



## Solution Provider Rapidly Builds Multitouch Application with Latest Operating System

### Overview

**Country or Region:** United States

**Industry:** Technology

### Customer Profile

Tyler Technologies, based in Dallas, Texas, provides software and services that help public-sector organizations be more efficient and accessible. It has approximately 2,000 employees.

### Business Situation

Tyler Technologies needed to quickly develop a new software product that enabled judges to review complete case information, would be very easy to use, and would run on small devices.

### Solution

The company built its new Odyssey SessionWorks :: Judge Edition application using the Windows 7 operating system, the Microsoft .NET Framework 4, and Windows Presentation Foundation 4.

### Benefits

- Simplified and accelerated development
- Created an intuitive application and rich user experience
- Enabled a streamlined solution and compelling package

"We're confident that we can deliver a compelling, intuitive product that will transform the way judges use technology in their courtrooms. We couldn't do this without Windows 7."

David Harris, Chief Technology Officer, Tyler Technologies, Courts & Justice Division

Tyler Technologies provides software solutions that streamline business-critical operations for local governments. Named one of "America's 200 Best Small Companies" by *Forbes* magazine in 2009, the company attributes its success to solutions that excel at improving efficiency and accessibility. Its Courts & Justice division, which sought to change how judges manage information in courtrooms, needed to quickly create a product for that new audience. Using the Windows 7 operating system for its enhanced touch capabilities, and the upcoming Microsoft .NET Framework 4 and Windows Presentation Foundation 4.0 technologies, Tyler Technologies built its Odyssey SessionWorks :: Judge Edition prototype in just two months. It features an intuitive, functionally rich solution that mimics the way judges review case information, and that runs on small devices that are well suited for courtrooms.



Works the way you want

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## Situation

Tyler Technologies empowers people that serve the public by providing information management solutions and services to more than 8,000 local government entities in the United States, Canada, Puerto Rico, and the United Kingdom. Its continued success—2008 revenues grew 21 percent over the previous year to U.S.\$300 million—stems from the company’s ability to deliver high-quality, innovative solutions. That commitment to excellence is evident in the company’s Courts & Justice division, which enables county, district, state, and municipal courts to use advanced technologies to simplify processes, improve workflow, and streamline operations.

In April 2009, David Harris, Chief Technology Officer for the Tyler Courts & Justice division, was presented with a challenge. The company was planning to exhibit at the Court Technology Conference—the premier court industry symposium—in September 2009 and wanted to showcase an offering for judges. “Our Odyssey solution set had products for court administrators, clerks, and prosecutors, but it didn’t include anything targeted at judges, who are key constituents in the court system and have tremendous influence over technology-purchasing decisions. The Court Technology Conference was an ideal opportunity to gain exposure to this critical yet hard-to-reach audience. But with only five months to go before the conference, we had very little time to conceptualize and build a compelling product,” Harris says.

Some judges are resistant to using technology in the courtroom, perceiving that it is cumbersome and could disrupt their ability to process cases efficiently. But Tyler knew that judges would value a solution that made it easier for them to manage case information. And with deep expertise

born from long-standing engagements with court customers, Tyler knew it was uniquely suited to deliver such a solution.

Tyler developed the concept of Odyssey SessionWorks :: Judge Edition, software that would provide access to complete electronic case files right from the bench. The company envisioned that judges would use the application, instead of paper file folders, to enter notes, view and bookmark vital documents, and view summaries of case information.

“We knew that we’d have to make the product easy to use with a natural interface that operates the way judges want to work, and intuitive enough that they wouldn’t have to spend valuable time attending training courses,” says Harris. “Because judges would no longer have paper files that they could refer back to, the solution also had to provide reliable, simple access to all the information they need. And because judges don’t want computers to block their view of their courtrooms or interfere with the proceedings, we also wanted to make sure that SessionWorks :: Judge Edition would run on hardware that has a small footprint and a very low noise level.”

Tyler needed a way to develop SessionWorks :: Judge Edition quickly, while ensuring that the software would meet the company’s requirements for ease of use and functionality.

## Solution

Tyler Technologies, a Microsoft Gold Certified Partner, had been speaking with its Microsoft representative about the time-frame and usability challenges in developing Odyssey SessionWorks :: Judge Edition. “Microsoft was eager to help us and invited us to the Microsoft Technology Center in Las Colinas, Texas, so that its

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David Harris, Chief Technology Officer,  
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technology experts could assist us in planning and designing the product,” says Harris.

In July 2009, three developers from Tyler and an interactive designer from its partner, RD2, spent two weeks working with Microsoft at the Microsoft Technology Center. “Having everyone together in one place enabled us to jump-start the development process while getting up to speed on the latest Microsoft technologies,” Harris says.

After collaborating at the Microsoft Technology Center on a proof of concept for SessionWorks :: Judge Edition, Tyler and RD2 spent two months developing a prototype of the product. Tyler chose to run SessionWorks :: Judge Edition on the Windows 7 operating system. “We wanted to use the enhanced touch technologies in Windows 7 to create software that judges could easily interact with—which was critically important to our product’s success,” Harris says.

Using Windows 7 would also enable Tyler to meet increasing demand for 64-bit applications. “The industry is clearly moving to 64-bit versions of Windows on desktop computers, and we felt it was important to be ready with a 64-bit product for the courts,” Harris explains.

The company developed its SessionWorks :: Judge Edition prototype on an HP TouchSmart IQ846 computer using the Microsoft .NET Framework 4 Beta, the Windows Presentation Foundation component of the .NET Framework, and Microsoft Visual Studio 2010 Beta development system—all of which helped simplify code development and enable a rich, intuitive user experience. Tyler developers took advantage of Windows Presentation Foundation technologies,

including the manipulation processor, which enabled them to quickly create the code for recognizing sophisticated touch movements such as image rotations, and the inertia processor, which they used to simulate actions such as users “grabbing” and “flicking” pages. RD2 used Microsoft Expression Blend 3 design software to transform concept artwork into an interactive model that was then incorporated into SessionWorks :: Judge Edition.

Tyler built SessionWorks :: Judge Edition to run without having to be continually connected to a network. All of the information that judges require is cached on the local client, in a database running Microsoft SQL Server 2008 Express data management software. The product uses the Windows Communication Foundation unified programming model in the .NET Framework to retrieve relevant case information from central server computers prior to the beginning of the court session. In this way, judges know that they will have the information they need when they arrive in their courtrooms the next day.

Tyler demonstrated the prototype on the first day of the Court Technology Conference. Harris notes, “The product was exceptionally well received. Judges were overwhelmingly pleased with its capabilities and ease of use.”

The Tyler development team is now incorporating feedback that it gathered from judges during the conference and developing the final product. The team expects to ship SessionWorks :: Judge Edition in the second quarter of 2010.

## Benefits

By using the Windows 7 operating system, the .NET Framework, and Windows Presentation Foundation, Tyler Technologies simplified and accelerated the development

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of Odyssey SessionWorks :: Judge Edition. It expects to deliver a very easy to use, functionally rich solution that runs on small, power-efficient devices.

“We’re confident that we can deliver a compelling, intuitive product that will transform the way judges use technology in their courtrooms,” says Harris. “We couldn’t do this without Windows 7.”

#### **Simplified and Accelerated Development**

Harris notes that, by using Microsoft technologies, Tyler developed the prototype of SessionWorks :: Judge Edition faster and with much less effort than expected. “We were pleasantly surprised that, with just four people working on the project, we were able to create a solid prototype in just two months,” says Harris. “The developers didn’t have to do complex coding and learn new application programming interfaces to manipulate images. If we had to do native coding, we wouldn’t have made our deadline for the Court Technology Conference. We’d still be writing the software now,” says Harris.

Using the .NET Framework and Expression Blend 3, Tyler was able to easily align the design and development aspects of the project. “Because we had two separate work streams and teams that were in different locations—at Tyler Technologies and at RD2—we needed to establish as much synergy as possible between the groups. The workflow between Expression Blend and the .NET Framework is superb. It really enabled us to synchronize efforts and streamline the design and development processes,” says Harris.

#### **Created an Intuitive Application and Rich User Experience**

Using the Windows Touch capabilities in Windows 7, Tyler created a solution that is intuitive and simple to use, and can

eliminate the need for judges to use both the mouse and the keyboard. “Judges can thumb through cases with hand gestures that feel natural and familiar,” says Harris. “All the information that judges need is readily available at their fingertips. And they can access information just as quickly—and perhaps even more easily—than they could with paper files.”

Because the product mimics how judges are used to working, they won’t have to take time for training. “Judges will be able to get up to speed on SessionWorks :: Judge Edition very quickly. This is really important because they wouldn’t use the product if it wasn’t intuitive; they don’t have the time to spend days or weeks in training courses,” Harris says.

#### **Enabled a Streamlined Solution and Compelling Package**

Tyler Technologies is taking advantage of Windows 7 power management capabilities, such as device driver support for the latest power-management technologies from hardware vendors.

“Because Windows 7 is so efficient, customers can run SessionWorks :: Judge Edition on computers that use less power, don’t require fans, and are quiet enough to have in the courtroom,” Harris says. “By enabling a small footprint—with no cables—we’re minimizing the space required on each judge’s desk, and enabling the whole package to match the clean look that judges want for their courtrooms.”

## 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 in the United States and Canada who are deaf or hard-of-hearing can reach Microsoft text telephone (TTY/TDD) services at (800) 892-5234. 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](http://www.microsoft.com)

For more information about RD2, Inc., products and services, call (214) 521-9600 or visit the Web site at:

[www.rd2inc.com](http://www.rd2inc.com)

For more information about Tyler Technologies products and services, call (972) 713-3700 or visit the Web site at:

[www.tylertech.com](http://www.tylertech.com)

## Windows 7

Works the way you want: Windows 7 will help your organization use information technology to gain a competitive advantage in today's new world of work. Your people will be able to be more productive anywhere. You will be able to support your mobile work force with better access to shared data and collaboration tools. And your IT staff will have better tools and technologies to help enhance corporate IT security, protect data, and efficiently deploy and manage systems.

For more information about Windows 7, go to:

[www.microsoft.com/windows/windows-7](http://www.microsoft.com/windows/windows-7)

### Software and Services

- Windows 7
- Microsoft Server Product Portfolio
  - Microsoft SQL Server 2008 Express
- Microsoft Visual Studio
  - Microsoft Visual Studio 2010 Beta
- Microsoft Expression Blend 3
- Services
  - Microsoft Technology Center

### Technologies

- Microsoft .NET Framework 4 Beta
- Windows Communication Foundation
- Windows Presentation Foundation

### Hardware

- HP TouchSmart IQ846

### Partners

- RD2, Inc.