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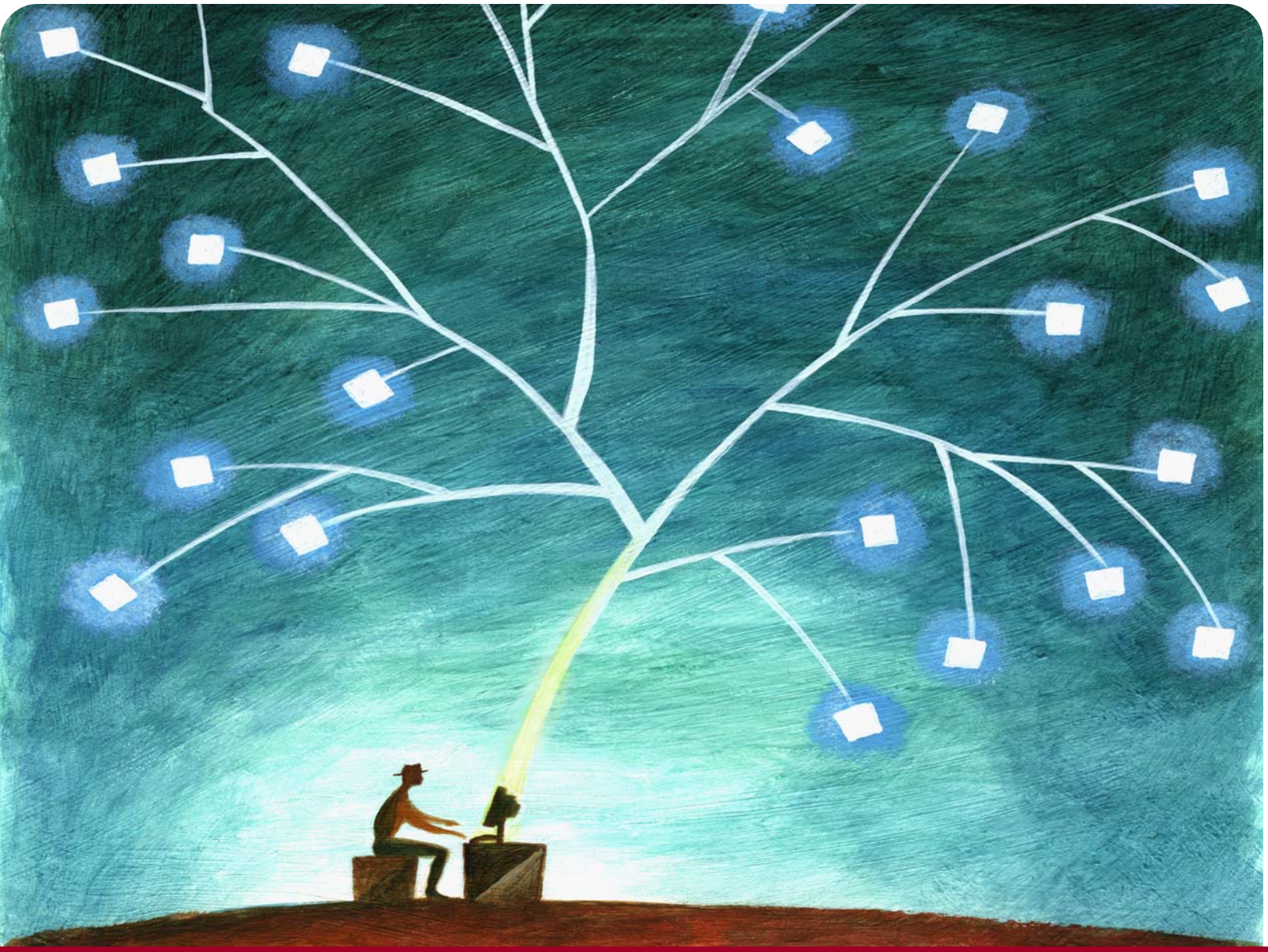

April 2008

Unified Communications

It Is a Small World After All

A Publication of ILTA

Inside This Issue

EDITOR'S NOTE

Unified communications (UC) is defined by one of our authors as "the convergence of multiple communications technologies over an IP network. It is based on open platforms that allow new methods for individuals, groups and organizations to communicate and collaborate. [UC] condenses these technologies into a seamless experience with one login, one address book and one inbox."

The convergence of complex technologies to render a simple, unified interface is not far afield from an air traffic controller coordinating the landing of different types of aircraft at the same time on different runways. The effort requires proper planning, attention to detail and perfect timing.

And the speed at which all communications technologies are converging is jet-propelled.

We offer our thanks to the authors for landing their expertise on our runway.

Ken Hansen, Editor

ABOUT ILTA

Providing technology solutions to law firms and legal departments gets more complex every day. Connecting with your peers to exchange ideas with those who have "been there done that" has never been more valuable.

For over three decades, the International Legal Technology Association has led the way in sharing knowledge and experience for those faced with challenges in their firms and legal departments. ILTA members come from firms of all sizes and all areas of practice, all sharing a common need to have access to the latest information about products and support services that impact the legal profession.

Statement of Purpose: ILTA is the premier peer networking organization, providing information to members to maximize the value of technology in support of the legal profession.

International Legal Technology Association

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by Dave Rigali of Husch Blackwell Sanders LLP

The Business Case for UC

When is the last time you rolled out a technology that truly changed the way people work? I'm not talking about "The Next Big Thing." I'm not even talking about a technology that has the potential to provide a competitive advantage for your firm. I'm talking about a technology that becomes so ubiquitous it transforms the way people work. Technologies that fit this description include the fax machine, PC networks, e-mail and BlackBerry devices. Working without these today is unimaginable (okay, maybe you've imagined life without the BlackBerry). We could no more do without these devices than do without electricity, itself a transformative technology at one time.

These technologies have many things in common. Each is actually a collection of technologies working in concert. Each enhances communication. Each is subject to "positive externalities," or simply stated, the value of the technology increases as the number of people who use that technology increases. Perhaps most important, each of these technologies improves the way people already work. Radical changes aren't required. The change is truly evolutionary. This is unified communications (UC).

Unified Communications Defined

Unified communications is the convergence of multiple communications technologies over an IP network. It is based on open platforms that allow new methods for individuals, groups and organizations to communicate and collaborate. Key technologies include VoIP, e-mail, audio-, video- and Web-conferencing, voice mail, instant messaging (IM), unified messaging and "presence." Presence is a foundational technology with the potential to change the way we work, play and live.

Unified communications condenses these technologies into a seamless experience with one login, one address book and one inbox. These are then integrated into familiar applications such as Outlook, Microsoft Office and SharePoint. Add integration with VoIP systems, and your computer is transformed into a communications tool that can provide increased access to the right people at the right time in the best way for the situation.

Here's a simple real-life example: Earlier in the year, I needed to review a budget spreadsheet with a colleague. We had a bottom-line number we needed to hit. In the past, this would have meant either sending out copies and redlining the changes or arranging a meeting in a conference room to work through the exercise. Instead, I called my colleague and automatically launched a desktop video-conferencing session with Cisco Video Advantage. I then launched Office Communicator and initiated an IM session. From there, I was able to share Excel from my desktop easily, and we started reviewing the budget. After an hour or so of "what if" scenarios, we came up with a combination of cuts that hit our target. I saved the spreadsheet and e-mailed a copy to my colleague. This didn't just save time; it was actually a better, smarter and faster way to work.

Add a "click-to-call" interface along with Web-conferencing and the example here easily could be made into an even richer experience. By combining these technologies and blending them seamlessly into applications I use every day, my computer is transformed from a personal productivity tool to a communications and collaboration tool I can use today with members of my team and in the future with colleagues outside my organization. Please note that at Husch Blackwell Sanders, we're at the earliest stages of our UC initiative and don't have the entire infrastructure in place or deployed to users outside of IT.

Deploying Unified Communications

So what does a typical unified communications deployment look like? An all-Microsoft deployment might include the following:

- Microsoft Exchange Server 2007
- Microsoft Office Communications Server 2007
- Microsoft Office Communicator
- Microsoft Office Live Meeting
- Microsoft Office System (including SharePoint, Outlook, Microsoft Office and more)

Ideally, you'll want to include a VoIP solution like Cisco Call Manager that supports a click-to-call interface (gateways are available for some legacy PBXs) and a voice mail solution like Cisco Unity that supports unified messaging so all message types, including voice mail, e-mail, faxes and even IM conversations can be managed from a single inbox. Of course, this is only one of many possible solutions. In addition to Microsoft, leading vendors in this space include Cisco, Nortel, IBM, Lucent and Avaya, who have products that both compete with and complement each other.

Establishing Your Presence

A UC environment requires a presence engine. Presence provides an indicator of a person's online availability. Typically, this is presented as a color-coded dot that appears next to contact names within "presence aware" applications such as Outlook, Word, Office Communicator and even SharePoint. Common indicators include "Online," "Busy," "Away" and "Do Not Disturb." Some options can be more specific, such as "Be Right Back" or "Out to Lunch," giving others an idea of how long you'll be unavailable. Most systems allow you to decide how you want your presence status displayed. You can select certain people whom you want to block from viewing your status, or you can select only those allowed to see your status and block everyone else from viewing it.

You can set your presence status manually and make yourself appear to be offline when you're actually online. With some systems, you may also be able to enter a custom status message, such as "Be back at 3:00 p.m." or "Gone to doctor's appointment."

Your status may also be changed automatically. For example, the system may set your status to "Away" if you're inactive for a specified period of time or automatically show you as "Busy" if you're running a full-screen program or on the phone. Your status potentially can be used to help determine how to handle calls and messages. For example, if you've set your status to "Busy," calls might go directly to voice mail, whereas if your status is "Out of Office," the system might redirect calls to your cell phone.

Presence information can help business users communicate more efficiently by making calls or sending messages at a time when they know the recipient is available to receive them. Some estimates place the percentage of calls that end up in voice mail as high as 80 percent. Knowing whether a person is available before you make the call really can save time. Presence also can notify users when another user's status changes so they don't have to play telephone tag or guessing games to try to get in touch. In many ways, presence has the potential to change the way we communicate.

The Benefits of Implementing UC

The business case for unified communications in law firms is compelling. While the ROI for UC is largely soft (benefits are generally indirect and based largely on productivity gains), there are some potential direct benefits, including the use of in-house servers for Web-conferencing instead of an outside service, expanding the use of conferencing to reduce travel costs and even using IM and presence for cost avoidance. However, the benefit of increased productivity for timekeepers is, in itself, significant. Less time spent on nonbillable tasks can translate directly into more billable time. In a law firm, minutes really do add up to dollars.

Gartner states that the biggest value of UC is the "ability to reduce 'human latency' in business processes." Human latency can be defined as the time it takes to bring team members up to speed and is driven by the need for collaboration in decision making. The ability to contact the necessary people more quickly and easily by automating the process of setting up conference calls or other methods of communication can squeeze out this latency and allow people to make decisions faster. Lowering these communication costs can offset some of the diseconomies of scale law firms can experience when they merge. Gartner refers to this as "communications-enabled business processes."

There is a client service advantage here as well. Expertise location is another facet of human latency: finding the right person at the right time to get the information you need. In a professional services organization, that can mean getting the client an answer more quickly. Consider a presence-enabled expertise location system. It would not only scan attorney work product and standard directory information to tell you who knows what, but also tell you who is available to answer your question now, and then provide one-click access to reach that person. The power of a solution like this would be considerable.

The intersection of unified communications and Web 2.0 should not be ignored. The new generation entering the profession has increasingly grown up with an online presence. They will expect to bring this virtual aspect of themselves into the work environment and have access to the underlying technologies that support it. The issue of associate retention is enormous, and firms that cannot create an environment within which this generation can work will pay the price.

Getting Buy-In for UC at Your Firm

Unified communications is about improving productivity and accelerating business processes. The real value is in changing the way people communicate. Justification should be based on a few primary benefits. Soft benefits may be enough (hard benefits are a bonus). Don't justify the project with a complex business case that is unlikely to succeed. Competitive necessity may be compelling enough, particularly if the firm across the street is already using this to communicate with clients.

Start with a trial or pilot project that incorporates a subset of the UC portfolio. Look for practice groups that are decentralized and large enough to reap the benefits of the technology. Include people who have a willingness to adopt new technology. As with most IT projects, a department advocate or executive buy-in will go a long way toward making the project a success. Provide plenty of end-user training that incorporates real-use cases and avoids focusing on features and functionality. Then step back and watch things take off.

The benefits of unified communications will only grow as more people are added to the network and more applications become communications-enabled. It truly does have the potential to change the way people work, and your attorneys will thank you for it. And when was the last time that happened?

by Rod Sagarsee of Brinks Hofer Gilson & Lione

A Strategy for Implementing UC

Shortly after returning from an overseas trip, the president of our firm approached me at a firm luncheon. He expressed appreciation for being able to sit in his hotel room and connect with the Internet as well as our Chicago office. He checked his data files on the network, reviewed his e-mail and listened to voice mail through e-mail. He also placed a return phone call to a client in the U.S. through his computer using a wireless Bluetooth headset. He said the call was clear and went through perfectly. There was no need for a cell phone or international operator, and there were no additional costs or hassles associated with the call. He loved the convenience and the ability to accomplish all of his essential communications at one time and from one device.

Although it wasn't needed on this trip, if his phone had rung in Chicago while he was sitting in that hotel room thousands of miles away, a window would have popped up on his computer to advise him of the incoming call. Caller ID would have shown him the number of the party who was calling, and he would have been able to answer that call right from his PC. He also would have had the option to conference in another call and place the first caller on hold. In addition, high-speed video and content conferencing (people + content) could have allowed him to attend a meeting here at the firm, all from that same hotel room. Maybe next trip!

Rewind to Spring 2005 – Strategic Planning Begins

In 2005, our goal was clear. The firm was continuing to grow beyond its existing physical space in our Chicago headquarters, and there were ongoing plans to add satellite offices in other states. As a result, we needed to ensure our technologies would continue to support such growth and keep our attorneys on the cutting edge of communications with our clients.

To provide the highest quality client service, we had to make sure our attorneys would have the ability to communicate with our clients from any given place or time. A unified communications platform would enable attorneys to check their files and voice mail, make a phone call or conduct a video-conference or webinar, and do it all from one device.

A successful implementation is contingent on the foundation built to house the technologies associated with a unified infrastructure. That infrastructure will set the tone for how well your unified voice, data and video will perform as one network. Your infrastructure also will determine whether or not you are able to sustain "five nines" (99.999 percent uptime) on your voice quality of service (QOS), while sending gigabytes worth of data traffic over the network and running "live" video-conferences across the country all at the same time.

In 2005, our firm already had an extremely solid data network foundation with total network continuous uptime near 100 percent. Nevertheless, it was time for the firm to replace its aging 16-year old analog/digital phone switch. We needed to conduct in-depth research and make a decision on a replacement switch and system.

VoIP still was relatively new to the larger corporate environment and was starting to become more popular due to its promise of value-added savings, productivity enhancements and converged network capabilities. We spent over eight months researching the new technology and decided that the Avaya VoIP 8710 series switch was the best fit for our environment. Together with our existing data network, it would lay the proper foundation for the firm's future total unified communications plans. Getting our data and voice to communicate over the same network also would create the traffic lanes we would need to add streaming video and live video-conferencing to the network.

January 15, 2006 – VoIP Comes Onboard

We implemented the Avaya 8710 series VoIP phone switch with 8710s, G650 gateways and Cajun voice switches, two of each for redundancy. We also added a G700 gateway in our Ann Arbor, Michigan office connected through a Tri-Bonded DS1 dedicated link between Chicago and Ann Arbor, not only to get one of our satellite offices onto the system, but also to add an immediate disaster recovery solution and location.

We decided to use VoIP phones across all offices (no analog or digital) for consistency. We chose the 4625 color display phone as the standard for all users and for all public area and conference room courtesy phones. We selected the Avaya 4690 speakerphone "starphone" as our standard conference room table phone. The decision to standardize all phones aided us tremendously in streamlining training on the new phones and simplified the programming of the features and templates for different user groups (attorneys, secretaries, paralegals, etc.).

To some degree, you can plan and implement a great VoIP system by choice of manufacturer. However, even the best system on the market can still fail miserably if improperly installed and poorly integrated with

an existing data network infrastructure. For this reason, we chose to take a relatively different approach to the topology aspect of introducing VoIP to our LAN and to our WAN.

Again, the focus is on setting the proper foundation. Choosing the right physical topology for your schematic description will help determine clear and set routes for the logical flow of traffic across the network.

In our case, we did not want our data and voice to compete for primary traffic flow at the segment level running over the same Cat6 wire. You can set separate VLANs and prioritizations, but you are still restricted to the bandwidth of that one wire. As a result, we decided it would be best to keep the voice network separate from the data until it reached the backbone level 50/125 Fiber Optic wiring.

We felt this approach would create the least amount of traffic protocol competition on our segment level Cat6 cable "local highway lanes." At the same time, it would give us the option to use converged networking features by taking a "ramp" onto the backbone fiber cable "express highway" where we have larger bandwidths and more traffic lanes to allow for all the merging data and voice traffic.

Packets on the data side tend to be much larger than voice packets. The goal was to keep the voice packets from being swallowed up and "pushed aside" by any unexpected flood of data traffic or future video traffic in those local segment "lanes."

This topology turned out to be the best fit for our network, and it was instrumental in our immediate success with VoIP for the firm. We had our share of bumps in the road initially, but overall we've been able to maintain the coveted five nines QoS voice quality that is optimal for phone conversations carried on a VoIP network.

This foundation allowed us to take the next step in our plans for additional unified communications: incorporating the rest of our satellite offices via dedicated multi-bonded and singular DS1 links. We also added a new conferencing center to our Chicago office. It featured high-speed audio-/video-conferencing and webinar recording capabilities among all of our offices, as well as with our clients and attorneys when accessing communications on the road.

Fast-Forward to November 2007

We have had an outstanding experience with VoIP. We brought up all our major satellite offices on the VoIP system with G350 gateways at each location and dedicated DS1s as the link among the offices. Each location also has its own local PRI and automatic stand-alone failover to allow them to maintain dial tone and send/receive calls in the event of unanticipated dedicated link downages.

VoIP has allowed our attorneys in all offices to communicate directly with the network (four-digit dialing) and receive voice mail in e-mail messages, dial their phone via clicking on contacts in Outlook, receive and make phone calls from their computers when outside the office, receive calls on cell phones (Avaya Extension to cellular feature) or listen to voice mail through their mobile or BlackBerry devices.

In 2007, we completed our new conferencing center in our Chicago office, where, along with a host of other great communication technology features, we introduced our users to the latest in high-end video- and audio-conferencing via the Internet and among offices. The new conferencing center sits on the 36th floor of the NBC Tower and consists of 10 mid- to large-sized conference rooms.

One of the conference rooms takes over the west side of the building (seating approximately 60) and has an automated divider wall which allows it to be split into two smaller conference rooms. At the opposite end of the building is our new lunch room (seats approximately 110) with a great view of Lake Michigan. These rooms are equipped with the latest in touch-screen technologies that allow users to set up the room with a touch screen. The other conference rooms average a seating capacity of 10–20 people.

We have implemented over 380+ connections in the new conferencing center associated with high-level technology needs for the firm and its clients, offering the ultimate experience in electronic collaboration. The firm now has ISDN and high-speed IP video (people + content) conferencing, automatic ceiling lift projector systems, automatic projector screen systems, touch-screen presentation, automated room lights and shading systems, an electronic conferencing scheduling system with touchpad screens outside of all conference rooms, HD CATV flat-panel displays throughout and LCD CATV projector systems, wiring in conference table tops, wireless network, wireless Internet and wireless portable convenience printers in all conference rooms as well as over 80 individual audio microphone connection systems with a direct video camera system to link to video Web-conferencing among all offices.

We have added our own toll-free Meet-Me Conference system to our internal Avaya full VoIP phone system to reduce costs associated with previously used external toll-free conferencing providers for conference calls among firm offices and clients.

Additionally, we have linked the east side of the building (firm lunch room) with the west side of the building (large conference room) through ceiling-mounted video and hardwired and wireless audio microphone systems to allow for complete collaboration during overflow luncheons and firmwide events. We added state-of-the-art mobile video-conferencing systems equipped with 55-inch flat panel LCD displays. This enables both rooms to see each other as well as all satellite offices, presenters and presentations simultaneously via ceiling mounted projectors, screens and additional 47-inch LCD panel displays.

By utilizing the Web-conferencing system over IP, we can include attorneys on the road along with clients into an event or a meeting. We can host internal or external training sessions or seminars from anywhere in the world. We also can turn any of our meetings into webinars from any of the firm's major offices.

In several of the rooms, attorneys can set up the technologies at the touch of a button: ceiling-mounted lift projectors, screens, lighting and automatic window shades.

Finally, we have combined our own customized Outlook calendaring system with a vendor conference room scheduling system and the third-party conference room touchpad screens. All are integrated to allow users to schedule conference rooms for any office location right from within Outlook, through main reception or directly from the touchpad screens located on the wall outside of each conference room.

These touchpads have red and green colored lights to indicate whether the conference room is scheduled or available for use. If the light on a room's touchpad is green, a user simply can walk up to the screen and, with the touch of a button, schedule the conference room for immediate use. Any changes made via Outlook, reception or directly at the touchpad automatically are updated and appear at all locations.

Now and for the Future

Our new technologies not only benefit the firm's attorneys and support staff in all offices, but also allow for all possible means of advanced unified communications, including visual and audio collaboration, with clients and other firms. Our new toll-free VoIP audio-conferencing, combined with Web video-conferencing are completely nonproprietary. This flexibility allows for any client or firm with any type of webcam system to be able to attend a secured conference or meeting without additional expenses.

Return on our investment was realized almost immediately in terms of increased productivity among the firm's employees, clients and colleagues in the industry as well as the monetary savings associated with long distance conferencing charges, dedicated video connections and long distance charges among all offices and surrounding area codes. The topology and internal infrastructure we put in place created a foundation for our latest unified communication technologies. This is paving the way for us to add new technologies as they come into the marketplace. We're confident we can pack up at any time, hit the open information highway and connect to new communication adventures in the future.

Author's Acknowledgement

Our firm's IS team deserves all of the credit for the coordination and implementation of all of the above technologies. Although we did have third-party support in the hardwiring and audio systems implementation, our team pulled together to prepare, order, test and program these new systems and, incredibly, implemented the bulk of the hardware and software associated with both the VoIP install in 2006 and the conferencing center in 2007. In both cases, this unique team of professionals pulled together to complete the actual "switchover" implementation of the projects over one weekend, so our users were able to walk in on Monday morning and begin utilizing their new collaboration environments. From adding the entire list of major technologies to our existing network fiber optic backbone, network infrastructure and topology, to integrating expanded bandwidths, traffic monitoring systems, and network IP video camera systems, DVD recording and webcasts lines, this was the ultimate team effort.

Voice Mail Integration with Outlook – What It Really Means to Your Users

by Chris McDaniel of Smith, Gambrell & Russell, LLP

In the fall of 2005, Smith, Gambrell & Russell implemented a new voice mail system that completed our move to a unified communications (UC) environment. This was the second step in a three-year, three-phase overhaul of our telephony environment. Avaya's Intuity Audix served as our voice mail system, and it was not integrated with Outlook. When Audix was declared "end-of-life" by Avaya, we decided to replace it with Avaya's most current Modular Messaging (MM) system. Buy-in for the upgrade wasn't difficult, given that Audix was no longer supported, and we would be moving to a much more current voice mail system.

We assured users that MM would offer the same basic voice mail features they already were using, but MM also would integrate with Outlook. Voice mail messages would be delivered as new Outlook messages and be accessible from the Outlook interface. BlackBerry users would receive notification of new voice mail messages and access them from their handheld. Remote access users would be able to retrieve voice mail through Citrix (now Terminal Services), Outlook Web Access and VPN Outlook for laptop users. Everyone would be able to organize, store and retrieve voice messages in Outlook in the same way they handle e-mail messages.

As users were introduced to the new system, it became apparent we needed to iron out a few operational details. Under the Audix system, users had no way of knowing who might have provided their Audix password to an assistant or peer. Neither did they know to whom a message might be forwarded. While those same risks would hold true under the MM system, there were now additional concerns. During a demo, some of the senior partners noted that an assistant who had access to the attorney's Outlook Inbox would now have access to voice mail messages as well. This could raise significant confidentiality concerns.

Through some Active Directory sleight-of-hand, we devised a technical method by which attorneys could opt out of Outlook integration with the new MM system and protect the privacy of their voice messages. In addition, we explained to all attorneys several key points regarding discovery and the privacy of voice mail messages.

It was important to convey to everyone that the upgrade did not change the fact that deleted voice mail messages were still accessible for a defined period of time. MM simply changed the timeframe and the means for storing and retrieving those messages from the telephone system to Outlook. The MM system added the option for a user to consciously "folder" a message, preserving it indefinitely in Outlook. Nevertheless, it was important for our users to understand that all communications other than those protected by privilege would be discoverable. We told them to exercise prudence when leaving a message for anyone, anywhere, on any system. We recommended attorneys speak directly to their assistants and come to an agreement on how voice mail would be handled. We pointed out they could remove an assistant's access to their Outlook Inbox for **all** messages. With UC, Outlook does not distinguish message types. If someone can see your Inbox, they can see every message in it.

Finally, we offered the option to disconnect their MM mailbox from Outlook (technically, to remove voice mail integration with Outlook). Doing so meant their only means for accessing voice mail would be via the telephone interface. New voice messages would not appear in Outlook. Exercising this option, however, would prevent them from receiving notification on their BlackBerry device of new voice mail messages and deny any remote access to voice mail through Outlook.

Only six users choose to opt-out of MM/Outlook integration. The upgrade went smoothly, and early feedback was largely positive. In particular, users noted that it was now much quicker and easier to use Outlook to access voice mail messages. For many long-time Audix users, it was a challenge to unlearn the "muscle memory" for the old system and follow the new telephone codes used by MM for manipulating messages. As time went by, however, people discovered and began to understand the basics as well as other subtle but helpful changes.

As for lessons learned within the IT department, we realized how important it is for users to both read about **and see** a new system early on. Thankfully, we were able to address their concerns with minimal delay to an ultimately successful implementation.

FoIP in Your UC Rollout

by Christian Larocque of Sagem-Interstar

In today's global business world, continual productivity and efficiency improvements are necessary for companies to survive. In the legal industry, too, communication speed is key to success. Attorneys and staff must efficiently deal with litigation documents, subpoenas, contracts, patent filings, intellectual property rights, etc., in various parts of the world. Competitiveness demands performance, and clients expect it from their law firms.

Thus, innovative, productivity-enhancing unified communications (UC) systems are being deployed by law firms worldwide, transforming how they do business inside and outside the office. Legal staff increasingly are using IP-based communication and collaboration tools such as instant messaging, Web-conferencing and calendaring. They require multi-device access to all business-critical voice, e-mail, online and network resources.

Fax Over IP Is Often Overlooked

With convergence and UC in full swing, IT executives often overlook faxing as a crucial piece of the UC offering. According to Gartner, the fax is still an integral part of business communications on the legal landscape: "Law firms use fax servers and fax machines to exchange hand-marked-up contract drafts – as well as final signed versions – as legally valid means of communications."

For example, while on the road in Los Angeles, a New York lawyer, working diligently to resolve a contract issue for a business client, receives a crucial document on his fax machine in New York after hours. At a minimum, he will have to get someone to re-fax the document the next morning, losing both time and image quality in the process. And where should it be sent? To another customer's office in Los Angeles? Unethical. To a hotel or business center? Inconvenient and a threat to the client's privacy. How much time is wasted on these communication slip-ups when the technology exists to route faxes over the same networks and into the same inboxes as e-mail and voice mail?

Challenges with Traditional Fax in UC and Converged IP Environments

For the lawyer described above, the promise of great productivity enhancements with his firm's UC deployment won't be achieved fully until all his communications are routed through the same telecommunications/IT infrastructure and are accessible with standard interfaces on any computer or device he happens to have where he's working.

Faxing is still one of the preferred methods for transmitting documents for most legal organizations because it is a legally binding means of fast, low-cost and secure document transfer. That's why there are still so many fax machines and multifunction peripherals (MFPs) around the modern law office. But using these fax methods means that firms must maintain separate analog communications overhead, while all other communications flow across IP networks. This is a common challenge in UC environments.

Too often the fax infrastructure comprises costly dedicated POTS lines or analog extensions with adapters, defeating the purpose of convergence and UC in itself. And worse, this infrastructure does not deliver fax documents when and where employees need them, lowering productivity and leaving fax services outside electronic document management systems, risking regulatory compliance.

Bringing the Fax Online

In IP-based converged networks, boardless (software-only) Fax over IP (FoIP) solutions are the remedy for the UC fax problem. FoIP leverages the ITU's T.38 real-time IP fax protocol. This is already supported by most leading media gateway and UC vendors such as Cisco, Avaya, IBM, Nortel, 3Com, AudioCodes and Alcatel-Lucent. Boardless FoIP solutions, in particular, offer legal firms numerous benefits:

Enhanced Employee Productivity

- Time savings by sending/receiving faxes with diverse tools such as e-mail programs, desktop applications and Web browsers
- Automated faxing from legal document management systems, and routing to multiple destinations
- Real-time fax delivery anytime, anywhere to support business workflow and collaboration

Substantial Cost Savings

- Elimination of expensive dedicated analog fax lines, fax boards, fax machines and hardware, maintenance fees and supplies

Improved Document Management, Security and Regulatory Compliance

- Secure archiving and audit trails for all incoming and outgoing fax documents, including ones transmitted via MFPs, to facilitate regulatory compliance (*e.g.*, HIPAA, PCI Compliance and Sarbanes-Oxley)
- Security and privacy protection for confidential documents

Streamlined Administration

- Centralization of all fax transmissions, leveraging existing UC components
- Solid fit for virtualization strategies because boardless FoIP solutions enable IT staff to efficiently combine and manage common resources for diverse applications, further enhancing UC deployments

When planning a UC strategy for your firm, be sure to include faxing in your considerations. FoIP is one more way to ensure your firm has seamless communication technologies in place to enhance collaboration and reduce costs.

by Frank M. Grillo of Cypress Communications

Communications as a Service

Providing VoIP Communications as an Outsourced Service for Law Firms

Obtaining an ideal communications system can present challenges for any law firm. Voice over Internet Protocol (VoIP) systems can deliver everything that PBX or key systems do and more, but building and maintaining a VoIP communications system is a complex and expensive endeavor. As a result, an increasing number of firms are outsourcing their communications services to Technology Service Providers (TSPs).

In the outsourcing model, firms lease communications services and equipment from TSPs, avoiding capital expenses as well as ongoing maintenance and management responsibility. The outsourced solutions that TSPs offer range from hosted VoIP products that deliver limited functionality over public Internet lines to full Communications as a Service (CaaS) solutions. CaaS extends hosted VoIP with dedicated voice networks, 24/7 monitoring and integrated unified communications functionality.

VoIP Trends

In the past decade, VoIP has become a viable alternative to traditional Time Division Multiplexing (TDM) phone service. VoIP is becoming increasingly popular because it offers benefits that TDM phone service cannot deliver such as increased productivity and efficiencies through integration with business applications. Law firms seeking to transition to VoIP or new firms that want to start with the latest technology have several options:

Do-It-Yourself. Purchase your own IP PBX equipment and commit the resources to build, operate, and maintain the equipment and network. This approach is capital-intensive as you buy everything and absorb all the risk. With a do-it-yourself approach, you have all the complexities of installing and managing a new PBX, managing Quality of Service and installing, integrating and managing video streaming, collaboration and unified messaging applications and servers. By doing it yourself, you'll have multiple suppliers to manage and integrate. And unless you invest significant dollars with redundant networks and systems, business continuity will be limited as the do-it-yourself approach is a premises-based system.

Hosted IP PBX. With a hosted IP PBX approach, you can choose a premises-based or nonpremises-based approach to the IP PBX, but either way, you'll outsource the day-to-day management responsibilities of the IP PBX. The management of your data and voice network is still handled by you and your staff, and it will fall to you to procure, manage and integrate numerous separate services for a full unified communications implementation. The hosted IP PBX approach is generally expensive and typically not available to firms with less than 1,000 employees.

Hosted VoIP. Hosted VoIP services remove the equipment from the law firm site and, like IP PBX, the day-to-day management responsibilities are handled by the vendor. Where hosted VoIP generally falls short is in the features. Generic hosted VoIP applications usually require expensive add-ons to achieve a complete unified communications solution. Unified messaging, chat, presence, video and other advanced applications are typically not included in a basic hosted VoIP service.

CaaS. Similar in concept to Software as a Service or SaaS, CaaS represents the virtualization of the PBX. Like other hosted models, users outsource the day-to-day management responsibilities and pay for usage, not ownership. The newest and most innovative of the hosted applications, CaaS includes a full compliment of unified communications functionality. In the CaaS model, the PBX is located in the IP "cloud" instead of residing at the user premises.

The Challenges of Building a VoIP Solution

The obstacles to building a VoIP system are steep. VoIP systems:

are more complex than the traditional TDM PBX systems

require a very significant up-front capital investment

demand high ongoing costs for maintenance, operations and upgrades

Building and maintaining a VoIP network requires a large investment in experienced IT staff who can deal with the different technologies and complicated interactions of a VoIP system. You must manage multiple vendors and suppliers. The process is time-consuming, and if the enterprise intends to include unified communications, the complexity and associated costs only increase.

Ongoing maintenance will become costly over time as technology components face a short shelf life. They can become outdated in as few as three years, forcing the enterprise to reinvest to stay current or else be stuck with an obsolete system.

These issues are too great an obstacle for most small- to mid-sized law firms, driving many to choose CaaS as an alternative solution.

Communications as a Service

CaaS goes beyond traditional VoIP offerings by delivering a fully-hosted VoIP and unified communications solution. Instead of paying to own and operate a communications system, you pay a recurring fee to use the communication services provided by a single vendor. The vendor offers this functionality from one or more remote, secure and fully redundant data centers.

CaaS allows you to obtain enterprise-class communication services without the complexity and time required to build a premises-based solution and without the capital investment. Bundled services usually include voice and data access, long distance and local voice services, telephone handsets, voice mail, Web-based account management and advanced unified communications functionality such as video calling, Web collaboration, chat, real-time presence and unified messaging.

Fully Hosted and Managed Solution

Unlike services that you obtain from specialist providers, CaaS delivers a complete VoIP and unified communications solution that is entirely managed by a single vendor. Integration of core PBX features with advanced UC functionality is managed by one vendor who is responsible for the complex integration and service set delivered to your users. The service provider is not tied to a single vendor investment and can leverage best-of-breed providers like Cisco, Microsoft and Nortel much more economically than a single enterprise.

From the phone and PC soft client on each person's desk to the private IP backbone and all points in between, every component in the CaaS solution is managed 24/7 by the vendor. In a CaaS implementation, the expense of managing a carrier-grade data center is equally shared across the vendor's customer base, making it more economical for your law firm to implement CaaS than to build your own VoIP network. Plus, by using a hosted approach, you can reassign valuable IT personnel and capital resources to where they will create the most business growth.

No Capital Expense Implementation

When you outsource your communications to a CaaS vendor, the vendor provides everything you need for a UC solution: the network, switches, routers, IP phones, soft clients and the inherent CaaS functionality. There's no purchase of equipment and no capital outlay. Ongoing maintenance and upgrade costs are also bundled into the offering.

A good CaaS vendor can eliminate costs for transitioning to CaaS by:

- removing the old phones from the desks
- installing the new IP phones at the desks of your users
- training your staff in the use of the new phones and phone service

Customer Service Levels Meet or Exceed Current Levels

If you pay for the required infrastructure and dedicate skilled staff resources to ensure that problems are addressed rapidly and quality remains high, you can manage your own IP communications system and network. However, you can obtain the same or better levels of service with CaaS because vendors can use their enterprise-grade equipment and 24/7 monitoring capabilities to meet or exceed your current response times and Quality of Service (QoS). You can specify Service License Agreements (SLAs) in your service contract, shifting the responsibility for providing those services to the vendor.

Fully Integrated Enterprise-Class UC

With CaaS, a single service provider is responsible for all of the complexities of managing the unified communications service. The vendor provides voice and data access and manages your LAN and WAN, security, routers, e-mail, voice mail and data storage.

By managing the LAN/WAN, the vendor can guarantee consistent QoS from the desktop across the VoIP backbone and back again. Advanced unified communications features such as Outlook integration, soft phones, real-time presence, chat, multimedia conferencing, video calling, unified messaging and mobility are also part of a standard CaaS deployment.

And with CaaS, the feature set can continue to evolve. Development and introduction of new features and applications are faster, easier and more economical because the service provider is doing the work for multiple end users across a scalable platform.

Flexible Network Configuration and Management

CaaS providers can tailor your solution to fit your law firm. A CaaS service provider can:

- Provide complete voice and data network LAN/WAN and management of that network.
- Provide and manage a separate voice network. You continue to manage your own data network.
- Manage the data network up to your law firm's LAN switch, then coordinate with your IT staff when actions will impact the switch. You maintain control of and responsibility for your LAN.
- Manage the voice network all the way to the phone (remotely).
- Implement upgrades as they become available. This removes the time and costs associated with monitoring the availability of upgrades and evaluating, purchasing and implementing them.
- Provide automatic failover from data to voice network or from the voice to the data network.

Flexible Capacity and Feature Set

When outsourcing communications services to a CaaS provider that offers a scalable communications platform, you pay for the bandwidth and features that you need, when you need them. Your service provider is able to spread the cost of feature development and delivery across a broad customer base, making feature functionality more economical for you to implement. Economies of scale also mean that the service provider is not tied to a single vendor investment.

No Risk of Obsolescence

While technology innovation brings many positives to the table, rapid technology advances bring about product obsolescence in a short amount of time. Average life cycles of older PBXs and key systems could range anywhere from seven, eight or even twelve years. With the advent of the PC, cell phone, video and many other new technologies, technology products typically face much shorter life cycles. The CaaS vendor absorbs this burden for the user by continuously upgrading the equipment in the CaaS solution and offering the latest in VoIP and unified communications functionality to its customers.

Increased Energy and Resource Efficiency

Your CaaS provider hosts the VoIP and unified communications equipment, eliminating the need for you to provide space and facilities for an onsite data center. There's no switch room rent to pay, no special heating or air conditioning requirement and no extra expense for the constant power consumption that such a facility would demand.

Many companies today are turning to server virtualization to reduce drastically the number of power-consuming servers they use. CaaS essentially offers a virtualized communications solution. With CaaS, you typically receive the benefit of multiple carrier-grade data centers with full geographic redundancy.

With regard to power consumption, even small issues such as the backlights used on IP phone displays can add up to significant power consumption. But the better IP phone models can be set to turn off the backlight automatically after a few seconds of inactivity.

Smart Call Routing and Alternatives to Desktop Phones

At the user level, calls can be routed to cell or home phones. Inherent collaboration and mobility features ensure business continuity for each employee. People call your office number and reach you no matter where you are. If a power failure disables the desktop IP phone, your employees can still make and receive calls using the soft phones running on their laptops.

Business Continuity

If you experienced a communications outage, how significantly would it impact your firm? If it's a simple problem like a power outage or temporary evacuation caused by a burst water main, you might not feel a pinch. But what if something more catastrophic occurs at your physical location, such as a hurricane or fire? How long could your law firm survive? For most law firms, the answer is "not long."

Most companies don't contemplate voice continuity. Unlike data continuity, eliminating single points of failure for a voice network is usually cost-prohibitive because of the large scale and management complexity of the project. A CaaS vendor can provide services that would be difficult or impossible for a single organization to obtain: redundant telecommunications equipment, network and circuit diversity, and backup power systems at a fraction of the cost of a specialized disaster recovery plan.

A CaaS solution includes network, POP and circuit diversity, CPE redundancy and WAN failover that specifically address the needs of each of your office locations. Redundant switching and network elements are located throughout its hosted platform, and all VoIP transport components are located in geographically diverse data centers for high availability and survivability.

Instant Failover

For most companies, each call and e-mail message is very valuable. A CaaS solution can provide a mechanism to switch to a redundant network in the case of a failure very quickly, so that no call or e-mail is lost in the process.

Typical professional services law firms maintain two data networks, a primary and a secondary failover network. By providing a separate IP network for voice calls, CaaS removes the need for – and the cost associated with – a secondary failover data network. A good CaaS vendor can even provide automatic failover from your existing data network to the vendor's IP network and vice versa.

A Viable Solution

While CaaS may not be the answer for every firm, it is certainly a solution worth considering when implementing a unified communications strategy.

ILTA's Core Values

:: Maximize the value of technology in support of the legal profession

:: Provide quality, independent, unbiased and accurate information to our members about technology and the practice of law

:: Maintain vendor independence

:: Provide quality educational opportunities for our members and ongoing learning for navigating through change

:: Foster, rely on and celebrate volunteers for their real-world experience and their value as a resource for colleagues

:: Recruit and retain the highest caliber of professional staff

:: Act as a vehicle for meaningful peer networking

:: Respect our colleagues

:: Commit to the highest standard of professionalism

:: Maintain a financially sound organization that provides full value for the members' investments

:: Promote member advocacy with vendors regarding product development and support

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