

TECHNOLOGY NAVIGATOR

CHARTING A COURSE FOR IT SUCCESS

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HISTORY IN THE MAKING

IPC and ShoreTel provide the venerable College of William and Mary with a 21st-century voice communications solution that will take it into the future.

The College of William and Mary was chartered in 1693 by King William III and Queen Mary II of England. Its 1,200-acre campus includes the 311-year-old Sir Christopher Wren Building, the oldest college building in the U.S. Thomas Jefferson

received his undergraduate degree there, and George Washington earned his surveyor's license through the college.

History is celebrated at the College of William and Mary, yet the institution is decidedly high-tech. It was named one of Intel's 50 "Most Unwired College Campuses" for its campus-wide wireless network. The Swem Library's Media Center boasts nine cutting-edge digital video and audio editing suites and a state-of-the-art Special Collections Research Center.

The college's 1980s-era PBX fit neither its storied past nor its high-tech future.

"We've run the same on-premises PBX for 20-something years," said Courtney Carpenter, CIO for the College of William and Mary. "It's a mid-1980s design that was purchased and installed in the late 1980s. It's an antique — as some of our guys say, it's old enough to drink. It was end-of-life in the mid-1990s and end-of-support around 2000 or so.

"We've kept it running thanks to some guys who used to work for the manufacturer who have a warehouse of parts that they've scavenged off old

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History in the Making

equipment. That company has provided two on-site technicians who handled all the day-to-day administration and maintenance of the PBX. As long as they could keep it running we were OK, but we were starting to have problems. It looked as though we could have a major failure and lose all of our voice communications. It was time to replace it, and we selected the ShoreTel IP Communications solution through IPC Technologies.”

The Past Is Prologue

After obtaining funding for the project, Carpenter and his team issued an RFP for an IP telephony solution. The college received more than a dozen responses, representing all of the major telephone system manufacturers. Carpenter concedes that ShoreTel was not their top pick at the outset.

“We had this perception that ShoreTel was more for smaller organizations, and we had about 8,000 lines at one point,” he said. “As a result, we were focused on the larger systems going into the RFP. But we had an open mind as we went through the process. After two months of testing we went with ShoreTel through IPC.”

The ease of use of the ShoreTel system was a key deciding factor. The college has a small IT staff that is very knowledgeable when it comes to data networking, but with limited telephony expertise. They needed a phone system that was easy to set up and manage.

“ShoreTel’s tagline is ‘brilliantly simple’ — and it really is,” said Carpenter. “Some of these phone systems are really complicated, but setting up and managing the ShoreTel system is straightforward. You don’t need weeks of training just to figure it out. That was a big plus.”

Staying Power

The ShoreTel technology also impressed the college. The ShoreTel system’s distributed architecture and applications, and its N+1 redundancy, help provide five-nines availability for mission-critical business continuity.

“
We got the price
we wanted and
our first choice
from a technology
standpoint.
Everything came
together.”

”



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“A traditional PBX is a monolithic array of boxes sitting in a computer room with cabling and outside connections to the public telephone network. If we ever had problem with that facility we would lose phones for weeks or months,” Carpenter said. “Because the ShoreTel system is distributed in various data centers around campus, we reduce that risk. Plus we can bring in multiple connections to the public telephone network to make it even more resilient.”

The ShoreTel phone sets themselves were also appealing. Recognizing that the phone sets are what end-users see, Carpenter wanted to ensure that end-users would be happy with the endpoint.

“As we narrowed it down we actually put up test systems for the finalists and had a group of about 80 users come through and test the phones,” he said. “Overwhelmingly they liked ShoreTel. The instruments are intuitive, easy to use and well made.

“ShoreTel’s straightforward licensing structure was also appealing. A basic license covers most everything you need except for call center applications. And ShoreTel had the best price point by far. We got the price we wanted and our first choice from a technology standpoint. Everything came together.”

Now and Then

IPC Technologies completed the package. IPC created a test bed and made the ShoreTel system “talk” to the old PBX.

“We did not want to do a flash cutover of all phones. We wanted to roll it out over several months,” said Carpenter. “At the same time, we wanted to maintain five-digit dialing between endpoints, so the two systems had to talk to each other seamlessly. That was a challenge, given that our system is so old, but IPC made it happen.

“We really enjoy working with IPC — that was definitely part of the decision as well. They are providing our long-term support and we are very comfortable with their capabilities.”

On the one hand, it might seem fitting that the second-oldest college in the nation would have a phone system nearly three decades old. However, the College of William and Mary is a vibrant “public Ivy” school and cutting-edge research university. It needed a reliable phone system that would better serve its voice communications needs. IPC Technologies and ShoreTel provided a state-of-the-art IP communications solution that will take the 318-year-old college into the future.

IPC Navigator

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Looking Ahead

Cloud computing, collaboration and mobility among the top strategic technologies for 2011.

During a year of increased awareness and adoption, cloud computing has demonstrated it can meet the demand for improved IT efficiency through a virtualized, secure infrastructure solution that is both scalable and reliable. IT analysts and industry experts expect the continued evolution of cloud computing to remain among the most important technology trends in 2011.

Gartner Inc. predicts global sales of cloud services to reach \$148.8 billion by the end of 2014, up from \$68 billion in 2010. A key to the growing cloud market is the ROI an organization can realize. More and more organizations of all sizes are looking to get out of the business of owning and maintaining their own IT infrastructure.

“The core ideas at the heart of cloud computing — such as pay for use, multi-tenancy and external services — appear to be resonating more strongly,” said Ben Pring, research vice president at Gartner. “In part, this can be explained by macroeconomic factors. The financial turbulence of the last 18 months has meant every organization has been scrutinizing every expenditure. An IT solution that can deliver functionality less expensively and with more agility is hard to ignore against this backdrop.”

Other key trends that could define the IT landscape in 2011 include:

High IQ Networks

These networks — comprising ultra-wideband capacity, “super” data centers for the cloud and smart devices for anywhere, personalized applications — will become the springboard for a new decade of innovation. Businesses that have learned to do more with less over the past several years will increasingly harness the power of high IQ networks for the most inventive, efficient and cost-effective platform for success. They will look to private, public and hybrid clouds for

new delivery models and move to more industry-specific solutions to get the most for their money.

Mobile Apps and Tablets

Smarter, more portable devices combined with fourth-generation wireless networks, advanced mobile enterprise application platforms and an increased demand for workforce mobility will make mobile business apps more attractive and popular. A thin-client approach, in which applications are stored and delivered from the cloud, is helping to make it more practical to “mobilize” applications for today’s on-the-go workforce. More powerful devices, backed by huge libraries of applications and large developer communities, will help businesses capitalize on mobile broadband networks.

The quality of the experience of applications on these devices, which can apply location, motion and other context in their behavior, is leading customers to interact with companies preferentially through mobile devices. This has led to a race to push out applications as a competitive tool to improve relationships and gain advantage over competitors whose interfaces are purely browser-based.

Video

Video will be among the most engaging business applications to take advantage of higher-capacity wireless networks for face-to-face and face-to-machine interaction. Just as telepresence, high-definition desktop video units and Web-based video have become common in business meetings, video will become an essential tool for workers everywhere. It will be used, for example, by doctors to view X-rays that were taken hundreds of miles away, or manufacturers calling on faraway experts to diagnose challenges on an assembly line. New business models will evolve to monetize digital

content and deliver video across multiple screens, a development that is reshaping how we interact with video at work, home and on the go.

Machine to Machine

Beneath the service of all the cool apps we employ to engage with each other, a plethora of machines will continue to run in the background, initiating and responding automatically to the business at hand. Employed in applications as diverse as meter reading for utilities, patient monitoring in healthcare and wireless connectivity for devices in automobiles, machine to machine (M2M) communications will make the world we live in more intuitive and efficient.

Collaboration

As communications channels integrate, businesses are turning to unified communications technologies to make collaboration easier by bringing together a myriad of communication platforms — such as IM, chat, click-to-call, video and VoIP calls — into one central system. With the advent of cloud-based subscription models, smaller businesses will find a way to adopt these technologies to speed their operations. As a younger working population demands “social collaboration,” companies need to deliver the business-grade tools to empower employees to be more responsive and engaged with each other and with customers.

IPv6

According to the four international non-profit groups that collaboratively work to coordinate the world’s Internet addressing system, the last remaining IPv4 addresses were allocated in February. Organizations need to plan now to ensure that e-mail, Web and business applications will be accessible via both protocols. Global network service providers, private industry and the public sector will all need to work together to ensure that Web sites can be reached, and that the Internet supports business as usual during the transition to the next-generation Internet protocol, IPv6.

Next-Generation Analytics

Increasing computer processing power along with improving connectivity are enabling a shift in how businesses support operational decisions. It is becoming possible to run simulations or models to predict the future outcome, rather than to simply provide backward-looking data about past interactions, and to do these predictions in real time to support individual business actions. While this may require significant changes to existing operational and business intelligence infrastructure, the potential exists to unlock significant improvements in business results and other success rates.



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ShoreTel Mobility extends the full power of a desk phone and Unified Communications capabilities to a mobile and sets you free to communicate from any location by enabling access to any network — cellular or Wi-Fi) — simply and cost effectively.

Businesses of all sizes are deploying ShoreTel Mobility to address the key challenges associated with mobile phone use: soaring international roaming costs, poor in-building coverage, and integration into corporate PBX and Unified Communications systems.

In addition to being an inherent component of the ShoreTel Unified Communications system, ShoreTel Mobility also easily integrates with other PBX systems, including those from Cisco, Avaya, Alcatel, Siemens, and UC systems such as Microsoft OCS.

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Information Security Professionals Admit They Need Better Training

A study based on a survey of more than 10,000 information security professionals worldwide finds that a growing number of technologies being widely adopted by businesses are challenging information security executives and their staffs, potentially endangering the security of government agencies, corporations and consumers worldwide over the next several years.

The study conducted by market researcher Frost & Sullivan for the International Information Systems Security Certification Consortium, or (ISC)², says new threats stemming from mobile devices, the cloud, social networking and insecure applications, as well as added responsibilities such as addressing the security concerns of customers, have led to “information security professionals being stretched thin.

“In the modern organization, end-users are dictating IT priorities by bringing technology to the enterprise rather than the other way around,” said Robert Ayoub, global program director of network security for Frost & Sullivan. “Pressure to secure too much and the resulting skills gap are creating risk for organizations worldwide.

“We can reduce the risks, however, if we invest now in attracting high-quality entrants to the field and make concurrent investments in professional development for emerging skills. As the study finds, these solutions are under way, but the question remains whether enough new professionals and training will come soon enough to keep global critical infrastructures in the private and public sectors protected.”

Information security professionals admitted they needed better training yet reported in significant numbers that many of these technologies are already being deployed without security in mind. For example, 70 percent of surveyed information security professionals said that they need better skills for securing clouds. At the same time, more than half of organizations already have private clouds in place, and more than 40 percent of security professionals themselves now use software-as-a-service applications.

Respondents said they aren’t ready for social media threats, either. They reported inconsistent policies and protection for end-users visiting social media sites, and nearly 30 percent reported having no social media security policies whatsoever.

Nearly 70 percent of respondents reported having policies and technology in place to meet the security challenges of mobile devices, yet mobile devices were still ranked second on the list of highest concerns by respondents. The study concludes that mobile security could be the single most dangerous threat to organizations for the foreseeable future.

“The good news from this study is that information security professionals finally have management support and are being relied upon and compensated for the security of the most mission-critical data and systems within an organization,” added Ayoub. “The bad news is that they are being asked to do too much, with little time left to enhance their skills to meet the latest security threats and business demands.”

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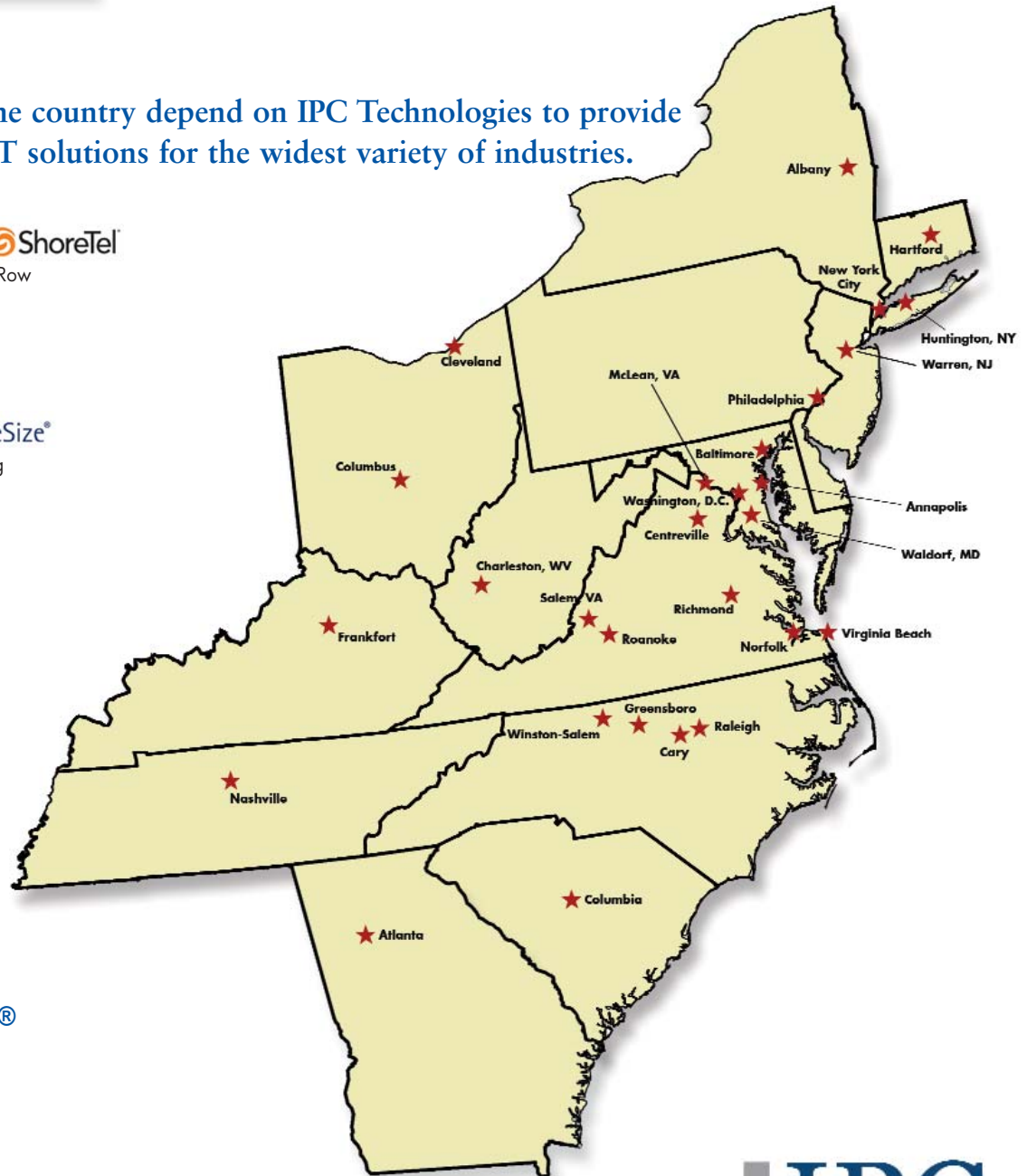
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