



Overview

Country or Region: United States
Industry: Professional services—
IT services

Partner Profile

MICROS Systems develops and distributes integrated software solutions for restaurants and other hospitality enterprises. The company has more than 4,700 employees globally.

Business Situation

MICROS clients needed to better manage separate systems. They also wanted to drive efficiencies in their operations and generate additional revenue through new channels.

Solution

MICROS built a solution based on the Microsoft .NET Framework 3.5, Windows Presentation Foundation, Microsoft SQL Server 2008 Enterprise, and the Windows Embedded CE 6.0 R3 operating system.

Benefits

- Centralizes content management
- Provides customizable user interfaces
- Helps clients create rich content
- Enhances security and resiliency
- Offers scalable architecture

Hospitality Technology Leader Centralizes Software, Creates Rich User Experiences

“Because MICROS Symphony 2.0 is based on the flexibility of the .NET Framework 3.5 and Windows Presentation Foundation, our clients can easily change their user experience and scale up or down as needed.”

Kelly Maddern, Chief Technology Officer, MICROS Systems

MICROS Systems, based in Maryland, is a Microsoft Gold Certified Partner that provides point-of-sale and other software solutions for restaurants, hotels, retail, and other hospitality industry companies. MICROS wants to provide exciting user interfaces, improve scalability and resiliency, and help its clients manage separate IT systems. Using the Microsoft .NET Framework 3.5, Windows Presentation Foundation, Microsoft SQL Server 2008 Enterprise, and the Windows Embedded CE 6.0 R3 operating system, MICROS created Symphony™ 2.0, a new service-oriented architecture solution. Now, MICROS clients have centralized management capabilities and the flexibility to create customizable user interfaces with dynamic visual features. The scalable solution also enhances security and increases system resiliency.

The Microsoft logo, consisting of the word "Microsoft" in a bold, italicized, black sans-serif font, with a registered trademark symbol (®) to the upper right.

Situation

MICROS Systems, headquartered in Columbia, Maryland, is a leading developer of enterprise applications that serve the hospitality and retail industries. MICROS provides complete information management solutions, including software, hardware, enterprise systems integration, and consulting. The company's clients include full-service and quick-service restaurants, hotels, retail stores, and leisure and entertainment industry companies.

MICROS is a global leader in restaurant industry solutions, with more than 330,000 installations worldwide. The company offers software for point-of-sale (POS) and operational applications as well as a suite of products for centrally hosted enterprise applications such as inventory, labor, and management. MICROS distributes its products and solutions through a global network of sales offices, subsidiaries, and independent dealers in 50 countries.

In the restaurant industry today, it is common for operators to have a POS system from one vendor, a digital menu board from another vendor, and a self-service kiosk from a third vendor. Each system has its own content store and is managed separately, so managing menu items, prices, discounts and specials, and presentation content can be very labor-intensive. For this reason, MICROS created a solution that will help its restaurant clients solve the problem of managing disparate systems.

Restaurant operators are also looking for customizable system user interfaces (UIs). For example, many solutions have UIs that are fixed in look and feel, with little support for customization. This is especially critical in the competitive restaurant industry, where restaurateurs need to differentiate themselves not only by the food they offer,

but also through operational behaviors and efficiencies. The ability to customize the user experience is becoming more and more important, because restaurants are increasingly using digital menu boards, ordering kiosks, and Web sites.

These kinds of capabilities are essential in this era of customers using cell phones and mobile devices to order food. "Restaurants need to extend their business beyond the four walls of the restaurant," says Kelly Maddern, Chief Technology Officer, MICROS Systems. "Restaurant consumers today have a digital lifestyle, and they need support at the point of sale for their preferred digital tools."

Scalability is another big restaurant client need. For instance, MICROS clients include small, independent single-unit restaurants and large chain operators with multiple units, and they require flexible systems that can be scaled down or up, depending on their needs.

Clients also require solid system resiliency and security. For example, they want offline functionality in case parts of their systems become unavailable. They also must secure sensitive consumer data, such as credit card information, from the time it is received at point of payment across the network and during storage in the database.

Solution

To create the right solution to meet the needs of its hospitality industry clients, MICROS chose to use a set of Microsoft technologies including the Microsoft .NET Framework 3.5 and Windows Presentation Foundation, which offer the XAML declarative markup language for use in defining UI elements. The company also deployed Microsoft SQL Server 2008 Enterprise data management software, the Windows Embedded CE 6.0 R3 operating

system, and Microsoft Silverlight for Windows Embedded CE 6.0 R3.

Additionally, MICROS uses the Microsoft Visual Studio 2010 development system, which includes a Model-View-Controller (MVC) framework—Microsoft ASP.NET MVC 2—for developing Web applications. The solution developers also took advantage of Microsoft Sync Framework, a data synchronization environment used for collecting data across multiple stores.

With this combination of technologies, MICROS developed Symphony 2.0, a significantly enhanced version of its centralized, service-oriented architecture system for hospitality clients. “MICROS has enabled the “Restaurant of the Future” with Symphony, a fully integrated, innovative solution that helps restaurant operators capitalize on the fast-changing business environment,” says Maddern.

Symphony 2.0 integrates the management of various customer presentation endpoints—including POS systems, digital menu boards, kiosks, and digital signs—from a central content management system based on SQL Server 2008. With this technology, a restaurant operator can change the price of a menu item or add nutritional information in one place, and have that change duplicated across all parts of the system.

The solution can scale from a single-unit operator to a business with thousands of workstations across multiple properties. It can be hosted in one of four MICROS worldwide data centers or be self-hosted by a client.

Symphony 2.0 also implements its user experiences as XAML content. The solution’s UI for Windows Embedded CE is implemented using Microsoft Silverlight for

Windows Embedded CE 6.0 R3, which makes it possible to support highly customizable user experiences with the flexibility of XAML.

All Symphony 2.0 components that display information through a user interface—including wait-staff workstations, digital menu boards, consumer-facing self-service kiosks, and order confirmation screens—can include animation and other eye-catching visual elements.

In addition, using ASP.NET MVC 2, Symphony 2.0 provides a Web interface, so MICROS clients can offer UIs for Web and mobile devices.

“MICROS Symphony’s advanced service-oriented architecture, unparalleled offline resiliency, superior reporting, and powerful integration provide restaurant operators with the tools necessary to increase guest traffic, improve business efficiency, and enhance the guest experience,” says Maddern.

MICROS released Symphony 2.0 in 2010. The solution is currently installed in single-site restaurants and some of the largest multi-unit chain operations in the world.

Benefits

The newly enhanced MICROS Symphony 2.0 system gives hospitality industry clients a centralized system to update and manage content, along with the flexibility to create custom user interfaces. Because it is based on Windows Presentation Foundation and Silverlight for Windows Embedded CE 6.0 R3, the solution assists restaurant clients in the creation of visually exciting user interfaces. It also features a scalable architecture and provides enhanced security and system resiliency.

“With Symphony 2.0, all content is stored in the same SQL Server 2008 configuration So when restaurant owners want to run a promotion, change menu prices, or modify nutritional information, they can do it all from a single location.”

Bill Draper, Director, Software Development, MICROS Systems

Centralizes Content Management

Using this new solution, MICROS clients can manage POS terminals, digital menu boards, and self-service kiosks from a centralized, integrated system. “With Symphony 2.0, all content is stored in the same SQL Server 2008 configuration and content management database,” says Bill Draper, Director, Software Development, MICROS Systems. “So when restaurant owners want to run a promotion, change menu prices, or modify nutritional information, they can do it all from a single location.”

Such a system can contribute to consistent menu pricing and information and, as a result, to greater customer satisfaction. “If a customer orders something from a restaurant’s Web site at a certain price but is quoted a different price when he or she picks up the food at the restaurant, that happened because two systems were not in sync,” says Draper. “This is the kind of problem that Symphony 2.0 can solve.”

Provides Flexible, Customizable User Interfaces

Because Symphony 2.0 was developed on extensible Microsoft technologies, it offers MICROS clients the ability to create highly customizable UIs. “Using the extensibility of Windows Presentation Foundation and Microsoft Silverlight for Windows Embedded CE 6.0 R3, as well as the flexibility of XAML, we created a system that clients can use to accommodate their operational requirements. They do not need to change their business operations to fit the software,” says Draper.

This flexibility also helps MICROS clients provide better employee training, because Symphony 2.0 gives clients the kind of intuitive environment they can use to fit their particular business operation.

Helps Clients Create Rich User Experiences

With the MICROS solution, clients are able to create compelling UIs with appealing visual content. For instance, they can use a digital menu board displayed on a large screen that accesses XAML content.

“Windows Presentation Foundation, Silverlight technology, and XAML helped us develop a product that offers rich, interactive user experiences for our clients,” says Draper. Because the user interfaces can display anything that these technologies are capable of creating—such as 3-D images, video animation, and other visual effects—restaurants can differentiate themselves by offering rich experiences for their customers.

MICROS also used ASP.NET MVC 2 to develop a Symphony 2.0 component that includes a Web interface to the central store data located in the content management system. All content, including menu items, pricing, images, and templates, come from the SQL Server 2008 Enterprise database and can be delivered to customer cell phones and mobile devices. As a result, restaurant operators can now support the digital devices their customers are using, which is especially beneficial for operators who offer delivery, to-go orders, and catering.

Enhances Security and Resiliency

Symphony 2.0 was also created with customer security in mind. The solution uses the cryptographic features contained in the .NET Framework 3.5 to secure credit card information and other sensitive data from point of payment all the way to database storage.

Additionally, the solution’s service-oriented architecture ensures that different components are distributed to provide a high degree of offline resiliency. By using

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Sync Framework, each Symphony 2.0 component automatically maintains a local copy of the configuration data needed to continue operating in the event of a network failure. With that functionality, restaurant operators using Symphony 2.0 have more resiliency and ultimately more confidence in their overall system.

Offers Scalable Architecture

MICROS developed Symphony 2.0 around a service-oriented architecture, based on the .NET Framework 3.5, that supports the scalability needs of restaurant clients of all sizes. “The Symphony 2.0 system is based on configurable software architectures instead of being limited to a one-size-fits-all architecture,” says Draper. Components can all reside on hardware in a single restaurant, or they can be distributed enterprise wide across hardware and operating systems.

With such flexibility and scalability, Symphony 2.0 can address the needs of smaller restaurant operators and large multi-unit companies alike. “The needs of a small, quick-service coffee shop operator are very different from those of a fine-dining restaurant chain,” says Maddern. “Because Symphony 2.0 is based on the flexibility of the .NET Framework 3.5 and Windows Presentation Foundation, our clients can easily change their user experience and scale up or down as needed.”

For More Information

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www.microsoft.com

For more information about MICROS Systems products and services, call (866) 287-4736 or visit the Web site at:

www.micros.com

Microsoft .NET

Microsoft .NET is software that connects people, information, systems, and devices through the use of Web services. Web services are a combination of protocols that enable computers to work together by exchanging messages. Web services are based on the standard protocols of XML, SOAP, and WSDL, which allow them to interoperate across platforms and programming languages.

.NET is integrated across Microsoft products and services, providing the ability to quickly build, deploy, manage, and use connected, secure solutions with Web services. These solutions provide agile business integration and the promise of information anytime, anywhere, on any device.

For more information about Microsoft .NET and Web services, please visit these Web sites:

www.microsoft.com/net

msdn.microsoft.com/webservices

Software and Services

- Microsoft Server Product Portfolio
 - Microsoft SQL Server 2008 Enterprise
- Technologies
 - Microsoft .NET Framework 3.5
 - Microsoft Silverlight
 - Microsoft Sync Framework
 - Windows Embedded CE 6.0 R3
 - Windows Presentation Foundation

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