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***Section II:***  
***Case Studies***

**ALLEGHENY POWER**

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**Company profile:**

Allegheny Power, headquartered in Greensburg, Pa., is the energy delivery business of Allegheny Energy. It delivers electricity and natural gas to about 3.5 million people in parts of Maryland, Ohio, Pennsylvania, Virginia, and West Virginia. Allegheny Power's service area is 31,000 square miles. The utility employs 3,500 people and has 70 service centers. It recently acquired West Virginia Power and Mountaineer Gas Co., adding more than 250,000 new electric and natural gas customers to its customer base.

Allegheny Power states it is now the largest natural gas provider and energy delivery company in West Virginia, with customers in every county in the state. It has been in business for 100 years.

**CIS vendors and consultants:**

Allegheny Power used Menlo Park, Calif.-based vendor MITEM's product called MITEMView, The Universal Adapter, to create composite applications from legacy system assets. Computer-telephony integration (CTI) was provided by Genesys Telecommunications Laboratories of San Francisco. Cambridge Technology Partners of Cambridge, Mass., provided management consulting and systems integration.

**Outsourcing:**

With regard to system support, nothing is outsourced. However, Allegheny Power outsources some call center functions such as charge off collections, electronic bill presentation and payment (EBPP), payment agencies, universal services programs, and overflow/high-volume call answering.

**System components:**

Allegheny Power's CIS was originally a TRES system, a substantially inhouse-developed system with broad functionality.

In August 1997, a team was formed to look into a systems integration solution for its recently consolidated call center environment. The business goals included improving quality and consistency, eliminating manual processes, improving contact tracking, and reducing training time. The technical enhancements needed to reach the business objectives required a system to front-end its legacy mainframe systems and to extend integra-



tion between those mainframes and the newly implemented client/server applications used for work management, outage management, imaging and workflow processes.

In October 1997, Allegheny Power engaged Cambridge Technology Partners, along with a team of Allegheny Power IT and business professionals, to make recommendations, design, build and integrate some eight systems used on a daily basis by customer service representatives at Allegheny's call center in Fairmont, W.Va.

The call center application became QUEST — a house-branded acronym for "quality, user-friendly, efficient, service-oriented timesaver." MITEMView is part of QUEST and was introduced into the system in March 1998.

Genesys Telecommunications provided the CTI software to integrate the QUEST application with the telephone switch.

Allegheny Power has an MVS-based IBM S/390 mainframe running a CICS environment for its mainframe applications. CSRs are connected via the QUEST application to the mainframe environment using an asynchronous non-blocking 3270 terminal emulation product from MITEM Corp. The other client/server integration is accomplished with varied solutions ranging from Window client-level API integration and ActiveX integration to direct database connectivity utilizing ODBC. QUEST also maintains its own back-end relational database for basic CRM functionality.

**Implementation and integration:**

According to John Sala, integration analyst at Allegheny Power, the scoping effort with Cambridge began in late October 1997 followed by movement into rapid application development (RAD). This focused, extremely intensive approach produced a system design by February, the onset of development in March, and the completion of Cambridge's work in September 1998.

The Allegheny Power project team consisted of five full-time people — a development specialist, a manager/project leader, field customer service manager, a customer service center analyst and a customer service representative (CSR). The Cambridge side of the project team varied from six to 14 members depending on the phase of the development process, with a high dependence on subject matter experts specific to each project phase.

Important systems that were integrated within the call center were the customer information, collections, letter generation, credit bureau (implemented as part of the QUEST project), work management, outage management, and imaging/workflow systems; Rightfax faxing solution; and CTI application. An MS Outlook e-mail interface and an internal browser has since been added to QUEST.

**Objectives/strategies:**

The primary reasons behind Allegheny Power's CIS front-end upgrade was to improve customer service at its call center, according to Sala. Although a strategic decision, Sala adds, "By improving customer service, we're probably saving money as well. The more



information we can give customers, the better. ... Our goal is to make available to our CSRs a snapshot of the customer's world. ... Everything we're doing is customer-focused. We want to perform, keep our costs in line, and we want Allegheny Power to be synonymous with good customer service."

Also, learning to use all the systems Allegheny had in place was not easy. "There were several different mainframe terminal sessions in the call center, and CSRs would be bounding in and out of multiple mainframe sessions. Add to that the addition of dissimilar client/server interfaces and you had a very confusing environment," Sala explains.

The Allegheny Power call center located in West Virginia has "not suffered the level of turnover commonly experienced at large call centers, but we began to worry about what a normal turnover of CSRs would do to efficiency in such a complicated environment," Sala continues. The complicated systems "were manageable for reps who had years of experience with the green-screen environment, but new people really struggled with the complex codes and interfaces, it was so inefficient. In a customer service environment, users will 'slice and dice you' if [a system] doesn't work [well]." So, there was a definite movement toward creating a system that all CSRs could learn easily and be comfortable with, and at the same time was reliable.

**Decision process:**

As to the selection of Cambridge, "We looked at several other major companies — including offshoots of the Big Six doing CIS or integration solutions. Others were companies who'd worked with legacy system integration products. We specifically looked for call center experience. We wanted someone who did not have a predisposed vision of a one-size-fits-all solution, someone that had an open attitude. Cambridge showed us that they were open to a wide variety of options and were reasonably impartial." Sala says, adding he felt Cambridge's only partiality might have been toward certain architectures.

Also a contributing factor to Cambridge's selection was its history of both building custom systems and selecting systems from those available in the marketplace. "We wanted a company that did both," Sala says. In the end, Allegheny Power leaders concluded that the valuable intelligence resident in the old CIS had to be protected.

"Our team's [original] hope was to go out and buy a system to integrate our call center, but no such animal existed. You could not integrate legacy systems seamlessly with all these other closed systems. We had to recommend a custom-built solution," Sala says.

When it came to selecting an integration tool, he continues, "We looked at several tools of similar structure; some put their main logic on the mainframe, some had a middle-ware approach, and we considered many different architectures."

MITEMView won out because "it worked, and it worked well," Sala asserts. "It was the only vendor we could find at that time with a reference list that included utility call



centers using its tool. ... We knew if systems were being implemented in those environments, it meant a lot. We were also able to quickly perform a proof of concept on the tool and were able to benchmark its performance. That was the deciding factor."

**Project timeline:**

The project began in fall of 1997 with appointment of Cambridge Technology Partners. A preliminary scoping engagement was used to determine what the core issues were and to define what the solution would encompass. The design phase began in January 1998 and the system design was in place by the end of February 1998. Development was underway by March of 1998. Initially, the project was to go live in October of 1998, but Allegheny felt the system wasn't ready and went back into testing with a pilot involving 20 CSRs. QUEST was rolled into production starting in January of 1999.

**System performance:**

Certain aspects of the upgrade have worked above and beyond Allegheny's expectations, and others have fallen below.

Of Cambridge, Sala states, "There were definite deficiencies. The core Cambridge team we had was exceptional. Unfortunately, I think they did drop the ball a bit on the high level project management aspects, and Cambridge experienced extreme turnover in the project management area, with our project having at least three different project managers and multiple technical leads during the project life span. However, we had a great group of developers, and they worked extremely long days to try to deliver the system. Our team generally felt Cambridge disengaged and stepped away from the project prematurely."

"We were very happy with the MITEM product. It has performed as well as anything I've ever worked with. We've never had a failure of the MITEM product," says Sala. "It has met all of our expectations. [MITEM] sell[s] their products off references, so they put in a lot of effort to make sure we used their tool properly. Its performance is exceptional," he adds.

However, even in the most successful implementation, expectations can exceed performance. "The CTI is one of our areas where we stumbled. With the CTI, we were going for skills-based routing, but we haven't been able to do that. We couldn't integrate that into our environment. We're using it on a queue-based structure – agents are logged into particular queues, but it's not as refined as we'd like. It is unlikely that we will be able to implement true skill based call routing until we replace our phone switch. It needs to be a combined approach with the IVR and the phone switch. [In our situation], those were already in place and not something we could easily walk away from," Sala says.

In summary, Sala says, the [MITEM] integration is not only seamless, but the system runs fast. In production, "CSRs don't realize 18 screens are being searched to bring up all the information on one screen — in under two seconds. Two other systems on Oracle databases, as well as QUEST's own database, are checked as well," he explains.



**System capabilities:**

Automatic retrieval via caller ID: Yes  
Payment record: Yes  
Record of past customer inquiries: Yes  
Latest consumption stats to last billing: Yes  
Current real-time consumption reports: No  
Variable rate information: N/A  
Real-time rate information: N/A  
Automated maps/geographical information: Yes, through Small World mapping  
Real-time outage notification: No  
Work order requests on file: Yes  
Work order status reports: Yes  
Summary billing for multiple sites: Yes  
Demographic information on customers: Limited  
Products and services purchased by customer: Some  
Products and services marketed to customer: No

**System costs/economics:**

Sala says that the CIS upgrade — consultant, new hardware, software and all — cost far less than a new CIS. "We did it for 10% of what it would have cost to replace the CIS."

With MITEM, he continues, "You buy development licenses to develop with their tool. In addition, there is a per-seat, run-time license cost." The yearly seat license and a developer license maintenance fee is typically from 15% to 20% of the original purchase price per year, Sala adds.

Allegheny Power pays maintenance for support and new releases, but Sala says, "We have had only one or two actual support calls to MITEM in over three years. We've had extremely good luck with their product. The MITEMView product is designed to do one thing and do it very well."

According to MITEM, a simplified way of stating its pricing is \$450 per user. That does not include professional services for custom application development. MITEM customers have the option of doing the additional development themselves or having MITEM Professional Services Group do it.

**Lessons learned and advice:**

Sala recommends testing and more testing. "We did proof of concept of product. We had a hard time believing [MITEMView] performed as they said. Whatever we use, we make sure it works."

Sala continues, "We would have focused more and tried not to do as much as we did. Because the CTI didn't work as expected, we spent a lot of time dealing with those issues at the expense of the project." In hindsight, "I wouldn't have recommended implementing CTI as part of this integration," he adds.



"I think we would have gotten more of our own people involved on the technology side. We had a real problem there," Sala says. During development, there were only two other technical people on the project in addition to Sala. "We lost one of those people and the other person left to go to another area. I had to hire new people and train them during the implementation. In the long run, it actually turned out well, as they are excellent." Next time, though, to avoid a potentially hectic situation, Sala would have more technical people to allow for such contingencies.

"Our team would definitely put language into any future contracts to allow us more input into staffing and leadership of the consultant, possibly with penalties if a consistent leadership team was not maintained. This was one of our bigger lessons learned," he continues.

"We were insane to do this as a RAD project, but [on the other hand] it's probably the best thing that we did. ... It forced us to live this project, and get it done. ... Our [information technology] environment changes so rapidly, you can't let these things drag on and on."



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