Rational and Arc Information Technologies

The Spark of Creation

Talk about a nightmare.You've had a team of developers hard at work for 8 months designing a critical software project. Now the design is done and you're ready to enter the implementation phase. Then suddenly the company that produces your development tool set pulls it from the market, leaving you stranded. As if that weren't bad enough, you're working on a fixed-bid contract, so every delay in the project is not only a problem from a technical standpoint, it's a financial headache as well.

Sound like a disaster?

Well, not for a company as resilient and innovative as Arc Information Technologies, LLC, a client-server application development firm located in suburban Chicago. And especially not when their fallback plan turned out to involve project-saving technology from Rational Software and IBM.

"When we started this project," explains Arc President, Dean Moretton, "we didn't begin with Visual Age for Java. We actually started with another vendor's integrated development environment for C++. But when we got to the point where we were ready to do implementation, the vendor pulled the IDE from the market - they were no longer going to support that tool. So there we were. We'd gone through 8 months of a design tool with 8 developers working on the project, and suddenly we found ourselves with a finished design, we've got the output, and we no longer have a target implementation platform."

The project in question was InTENSE (Integrated Trading and Event Notification System for Energy), an electricity trading and event notification system designed for electric utilities and power marketers. Specifically, Arc was working in partnership with a subsidiary of a major Midwest utility, which, like many other utilities facing deregulation, has branched out into the commodities trading market. This subsidiary trades electricity on the wholesale market, a commodity that has achieved and is projected to continue to achieve tremendous growth. "Electricity trading volumes are growing at 100% per quarter," says Joe Geary, Arc's Vice President of

Research, Development and Engineering. Currently in the commodity market, electricity posts $250 billion a year in consumption, and is the largest commodity in the United States. It is estimated by the year 2002, when full deregulation goes into effect, that the market will trade 4 trillion dollars a year in electricity.

Arc's InTENSE enterprise platform, the first Java application developed to automate and link all areas of the electricity trading organization, is a strong, versatile system designed to handle the challenges of this demanding industry. "We designed a system that supports limitless transaction growth," continues Geary. "And since trading organizations are spreading out geographically as they grow, we implemented a distributed component architecture for optimal performance. Additionally, since deregulation figures to play out over a five-year timeframe, our system is agile enough for us to deploy even substantial changes quickly."

But Arc's InTENSE system was nearly derailed by the defection of the IDE vendor. "The vendor's disappearance left us with a huge hole," says Geary. "We were on a fixed-bid project, and wondering how we were going to go forward in a way that would let us recover our design work. We hadn't quite realized the full importance of choosing Rational Rose® when we started out on our development effort, but as we faced a very serious design migration issue, we quickly realized the true benefit of Rose's round-trip engineering capabilities. Without such capabilities we would have incurred significant delays and cost overruns in manually moving our prior design, and partial implementation, into our new development environment. Rational Rose was crucial to the success of our project. And we are really looking forward to our future as RoseLink partners and exploring more of Rational's technology."

A triple play: Rose / VisualAge / InTENSE

Faced with the prospect of finding another development tool set, the Arc team made two crucial decisions: to switch to Java as a devel-

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opment language, and to go with IBM's Visual Age. "We evaluated what the marketplace had to offer us in terms of tool sets," explains Keith Faigin, Arc IT Technology Architect, "and Visual Age was the eventual winner." Adds Faigin, "IBM's Visual Age brought the technical requirements we needed at a competitive price with no runtime charges, which has a significant impact on our long-term ROI. IBM also brought teaming opportunities to the project that allowed us to tap into their broad experience with Visual Age and OO development. We wanted a tool that could support a system wherein a trade booked in New York immediately prompts the risk manager's screen in Chicago, regardless of the volume flowing over the system. This simply wasn't possible with traditional client/server tools. And because IBM Visual Age supports Java as well as C++, our system architecture has the capacity to handle high volume processes as compiled C++ components on a distributed platform."

But before Arc could begin working with Visual Age, they needed Rational Rose to convert their efforts to date. "Rose was incredible," states Moretton. "We started looking at how we could utilize the tool and what ended up happening was that we were able to recover 95% of our design from the earlier work and continue on with virtually no interruption. I've never seen it done before where a project is moving from design to implementation, has the chosen architecture yanked out from underneath it, and yet the project is able to move forward with only a very, very small impact on the schedule. With Rose, we were able to contain project scope and costs in a very difficult situation."

The process went like this: Arc began capturing analysis and design information in Rational Rose for C++, with the intention of integrating that information with the C++ IDE. But when the vendor pulled the IDE and Arc turned to Visual Age for Java, they were able to take those C++ models and generate code, reverse them back into Rose, and move the design forward into another version of Rose (Rose Java). With the help of Rose's scripting capabilities and a code-conversion routine Arc was able to output their entire application design into their new implementation environment.

Of the tools that helped Arc turn challenge into success, Moretton says, "With long-term partnerships such as Rational's and IBM's, we can be sure our solutions are in sync with each vendor's product direction. These partnerships have been and will continue to be valuable to us as we further extend into more complex components and business environments."

For more information please contact Arc IT at 888-98- ARCIT. Or visit *www.arcit.com*; *www.rational.com*; or *www.ibm.com*.

About Rational Software Corporation:

Rational Software provides a software development platform that improves the speed, quality, and predictability of software projects. This integrated, full life-cycle solution combines software engineering best practices, market-leading tools, and professional services. Ninety-six of the Fortune 100 rely on Rational tools and services to build better software, faster. This open platform is extended by partners who provide more than 500 complementary products and services. Founded in 1981, Rational is one of the world's largest software companies, with revenues of $796.7 million in its twelve months ended September 30, 2001, and over 3,800 employees worldwide. Rational is a component of the Nasdaq-100 Index®. Additional information is available on the Internet at www.rational.com.

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