones and external video conferences, create a new vector for attack. In most VoIP architectures, the PSTN serves as a firebreak between the enterprise phone system and the rest of the world. Risk of attack from the Internet is low because the VoIP system is physically and potentially logically isolated from the outside. Introducing external-facing applications changes this paradigm, as the enterprise phone system and other UC-related applications become vulnerable to IP-based attacks.

■ **Address compliance:** The 2006 updates to the Federal Rules of Civil Procedure (FRCP) (26-b-1) define electronic information discovery as allowing "the party making the request to inspect, copy, test, or sample any designated documents or electronically stored information—including writings, drawings, graphs, charts, photographs, sound recordings, images, and other data in any medium from which information can be obtained—translated, if necessary, by the respondent into reasonably usable form."

This broad classification of all electronic data as discoverable has far-reaching implications for UC applications, including unified messaging, text-chat, and Web/audio/video conferences that are potentially recorded for training purposes or future playback. Nemertes strongly recommends that IT leaders address compliance concerns early in the planning process.

UC and the benefits it brings have real potential to reduce operational costs and improve top-line revenue. IT planners should carefully examine their internal business processes to build optimal business cases for UC adoption while paying attention to the need for a proper architecture to address UC implementation challenges. ■

Irwin Lazar is the vice president for communications research at Nemertes Research, where he is responsible for benchmarking the adoption and use of emerging technologies in the enterprise in areas including VoIP, unified communications, Web 2.0 initiatives, social networking and collaboration.

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- The TANDBERG Vision for Unified Communications
- Video Telephony: Completing the Picture of Unified Communications

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