

Microsoft Application Development *Resource Guide*

Winter 2010/2011 Issue

Visual Studio®, .NET Framework, Silverlight™ and SharePoint®

An Abundance of Microsoft Platforms

Distributed Computing Drives New Microsoft
Application Development

The Golden Years of Programming

Industry Guide

Leading software, tools and services that integrate with and extend
Visual Studio, ASP.NET, Silverlight, SharePoint or .NET Software

► www.msdevonline.com

Platinum Sponsors



Intersoft Solutions®
A better web experience™

Gold Sponsors



ComponentOne®



Distributed Computing Drives New Microsoft Application Development

Developers tap a range of technologies to translate applications to new devices and platforms

Distributed computing – across the Web, in the cloud, and out to a dizzying variety of mobile devices – is at the forefront of developers' minds. To find out how developers are addressing this broad range of platforms and opportunities, Microsoft Application Development Resource Guide talked to Jimmy Petrus, chief software architect of Intersoft Solutions; Danny Cooper, Aspose associate director; Todd Schick, ComponentOne director of business development; and Julian M Bucknall, DevExpress CTO.

Microsoft Application Development Resource Guide: What major trends are driving Microsoft application development?



Danny Cooper, Aspose: The main driver seems to be an increasing demand for convenient access to powerful tools. Technology, devices, operating platforms and the entire web infrastructure are evolving to meet those needs. Microsoft is doing a

fantastic job of providing tools for developers to properly handle all of that growth. Tools like the .NET development platform, .NET mobile framework and Windows Azure are allowing developers to create a wealth of powerful business applications to accommodate many complex needs. Microsoft tools are made even more powerful by providing an extendable interface, allowing third parties to develop unlimited add-ons.



Jimmy Petrus, Intersoft: Today, the Internet is part of our daily lives: we watch YouTube, use Facebook to connect with peers, Twitter to share our thinking, and more. The web is livelier than ever. People may not be aware of the technology behind

it, but it has changed enormously from the last decade. And the rapid growth in Internet and social media users, especially from the developing countries, has driven vendors like Microsoft to deliver a better online experience. Silverlight, Cloud, Azure and the recent buzz on HTML 5 are all geared towards online computing system with richer user experiences.



Todd Schick, ComponentOne: Trends in distributed computing including Web, cloud-based and mobile computing are driving Microsoft application development. Multiple product groups within Microsoft, as well as third-party vendors like ComponentOne, are striving to provide tools and support for the enabling technology platforms including HTML5, JavaScript, Silverlight, Azure and Windows Phone 7.



Julian M Bucknall, DevExpress: As we see it, the major trend driving Microsoft application development is the web. Although traditional thick clients like WinForms or WPF apps are undoubtedly being written still, much of the impetus for new application development is through the browser and the cloud. ASP.NET is still going strong but is starting to be supplanted by ASP.NET MVC – if you like, the thicker thin client is being overtaken by the thinner thin client.

Microsoft Application Development Resource Guide: In what markets do you see the greatest potential for new customers?

Cooper: All markets hold great potential if you're delivering a high-quality product. If you're seeking to cater to consumer customers, I would suggest looking to mobile development; Apple and Google both have great platforms. If you're seeking to address a business audience then I would recommend focusing on traditional technologies, while learning more about cloud distribution.

By traditional technologies I am referring to a very broad set of technologies that power small-, mid- and enterprise-sized businesses. Microsoft offers many different tools ranging from servers (Windows Server, Sharepoint Server, SQL Database Server, etc.) to operating systems (Windows 7, Windows Phone 7, etc.) to development languages (C#, J#, VB, ASP.NET, etc.). Any combination of those tools can be used to produce a wealth of viable solutions. One's focus is traditionally based upon a) what they would like to accomplish and b) what existing technologies they want to integrate with.

Schick: Mobile and web markets show the greatest potential for Microsoft and its ecosystem partners. These platforms will enable Microsoft to extend its reach well beyond business application developers and users, into the commercial market spaces.

Bucknall: Possibly the greatest potential for new customers is where the buzz is, that is, the web space: providing new controls and functionality to help satisfy the need for richer and more powerful web applications. Then again, I must not forget the traditional markets for thick clients: not every customer is ready, willing and able to target web applications. They have a direct need for the standard internal or retail application that gets installed and used on a machine-by-machine basis. Providing such support still has very great potential.

Microsoft Application Development Resource Guide: What are the challenges developers face in developing phone apps vs. tablet apps vs. net-top apps vs. traditional PC apps?

Schick: Generally, applications that are “closer to the hardware” in order to exploit specific capabilities are more difficult to port to other computing platforms. Competing devices implement different APIs and user interface specifications that add to the challenge. One big advantage of browser-based, and now plug-in based applications, is that these device idiosyncrasies are abstracted, making cross-device and cross-platform development much less painful.

Bucknall: The challenges are numerous, but perhaps the most important one is the sheer number of platforms and technologies that are available. At some point, sooner rather than later, the developer must simplify in order to get any work done. One way to simplify is to use the common denominator, that is, web applications built using HTML/CSS/JavaScript. Using these well-known technologies (and newer ones like HTML5/CSS3), developers are already creating applications and web sites that work well on devices like phones and tablets as well as normal desktop PCs. There are also development environments that “compile” such HTML/CSS/JavaScript applications to native code for these devices, so you can have the best of both worlds: web standards and native code.

Other than that, technologies like Mono, MonoTouch, and MonoDroid allow developers to target phone and tablet devices by writing in a language they already know, using

a run-time they’re accustomed to. Again it’s a case of simplifying the multiplicity of possible paths to take: choose the environment that you’re familiar with and write applications for these portable devices.

Microsoft Application Development Resource Guide: What new Microsoft development environments or tools are you most excited about for new product opportunities?”

Cooper: Windows Azure: cloud computing is an emerging technology with a lot of promise. It will allow small and mid-size businesses to outsource much of their server and network administration duties. That will leave those businesses with more resources, dollars and man-hours, which can be used to improve in other ways.

Great efficiency in software delivery will no doubt result in better software. Application delivery will be centralized for many businesses, small and large, so updates should be more frequent and comprehensive. I truly expect to see life-changing software packages evolve over the next 10 to 15 years.

Petrus: Seeing Microsoft’s deep commitment in Microsoft Silverlight, I am very excited with it. Microsoft has actively released Microsoft Silverlight and pushed it into the community and is now making it available on Windows Phone 7. This is a great advantage for us and any developers familiar with Silverlight as they can reuse their existing knowledge to build rich applications that target Windows Phone 7.

Schick: ComponentOne is excited about a number of emerging Microsoft development environments, specifically Windows Phone 7, LightSwitch and SharePoint 2010. These environments are built on existing technologies and enable developers to more readily transition, or re-platform, their software investments.

Bucknall: Anything that will enable developers to create web applications easier, quicker and more robustly. ASP.NET MVC3 is now in beta and that’s exciting; Silverlight is being revved, although not much is publicly known yet about what’s coming. Visual Studio 2010 was a great move forward for creating such applications and I’m looking forward to seeing how Microsoft can produce a new version with new functionality to target this space quicker than before.

The Challenge of Ubiquitous Content

by Rich Dudley, ComponentOne

In my previous role as an enterprise developer, my cohorts and I would joke that our users wanted all data, in all formats, in all places, at all times. There is truth in sarcasm, and that statement holds a great deal of truth.

It's not an understatement that the iPod was the device many of us had been waiting for our whole lives. The Walkman first took the world by storm by making something we loved (our music) portable. Thanks to a pair of tiny ear buds, school buses, family trips, and even church became places we could consume our media. A competitive market in blank audio tapes led to the rise of the mix tape, where we were no longer bound to a single artist—we could proclaim our teenage desires through the words and melodies of a number of artists. We were in full control of our entertainment (at least until our parents confiscated the ear buds). Fast forward a couple decades—music collections are larger, device capacities are greater, playlists have replaced mix tapes, and the expectation of “all my stuff, everywhere I want it, when I want it, in a timely manner” is firmly planted in people's minds. We've progressed chronologically, and our content interests have moved beyond the latest power ballad, but we still want it all, and we want it now.

The challenge for content producers is to deliver on this expectation, regardless of whether the content is a video of a talking dog, a bestselling novel, or last quarter's sales summary. Meeting this challenge requires multiple solutions at different layers of our application design.

The average smartphone has more computing power than was used in the first moon landing. Collectively, the students on a school bus carry more computing power than the space shuttle. The capabilities of mobile devices enable our end users to remain fully connected and functional wherever they are. Delivering the content in a timely manner means our interfaces and content need to be everywhere as well. Microsoft's Azure platform provides strong capabilities for distributing our content across a wide geographic area. Currently, Microsoft has a number of data centers in place around the world, and a number of others are planned to open. These centers contain a massive amount of storage space and computing power, which provides a lot of leverage to application developers. We can harness Azure's content delivery network to provide content such as reusable scripts, images, video or static documents. This puts “all data” closer to “all places,” decreasing the time to deliver the content as well as reducing the probability

of a catastrophic failure leading to data loss. In designing Azure, Microsoft did not depart far from its development tools lineup. Developers can address nearly all the features of Azure using Microsoft Visual Studio 2008 or 2010, including the Express editions, using the .NET language of our choice. Google and Amazon are also strong players in the cloud space, bringing their own capabilities and leading to a very competitive environment.

Overcoming “all formats” is where life remains interesting. In the earlier days of the World Wide Web, website developers had to overcome differences between Netscape and Internet Explorer browsers. Today, there are several versions in the wild of the five major browsers (Firefox, Internet Explorer, Chrome, Safari, and Opera) for the desktop, and a number of different browsers for mobile devices, each with their own nuances and limitations imposed by device or OS. Add to the mix Flash and Silverlight, HTML 5, CSS 3, and jQuery and we developers have a multitude of options. Based on my experiences in enterprise and in the field, Microsoft Silverlight is shaping up to be a dominant choice in the Microsoft ecosystem for the foreseeable future, with jQuery close behind. Both of these technologies rely on solid service-oriented architecture. Serving streams of data to the client, leaving the rendering to the requesting framework, will go a long way to overcoming platform differences while minimizing our development and maintenance efforts.

I'm a happy media consumer. For instance, I can buy a book on my Kindle and then continue reading it on my Android phone or Windows laptop. The consumer media experience will begin to drive how enterprises deliver information to their personnel and partners, and Microsoft has positioned its technologies to allow us to meet this expectation.

Rich Dudley is a Technical Evangelist for ComponentOne and an advocate of Microsoft Visual Studio. With over 10 years of enterprise development experience, Rich has written articles and given talks relating to ASP.NET, SQL, XML, and Azure. Rich's role includes developing solutions and solving problems through the use of Windows, Web and Mobile custom controls from ComponentOne. Rich travels regularly to local .NET user group events and tradeshow as well as writes articles to share his passion of development.

