



Microsoft .NET Framework 3.5 Customer Solution Case Study



Software Developer Deploys Scalable, Extensible Reading and Publishing Platform

Overview

Country or Region: United States

Industry: Professional services

Customer Profile

EPS Software is a Microsoft® Certified Partner whose best-known products include *CODE Magazine*, *Xiine*, *Milos* Solution Platform, and *VFPConversion.com*.

Business Situation

To maintain its leadership position as a publisher of content for developers working in the Microsoft .NET Framework, EPS Software needed to make that content available in a more dynamic, interactive, and innovative way.

Solution

EPS Software developers used Microsoft technologies to deliver an innovative and compelling product known as *Xiine*, an open, extensible platform for digital reading and digital publishing.

Benefits

- Highly efficient development environment
- Innovative and extensible user experience
- Appeal to a broad customer base
- Ease of reuse and maintenance
- Wider development opportunities

“By integrating [Microsoft] technologies into our processes, we built a product that gives our customers a competitive edge they wouldn’t get elsewhere.”

Markus Egger, President and Chief Software Architect, EPS Software

EPS Software is the creator and publisher of *CODE Magazine*, the leading independent publication for developers using the Microsoft® .NET Framework. Seeking to boost the magazine’s appeal to readers, EPS Software decided to enhance the online version of the publication to provide a more compelling user experience. With the help of Microsoft technologies for rich-media development, EPS Software not only produced a more innovative and creative version of the magazine, but also released *Xiine*, a highly scalable and extensible platform for digital reading and publishing. With *Xiine*, EPS Software is positioned to reach more customers, and with the Microsoft technologies and the software-plus-services model, the company can do so in a rapid and efficient fashion.



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Situation

EPS Software is a consulting, mentoring, and custom software development company founded in Austria in 1994 and now headquartered in Houston, Texas. EPS Software developers work primarily with Microsoft® development technologies, especially the Microsoft Visual Studio® 2008 development system and the Microsoft .NET Framework 3.5.

One of the earliest offerings from EPS Software was *CODE Magazine*, the leading independent publication for developers using the .NET Framework. *CODE Magazine* was popular with readers, in both paper and online versions, but its creators had other ideas for it.

“In its online version, *CODE* was published as a PDF, which is really not optimized for screen reading,” explains Markus Egger, President and Chief Software Architect at EPS Software. “When it comes to technology, this audience is used to the best of the best. We knew that to keep them coming back to *CODE*, we needed to give them a more compelling experience than reading a PDF. We needed to deliver a version of *CODE* that was more dynamic, more interactive, and a lot more innovative.”

Solution

To transform the experience of reading its magazine online, EPS Software developed a special document viewer based on the *CODE* online solution and named Xiine. Although EPS Software developed the original *CODE* solution using the Microsoft .NET Framework 3.0 and Windows® Presentation Foundation, Egger did consider using different technologies for Xiine development—Flash, in particular.

“But Flash did not support code reuse, so we would have been unable to bring over

code we used in Windows Presentation Foundation,” Egger explains. “This would have required us to start from scratch, investing that much more time and effort and delivering the product that much later.”

Instead, for their Xiine development, Egger and his colleagues decided to continue using the Microsoft .NET Framework, moving to version 3.5 Service Pack 1, as well as Microsoft Visual Studio 2008, Windows Communication Foundation, and Windows Presentation Foundation. They also began using emerging technologies such as Microsoft Expression Blend™ design software, the Azure™ Services Platform, the Microsoft Surface™ software and touch-computing platform, and especially the Microsoft Silverlight™ browser plug-in.

“When we evaluated Silverlight, we found a level of support for rich-content formatting and rich-media integration that was simply unavailable in any of the other products we considered,” Egger says.

EPS Software markets Xiine not only as a document viewer for *CODE*, but also as an independent product for digital reading and publishing of Web content. Through Xiine, readers can customize fonts and layouts and integrate three-dimensional models and other graphical environments interactively. Publishers can do the same with Xiine, making their own products more innovative, creative, and attractive to readers.

Benefits

For Egger and his colleagues, Xiine represents a major success story for EPS Software, and for this success they give significant credit to their decision to use Microsoft technologies in development. “By working with Microsoft technologies, we made the most of our developers’ talents, and by integrating those technologies into our

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Mike Yeager, Manager and Senior Software Developer, EPS Software

processes, we built a product that gives our customers a competitive edge they wouldn't get elsewhere,” Egger explains. “This makes EPS Software that much more valuable in those customers' eyes.”

Open, Extensible Model Expedites Development

According to Mike Yeager, Manager and Senior Software Developer for EPS Software, developers enjoyed a decided edge in productivity from having used Visual Studio 2008 for all code development.

“Thanks to the open and extensible model of Visual Studio 2008 and its productivity features, we can make the product do exactly what we want,” Yeager says. “If you're developing an application for Microsoft Surface, Visual Studio 2008 becomes a Microsoft Surface application development tool. On an application for Windows Mobile®, it becomes an application development tool for Windows Mobile, and so on. It's the world's best development environment.”

Moreover, by taking advantage of the integration between Visual Studio 2008 and Microsoft Expression Blend, Yeager's team simplified what is often a tedious process during application development: integration of the business logic with the user experience. “We took code we had already developed in Visual Studio and opened it in Expression Blend to work on the user experience, and vice versa,” Yeager says. “By working on a single code base, we built a better application, in 20 to 30 percent less time, than we could have working on two different code bases.”

One of the most intriguing user-experience challenges for Yeager, Egger, and their colleagues was their desire to support Xiine in the Microsoft Surface environment. To meet this challenge, they took advantage of the

integration between Microsoft Surface and Windows Presentation Foundation. As Egger explains, EPS Software was developing Xiine for Windows Presentation Foundation long before the Microsoft Surface table even existed. However, because both Windows Presentation Foundation and Microsoft Surface are based on the .NET Framework, EPS developers were able to reuse most of their existing code—for a time-to-market advantage of approximately two months.

“Of course, we had to accommodate the different ways in which users interact with a Microsoft Surface unit, such as replacing scroll bars with direct touch navigation and enabling multiple simultaneous users, which you wouldn't ordinarily find in a desktop environment,” Egger notes. “But from a technical point of view, our transition from Windows Presentation Foundation to Microsoft Surface was very smooth and straightforward.”

Zero-Footprint Scenario Appeals to Partners

According to Egger, although the excitement surrounding the use of Xiine on a Microsoft Surface table is considerable, for now the largest market for an extensible Xiine with a highly attractive user experience is in the mobile application market. For this, EPS Software used Silverlight to deliver Xiine on a variety of operating systems and mobile devices, without having to install the software or add it to the operating system's “footprint.”

“By having used Silverlight as a Windows Mobile platform, we were able to insert the application service layer of Xiine into the middle tier,” Egger explains. “Consequently, we've been able to provide a natural interaction model for Xiine on multiple mobile form factors with very little effort on our part.”

“By using the software-plus-services approach, per targeted platform beyond the first implementation, we are saving 50 to 75 percent of the time required to adapt an application for a new device.”

Mike Yeager, Manager and Senior Software Developer, EPS Software

Those form factors represent mobile devices that run on a variety of operating systems in a cross-platform, zero-footprint scenario, which enhances the relationship between EPS Software and its partners, Egger points out.

“We can pass Xiine components to our partners, who can simply drop a control into their Web page to offer full Xiine functionality on their own Web sites—all without having to code or import hundred of files,” he says.

To support the level of scalability that many such partners will require, Egger and his colleagues turned to another Microsoft technology, the Azure Services Platform. “As a relatively small company, we can’t support a data center with thousands of servers or afford to contract with a hosting company for something of this magnitude,” he notes. “So how could we support enough storage capacity and bandwidth to make Xiine easily scalable?”

Egger found his answer by moving the Xiine services to the Azure Services Platform, where they could be scaled indefinitely to support the servers and storage space required by a given customer, application, or international location. “The Azure Services Platform enables us to open up Xiine so that partners can import their own content and extend the content base indefinitely,” he reports.

Software-plus-Services Model Supports Reuse, Maintenance

The scalability of Xiine is just one of the advantages that EPS Software is enjoying, thanks to its having decided to use Microsoft technologies on this project. Other advantages are ease of reuse and ease of maintenance, following the software-plus-services model that was enabled by the use of Windows Communication Foundation.

As Egger explains, software-plus-services is an important aspect of Xiine because Xiine

incorporates a rich services layer that drives the entire application, stores all the data, and has all the logic, and all the different clients and form factors are actually clients that talk to that service.

Using Windows Communication Foundation to build a service architecture that can be accessed in a number of different ways, EPS Software developers were able to access the services layer over HTTP, TCP, or whatever might happen to be open to them at a given time. As a result, they avoided having to build multiple implementations, for a time-to-market advantage of several months for each of the targeted platforms.

Egger’s colleague Yeager concurs, explaining that EPS Software developers are using software-plus-services not only in Xiine but in all of their projects, to create applications that are easier to reuse and maintain.

As Yeager explains, the developers are essentially taking a thin layer of the user interface and re-creating it specifically for a desktop browser, a Windows Mobile device, or a Microsoft Surface unit, taking the Extensible Application Markup Language (XAML) engine and reskinning and restyling it to provide dynamic and compelling user experiences on that particular device—and enjoying considerable savings in time and effort.

“By using the software-plus-services approach, per targeted platform beyond the first implementation, we are saving 50 to 75 percent of the time required to adapt an application for a new device,” Yeager explains. “That’s a huge advantage, considering the constant proliferation of new devices.”

For More Information

For more information about Microsoft products and services, call the Microsoft Sales Information Center at (800) 426-9400. In Canada, call the Microsoft Canada Information Centre at (877) 568-2495. Customers who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234 in the United States or (905) 568-9641 in Canada. Outside the 50 United States and Canada, please contact your local Microsoft subsidiary. To access information using the World Wide Web, go to: www.microsoft.com

For more information about EPS Software products and services, call (832) 717-4445 or visit the Web site at: www.eps-software.com

Platform Enables Development of Innovative Products

What's next for EPS Software and Xiine?

According to Egger, the possibilities are vast, considering that Xiine is an open platform that anyone in the publishing community can use for publishing and distributing rich content, free or paid, in a relatively simple fashion. For example, he points to bookstores that are now opening coffee shops onsite, where customers can sit and browse through books they are thinking of buying, and suggests a comparable scenario. Using Xiine and Microsoft Surface, EPS Software will offer solutions that can "bring the bookstore into the coffee shop," where customers can use Microsoft Surface units built into tables to browse what's available at a local bookstore, and then make their purchase online. Later, the customers can access the same content in Xiine from their smartphone or another mobile device.

For Yeager, Microsoft technologies are making a difference even when EPS Software developers are targeting a Xiine application for a more traditional device, like a desktop computer. "Using these Microsoft technologies, our developers can tackle new ideas and challenges with tools they already know," he says. "We're doing things we couldn't do before and building products we couldn't build before, and the way people are adopting our products is phenomenal."

Microsoft .NET Framework 3.5

The .NET Framework version 3.5 is the Microsoft managed-code programming model for developing software on the Windows operating system platform. The .NET Framework 3.5 includes Windows Presentation Foundation, Windows Communication Foundation, Windows Workflow Foundation, Windows CardSpace™ identity selector, and other technologies. It provides a consistent and familiar development experience, bringing new technology to the millions of developers programming in managed code today.

For more information about the .NET Framework 3.5, please go to: www.microsoft.com/netframework

Software and Services

- Azure Services Platform
- Microsoft Expression Blend
- Microsoft Surface
- Microsoft Visual Studio
 - Microsoft Visual Studio 2008 Professional Edition

■ Technologies

- Microsoft .NET Framework 3.5
- Microsoft Silverlight
- Windows Communication Foundation
- Windows Presentation Foundation