

Industry:

Professional Services

Organization:

Young America Corporation

Description:

Young America is a comprehensive, integrated fulfillment services provider chosen by Fortune 500 companies seeking to increase profitability through optimized promotions across their customer life cycle.

Business Problem:

To meet the demands of its growing customer base, Young America was updating its software systems and needed an effective modeling solution to facilitate model-driven development and component reuse.

Rational Solution:

IBM® Rational® XDE™ Developer - Java Platform Edition and IBM® Rational® ClearCase® LT

Key Benefits:

Met demands of a growing customer base and opened new business opportunities by designing and building resilient software architectures based on shared components

Increased developer productivity with forward engineering of code from models, real-time integration of design and code, and integrated software artifact management

Improved communication within and between development groups through a common, industry-standard modeling language

Minimized risk by identifying potential problems in the design phase, prior to implementation

Jumpstarted development efforts, promoted reuse, and maintained consistent code standards by leveraging a powerful patterns engine

Rational and Young America

Young America Delivers Customer Satisfaction with Responsive, Open Systems Using IBM Rational XDE

Based in Minnesota, Young America is a comprehensive, integrated fulfillment services provider chosen by Fortune 500 companies seeking to increase profitability through optimized promotions across their customer life cycle. Young America's customized program solutions and high quality execution are backed by over 30 years of experience, a commitment to consultative client service, state-of-the-art technology, and a talented, forward-looking IT department.

With a well-deserved reputation of delivering business results, Young America is understandably a very busy place. Their systems support more than 1,500 concurrent programs and process more than 40 million consumer orders annually, including over 8 million IVR (Interactive Voice Recognition) calls. To meet the demands of its growing customer base and the needs of individual consumers, Young America recently began replacing its IVR system with a newer one based on open standards and reusable components. Because many of Young America's service offerings – which include rebates, product fulfillment, sweepstakes, and customer care outsourcing – share common functionality, the company saw the move to model-driven development and component-based architectures as key to their continued success. After careful evaluation of available modeling solutions, Young America began using IBM® Rational® XDE™ Developer - Java Platform Edition. Rational XDE has not only met the team's initial requirements fully, it has surpassed expectations with increased developer productivity, improved team communication and accelerated development of Young America's most critical projects.

Riley Rotter-Harlan, Technical Architect for Young America, reports that Rational XDE is crucial to his team's ability to design, develop and deliver systems that meet the needs of Young America's diverse customers. "When we develop a system for one customer, we want to leverage that

functionality across many customers, and that increases the design focus for us. When we build an order status component, for example, it has to work for anyone from a telecommunications company to retailers, consumer packaged goods companies and more. Rational XDE is critical really to us. It makes our designs more readable, more consistent and more up to date. Without Rational XDE, to some degree, you're flying blind. You're coding from paragraphs of written requirements, and that's really hard to do," Rotter-Harlan says.

Platform Change Leads to New Opportunities

The decision to use Rational XDE was part of a larger shift within the company towards more open technologies. From a business perspective, the need was made more acute by the desire to replace the existing IVR system with one that would enable Young America to pursue more business opportunities. Rotter-Harlan remembers, "Previously we were primarily a Microsoft Visual Studio 6 development shop. We had not upgraded to .NET. There were upgrades that we needed to complete, and we needed to make a platform decision — continue with Microsoft or move to Java. Around the same time, we were replacing our voice response platform. We wanted to keep things as open as possible. For that reason and because we have an AIX backend for our database environment we decided to make the move to Java. For our IVR project, we chose IBM WebSphere™ Voice Response for AIX, because we are very familiar with AIX and because it is a Java based platform. And that point we also chose IBM WebSphere Studio as our IDE. It all fit together."

With the platform decision made, the Young America team addressed their next need: a visual modeling solution that would help them design and build resilient architectures based on shared



Rational and Young America

components. “We were really building more than a simple IVR application; it was a ...self-service... platform. This platform ultimately would be used by both the voice response system and our Web self-service applications. We planned on using components created for the IVR applications for the Web self-service applications as well as our Customer Care Toolkit. So we started looking towards modeling tools to better our communication between the groups and make sure that everyone understood where we were going with design.”

A False Start Highlights The Need For Rational XDE

To minimize costs, the team at first attempted to use an open source modeling tool, but soon found that it fell well short of meeting their needs. “We had limited success because of the very limited functionality and limited integration capabilities of the open source modeling solutions. So we did an evaluation of other solutions and chose IBM Rational XDE based on three key requirements. First, Rational XDE has UML support, which is very important for us because we are completely customer driven. In our development we have to flex our staff all the time so we’re constantly utilizing contractors and consultants. We needed something that everybody is going to understand, and that is UML,” Rotter-Harlan notes. Pioneered by Rational, the Unified Modeling Language (UML) is the recognized standard for designing, modeling, and documenting software systems.

Rotter-Harlan continues, “Second, Rational XDE integrates with our chosen development environment, IBM WebSphere Studio Application Developer, and that was important to our developers.” The last requirement of the Young America team was that the modeling solution they would pick would have to save the developers time, and, ultimately, save Young America money. “Third, unlike many tools, Rational XDE offers real-time integration of design and code. It is actually writing the shell code for your components while you are designing. We found that with some of the other tools that didn’t do that – including the open source tool we tried – we were wasting quite a bit of time retyping what we had already done in the design in order to generate the shell. For what Rational XDE costs versus the hours saved of a consultant’s time, it pays for itself awfully quick,” Rotter-Harlan concludes.

This last capability proved even more important as the team found itself short on time. “We were behind schedule because we had started the design with the open source modeling solution. But we found that it was actually counter-productive because we had to rebuild those components after we had designed them — there was no tie between the UML and the code. It was a lot of double entry and manual entry to keep the model and code in sync, and it just didn’t work. We went out specifically looking for something that would integrate code and design and Rational XDE really fit the mold perfectly. It hit every requirement that we had,” adds Rotter-Harlan.

Maximizing Re-use, Minimizing Risk

With numerous concurrent, high-priority projects underway, the Young America development team wasted no time putting Rational XDE to use. According to Rotter-Harlan, it wasn’t long before he recognized that Rational XDE delivered the capabilities they were looking for, along with additional benefits. “We jumped right in and started using Rational XDE. As we develop our applications we are able to communicate the design of the components to the developers that will build them and to developers on other projects. And as we bring in consultants, it’s a lot easier to get them to up to speed quickly. Rational XDE helps articulate the design to our team. They can look for areas where we might be designing ourselves into a corner and catch anything that we’ve missed before we begin coding the application or component. Also, Rational XDE helps us maximize bang-for-the-buck on re-use,” he notes.

The ability to identify potential problems in the design, before coding begins, is a key to minimizing the risks and costs of Young America’s development efforts. Rotter-Harlan explains, “With Rational XDE we can build a use case, and a class diagram and a sequence diagram. From there, we can really test off our design. We can run different business scenarios or different customer order types through our design before we write any code. We can find flaws and make refinements early. That’s important because when you move from requirements to design, to code to deployment, each step it makes it exponentially harder to fix problems. And it’s a lot easier to do with a picture than it is with a paragraph or with bullet points. Plus, with Rational XDE, once we’re happy with design, we

already have the shell code there so we just need to add the business logic. Later in development, when we make a change to the code IBM Rational XDE updates our diagram automatically. If we were using other tools we would need to go back and do that.”

Seamless Software Asset Management

As an integral part of IBM WebSphere Studio Application Developer, Rational XDE Developer enables the Young America development team to merge design and development into tightly integrated experience. Further extending the benefits of this seamlessly integrated environment is IBM Rational ClearCase® LT. For version control tasks, Young America developers use Rational ClearCase LT directly within their IDE to check-in/check-out code or model artifacts. The development team had come to expect software artifact management capabilities in their IDE from their use of Microsoft Visual SourceSafe; but they are impressed with the superior reliability of Rational ClearCase LT.

“Because Rational ClearCase LT is delivered with IBM WebSphere Studio Application Developer, it was the first Rational tool that we used. A lot of our developers were used to using version control that integrated directly with the IDE. So for Rational XDE to enable them to do that again, but also provide a more robust package was a big benefit for us. We looked at other tools – CVS, PVCS and a couple of others – and we just found that they were too cumbersome for us. Rational ClearCase has a very good reputation and we’ve proved out that it just works. We manage both code and models, we also check in requirements documents and other assets. It is a very easy tool to use, we don’t have any problems with it,” Rotter-Harland says.

The Power of Patterns

Through its unique patterns engine, Rational XDE Developer helps Young America jumpstart developers and development, increase efficiency and reuse throughout the project lifecycle, and maintain consistent code standards. Rotter-Harlan reports that pattern support in Rational XDE has helped his team come up to speed faster. “I see Rational XDE’s pattern engine as very powerful and very useful. We’ve utilized the singleton pattern successfully, and Rational XDE absolutely made that quite a bit easier, especially in the learning process. When we started, some our

developers were Java novices. When we brought in consultants with more experience, not only were they able to jump in and use Rational XDE right away, they were also able to articulate and explain the singleton pattern. You can talk about the code and write on a white board all day, but when you can actually look at a UML diagram it’s a lot easier for people to understand.”

He adds that he expects his team will further leverage this capability on upcoming projects by creating and using patterns of their own. “We plan on using design patterns of our creation in the near future. It’s easy to see the value. Also, given our success with Rational XDE, when we look at tools for requirements management, test management and automated testing, Rational will be our first choice.”

Advantages at All Levels

Rotter-Harlan reports that Rational XDE and Rational ClearCase LT have provided Young America with significant benefits across multiple levels, including advantages for individual developers and project leads, as well as competitive advantages for the business.

From the developer’s perspective, he points to the productivity gain made possible by the seamless integration of design and code, and to the value of Rational XDE in building developer skills. “For our less experienced Java developers, Rational XDE provided a kind of a shortcut. They didn’t have to spend as much time understanding how to code an interface, because Rational XDE does it for you. In my development experience, interface development — when you’re just typing into an editor — is very tedious. You know what your component should look like; you know how to articulate it in a drawing. So, to go back and have to write that code, in my opinion that’s a waste of time. Rational XDE generates it automatically and saves you a lot of time that you really shouldn’t have to spend. When we were evaluating Rational XDE we estimated that for an eight-hour design of a component, it would take us an additional four hours to build the interface without a modeling tool. With Rational XDE we no longer have to spend those four hours. Then on the other side, for our people that understand Java, sometimes it is quicker for them to just code it. Fine, they can go that way, and Rational XDE will create the diagram and so that it can be shared with the other developers.”

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In his role as project leader, Rotter-Harlan values the added flexibility in staffing that Rational XDE and industry-standard UML provide. "From my perspective I think the biggest benefit is simply the UML — the diagrams, the pictures, and the ability to review designs. When the developers articulate their designs in UML and automatically generate code, they get done faster which also benefits me. Plus, I can pull a Web developer that is doing all ASP, Visual Basic, or COM+ development and UML helps them understand our Java component, without them having to understand the intricacies of Java syntax." He adds that UML is a great help in monitoring his team's work. "Not only do we expect consultants and new employees to know Java, we expect them to know UML. When they come in and I have them do a design, they can hand me a UML document that I can review to see that they're going in the right direction. I trust them a lot more quickly too, when I can look at the UML document they've created. It's a lot easier method of reviewing design, as opposed to written words. It gets back to UML being a common language. It's a language unto itself, and it's something that people can pick up very quickly and understand. When we bring in consultants they don't have to learn from design documents, they can all read and create UML documents. It just works much better."

Ultimately, the team's success with IBM Rational XDE has had a positive impact on the entire Young America organization including Sales. Rotter-Harlan explains, "Our Account Executives are excited about the potential associated with our new platform. IT groups and development teams have to prove themselves to management and show that they can get the job done. With Rational XDE we're doing that."

About Rational

Rational 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.

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