



Hansel minutes

Hanselminutes is a weekly audio talk show with noted web developer and technologist Scott Hanselman and hosted by Carl Franklin. Scott discusses utilities and tools, gives practical how-to advice, and discusses ASP.NET or Windows issues and workarounds.

Text transcript of show # 46

January 9, 2007

WPF/E/

Scott and Carl discuss Microsoft's answer to Flash, Windows Presentation Foundation/Everywhere (WPF/E), a lightweight version of the .NET 2.0 (and 3.0) Framework that promises to be multi-browser and multi-platform.

(Transcription services provided by [PWOP Productions](#))



Our Sponsors



<http://www.codesmithtools.com/>



<http://dotnet.con-sys.com>





(Music)

Lawrence Ryan: From hanselminutes.com, it's Hanselminutes, a weekly discussion with Web developer and technologist, Scott Hanselman, hosted by Carl Franklin. This is Lawrence Ryan, announcing Show # 46, recorded Wednesday, January 9th, 2007. Support for Hanselminutes is provided by CodeSmith Tools, makers of CodeSmith - an extensible template-based Code Generator for .NET. Hanselminutes listeners get \$100 off CodeSmith Professional with Coupon Code HM100, online at codesmithtools.com. Support is also provided by .NET Developer's Journal - The World's leading .NET developer magazine, online at www.sys-con.com. In this episode, Scott and Carl discuss the functionality and requirements for WPF/E, Windows Presentation Foundation/Everywhere.

Carl Franklin: Hi, this is Carl Franklin, you're listening to Hanselminutes. Once again, it's good to be with you, Scott Hanselman. How are you?

Scott Hanselman: I'm well. How are you sir?

Carl Franklin: I'm just fine. This week, you might sound a little froggie.

Scott Hanselman: Yeah, I've got a little Barry White going right now, I'm about two octaves low.

Carl Franklin: Yeah, got a few extra white blood cells in your body.

Scott Hanselman: I don't know what's going on, I was at the hospital today trying to figure out if it was Malaria or not. The doctor doesn't think it is, thought it might be stomach worms, something that you would pick up in Africa, but the current thinking is that it's a bad Teriyaki.

Carl Franklin: That could be.

Scott Hanselman: You never know.

Carl Franklin: I've been laid out by bad Teriyaki.

Scott Hanselman: Nail you every time, it will get you.

Carl Franklin: So, we're talking this week about WPF/E.

Scott Hanselman: WPF/E, that's the code name of Windows Presentation Foundation/Everywhere.

Carl Franklin: Otherwise known colloquially among Devs as the 'Flash Killer', although Microsoft doesn't like it when we say that.

Scott Hanselman: They don't like it, but whether it's true or not, we'll discover in our talk today, won't we?

Carl Franklin: Yeah.

Scott Hanselman: I have a metric crapload of the links this week. We've been a little light on the links lately, but if we don't get to some of them, they'll all be listed on the Website. Have you done the XAML work yourself?

Carl Franklin: You know, XAML work is funny, the whole idea of XAML is that we shouldn't have to write it, but I understand it fully. In fact, I was very happy when we were looking at forms described as XML, and I had been doing that kind of thing, programming wise, for years even when HTML was just fairly new. So, it's a good idea whose time has come, but as far as rolling up my sleeves and writing XAML, no, I don't, I hope I'd never have to do that.

Scott Hanselman: Yeah, it's really interesting, is it a good idea whose time has come or a good idea whose time has returned? Wasn't it just ten years ago when I was writing C and C++ using MFC, and we would make our resource files be separate from our code and had to use the ClassWizard to hook them up. Is this just that with angle brackets? I don't know. I do know this that the XAML and the underlying markup idea, the technology behind it, is solid, and I think it's a fantastic idea.

Carl Franklin: It's a great idea. We had this idea when I saw Prodigy, the very first time then, we were thinking of sending vectors over modems instead of bitmaps. I mean it's that whole idea of, I want to just send you a form and have you render it and that's why the browser is such a big deal, and it's the same principle the browser works with.

Scott Hanselman: We're trying to get those Pentium 4s and Core 2 Duos to do a little work.

Carl Franklin: Exactly.

Scott Hanselman: Here's the thing, and we won't get too into the politics of it, but where I think Microsoft is dropping the ball is the Microsoft Expression tools. You can read about them at shrinkster.com/l4j. They've got this Expression Designer, this is an evolution of a tool that they bought for another company, and now



they've broken it up now, if I understand correctly, there's a Web SKU, a Blend SKU, Design SKU, and a Media SKU. I've read the directions three times, and I'm still not clear which one of these works.

The reason that Photoshop is awesome is that there're two versions. There's Photoshop and then there's Photoshop SE, which is a special edition, which everyone always realizes as this crippled edition. So there's basically the free crappy version you get and then there's the \$500 version. If there were eight different versions of Photoshop, I don't think Photoshop would be as ubiquitous. Just as I was very frustrated when Visual Studio Team System had half a dozen different SKUs, for testers and architects and developers, and you couldn't just buy the ultimate SKU. Vista has got what seven now, seven SKUs - Home, Home Premium, Home Basic, Business, at least they have an ultimate SKU, the Everything in the Kitchen Sink SKU. I just don't understand Expression, than if I -- you can correct me if I'm wrong here, but the MSDN Universal License does not currently include Expression.

Carl Franklin: That's correct, yeah.

Scott Hanselman: So, how are we suppose to make this technology ubiquitous and amazing if we're not going to give people the tools to develop with -- right now you can get the CTPs for free, but eventually you're going to have to start paying.

Carl Franklin: I can imagine all of our paying listeners out there who are used to paying for everything saying, you guys are just upset because you're not getting some free software from Microsoft.

Scott Hanselman: No, I disagree. I think our paying listeners, if they're smart, they pay it for Universal License. For developer, not for production, but for developer, it's the smartest thing you can do. You show up at your new job and oh, you have a Universal, here's your license.

Carl Franklin: I totally agree, I don't know why it's not in the box, I mean maybe it's that they're financially strapped and they think this could be a big thing, but unfortunately that's a bean counter mentality, things don't get big by them just being great. They also have to be accessible.

Scott Hanselman: Well, that's enough politics. I have my opinion and I've expressed it, you've got

yours. Let's talk about the underlying technology because I think that's what people want to hear.

Carl Franklin: Okay. By the way, the regional directors are on our side. So, if we have any influence at all maybe Microsoft will come around.

Scott Hanselman: Yeah, I mean it's possible, I think that Blogs, people, everyone who is out there, whether they're an MVP or not, if you Blog about it and you express your opinion in a civil way as opposed to starting a flame war, I think all of that adds up. You've got to give people like Scott Guthrie, credit. This is a guy who writes his own Blog, he doesn't have like an assistant writing his Blog. He writes his own samples, he reads and responds to his comments, and if you make a reasoned argument, things will change and there are people at Microsoft at very high levels who have the power to make change. So, I got to give him credit for that.

All right, WPF, not WPF/E, but WPF, this is Windows Presentation Foundation, code name Avalon. This is GDI.Next, it's the new rendering engine. You can get it by downloading the .NET Framework 3.0, which includes also of course Indigo, which is Windows Communications Foundation. The first really awesome application we talked about it on the show a couple of weeks ago or couple of months ago, was the New York Times application. This was The New York Times reader App. It's basically a super Blog reader, except the only Blog it reads is the New York Times, but an amazing presentation, it shows off rendering, the new font stuff, the flow text controls through columns. All of the things that made life hard under GDI, made simpler. That was kind of a showcase application from The New York Times. Now, WPF requires of course .NET 3.0 which itself requires .NET 2.0, so for your mom, that's kind of a significant thing to get setup on her machine.

Carl Franklin: Is .NET 3.0 going to make it into Windows Update as recommended Update or an optional Update?

Scott Hanselman: The word on the street is that it's still optional, but I could be wrong. I did notice -- I was in Tanzania and I needed to update -- so this is an interesting point about who out there is going to be able to get these things? I've got two anecdotes. First one, I'm in Tanzania on a 9600 Baud dial-up and I want to get .NET Framework 2.0 on the thing, so I can show some of the kids over there how to program. I just want to get them Hello World. I wasn't even going to download Express, I was going to download



SharpDevelop, just a very basic IDE. So, to do this I got to get .NET 2.0 on the box. Well, in order to get these things on the box, I needed like six -- this is on a Windows 2000 Server running Service Pack 3, I needed to get 2000 Service Pack 4, I had to get 69 different security updates, which took three days, while running the modem all night long. I had to use tools like GetRight to get the stuff I needed, I had to install all of these just to get .NET 2.0.

Same thing happened recently with a person who gave me a laptop to give to the kids in Africa. I paved it, I put on my XP box, my XP disk rather, it's not a slipstream disk, it's just whatever the SKU I have is, and it took five reboots and five visits to Windows Update just to get the things that would allow me to get IE7 on the box. So, if your mom's machine is not up-to-date and you haven't set automatic updates, which you should, you're going to have a little challenge or she will have a little challenge trying to get those prerequisites that you need to get .Net 3.0, .NET 2.0 on your box.

Carl Franklin: There really isn't any other way to do it other than to download the updates, right? I mean is there -- does MSDN Universal come with some sort of Microsoft Windows Updates list that you can install from DVD?

Scott Hanselman: That's a really interesting point. I've found myself wishing for the Windows update disk, and I hope someone hears us and works on that, because the problem I was having was that the wireless connection, the 9600 Baud CDMA cell phone connection I was using was so unreliable that Windows Update would time out, and you'd keep retrying, and retrying, and retrying. If I could go and get the -- well, remember that they've passed out CDs of Windows Service Pack 2, XP Service Pack 2, that was great. I carry that around with me at Christmas time, I went to all the family's houses, you could. You go to Thanksgiving, you say, hey, you got a Laptop in the bag, let me update it for you.

Carl Franklin: Right.

Scott Hanselman: Okay. So, the point is that for a corporate application, for something that you control deployment, Windows .NET 3.0 Framework is probably something that's within your ability. For those people who have their machines running automatic updates, it will be a no brainer, but what if you want to get WPF, XAML based rich media experience, you want the flexibility of an XML based presentation layer, but you don't want all of the schmutz on your box.

Carl Franklin: Right.

Scott Hanselman: So, WPF/E is fantastic. It is a 1 Meg, it might be a little bigger when it gets done, it's a 1 Meg download, just like Flash or Shockwave, that you download when you hit a page and it does not have any prerequisites on the .NET Framework. Now, current versions don't have real rich C# support and Framework, the CLR support, but future versions will.

Carl Franklin: It works because it has a micro framework in it, right?

Scott Hanselman: Right, exactly. It's a tiny .NET Framework of its own, it's a tiny render, it's basically tiny versions of all these things that you would need, packaged up into one tiny, tiny download, well, tiny for us, 1 Meg. I think on a dial up that will probably take you about 10-15 minutes.

Carl Franklin: Yeah, that's not bad.

Scott Hanselman: They're talking about adding much more support for the base class library, because they have to do a subset of the library, they can't give you the entire .NET Framework.

Carl Franklin: Right.

Scott Hanselman: But they want to give you enough or you've got a rich enough environment where you can build some interactivity into your system. Now, they just released the December 2006 CTP, The Community Technology Preview, and to show that they're serious, there is both a Windows and Mac version. This is very cool, so...

Carl Franklin: Wow.

Scott Hanselman: The Windows version is at shrinkster.com/l4c and the Mac version is at shrinkster.com/l4a, and of course being that I have a Mac and a PC sitting next to each other on my desk, I can attest that they work nicely together. You can download a bunch of samples at shrinkster.com/l4b that includes a bunch of the stuff you can unzip and play with, and you have to get the documentation separately, that's at shrinkster.com/l4d, the samples are at shrinkster.com/l4b.

Yeah, so I think the fact that it works on the Mac, and I can only assume that there's going to be a Linux version out there, and the Windows version works on both IE and Firefox, works on Firefox 1.5 and 2.0. And there's actually a really



interesting article on getting started with WPF at shrinkster.com/4l, this is an MSDN article. And about half way down, there's a section on exactly what works and what doesn't in Firefox. Right now when you visit a page that uses WPF/E, it will prompt you to go and look in the Firefox plugin finder directory, because WPF/E is not a published official helper yet, it's not a real application, it's Beta.

Carl Franklin: Yeah, right.

Scott Hanselman: It doesn't actually get listed, but you can go in and manually install it and it works just fine in Firefox. So, when it eventually comes out, the experience that someone gets, whether they're using IE or Firefox, is going to be really smooth. It's just going to be like getting Flash, they're just going to show up, click a couple of things, maybe one-two clicks, they don't have to go through a big installer. I just went next, next, finish, and it was taken care of.

So, the thing is you've got to see these samples, you've got to see some samples to really understand how clean this is. I think one of the nicest samples that I saw was, there was a guy called the Rogue, his Website is kind of dodgy, but he's got some nice samples at shrinkster.com/4r. He's got like an all black Website with flashy animated gifts and stuff, but he's got a lot of good information about WinFX. As a banker type myself, I'm always looking for things that are going to move banking and online finance to the next level.

The Woodgrove Finance Application was written by a lady whose Blog is called scorbs.com, I don't think I shrinksterised that, scorbs.com. And she worked on an application called The Woodgrove Finance Application, and just last month they released the source code to this app at shrinkster.com/4q. This application was a -- basically takes over your browser, and this is an, what's called an XBAP, it's an XML Browser Based Application. This is going to be a little bit confusing to people until Microsoft does some positioning on this, because there's a couple of different ways you can use WPF, you can compile an application, I could give you an EXE, and if you have .NET 3.0 on your box, you can use it, like the New York Times Reader. Then I could make an XBAP, a browser based XML, XML based application. It would have an XBAP extension and I would just visit that URL and it will actually show up and fill up the browser, there would be no HTML involved. The Woodgrove Finance Application is like that. Then the WPF/E stuff is more like Flash, it's really focused on living in an ASP .NET page. It's not meant to be a

whole new application or a whole new kind of application all by itself, it could, but it's really about adding interactivity. Like a really great example of Web 2.0 interactivity would be the Google Finance page. I'm sure you've probably seen that, you visit finance.google.com.

Carl Franklin: Right.

Scott Hanselman: Enter in anything, and there's this really great chart, and it really fits into the current layout and the flow, but then you realize that the chart has interactivity with the HTML and vice versa. So, for example, they'll show a chart of your running stock price with letters pointing to points of interest on the actual chart. So, you might see a peak where you went to four bucks and you have a letter A there. You click on the letter A and then you'll actually find the press release that was released that day and then draw a correlation between the two. This is a Flash based application, but the Flash App is communicating with the AJAX aspect of the application. So, if you already got an AJAX ASP .NET Application, you could enable aspects of it that would have been difficult in AJAX with WPF/E, it might be richer charting, might be a drop down combo that works the way you want it to work.

Another good example would be Nikhil Kothari's Flickr Photo Viewer at shrinkster.com/4h. Nikhil is a brilliant, brilliant ASP .NET guy, and I've become a huge fan. He has a thing called Script# and you can see it at shrinkster.com/4g, and he's been starting to apply this to WPF. Script# is a way to write C# if you're a C# programmer, and get JavaScript. He is extending that so one could write C# and get XAML. It kind of sounds silly but the idea is, if you're really good at expressing your intent in one language, stick with it and he'll handle the generation. So he's got a really great example of the Flickr Photo Viewer. Basically, you visit that site at shrinkster.com/4h, type in a tag, a Flickr tag and then he'll pull using the JSON JavaScript Object Notation. Jason kind of Web Services API that's exposed by Flickr, and pull down images and then bring them into the WPF/E space, and show you an animated slide show. That slide show will include reflections and translucency and all of the things that you are used to seeing in your WPF Application.

Carl Franklin: Wow.

Scott Hanselman: Really, really slick stuff.

Actually there's another one that is written at shrinkster.com/4s, it's basically kind of a rewrite of the Virtual Earth Application, but it's done in



WPF/E. This is just a start, but if you go to MIX 07, MIX is the Web Interactivity Conference that is hosted by Microsoft, but not run by Microsoft.

Carl Franklin: Right.

Scott Hanselman: It's going to be in Vegas this year. There's going to be a lot of stuff on WPF/E.

There is an announcement up at Scott Guthrie's blog at shrinkster.com/14n, where he announces the CTP, and he kind of gives some hints, some harbinger of what's to come. The impression that I get is that in the first half of 2007, they're going to want to have Firefox, IE on Windows, on XP and up, and then they're going to have Mac and possibly Linux, and then they're going to have a limited CLR within that working. Already bigger companies have started to pick that up. If you take a look at shrinkster.com/14o, Yahoo! is actually rewriting the Yahoo! Messenger using Windows Presentation Foundation. Now, they're not using the WPF/E stuff, which again I think is going to cause some confusion, because there are these different levels of requirements. I think the same things happened with Shockwave and Flash, don't you think? There was a time where it was like, do I need Flash, which is easy and small, or do I need Shockwave which is a bigger deal to install?

Carl Franklin: What can happen here if WPF/E gets some real popularity is that, people will be willing to download and install WPF/E, because that's where all the cool stuff is happening, but when you go to a ClickOnce application that requires the entire framework, oh my God, why should I do that.

Scott Hanselman: Yeah, I think you totally nailed it, I think you nailed it. Couple of other Blogs to check out - Mike Harsh, one of the PMs in shrinkster/14k. Again, all of these links are going to be up on the Hanselminutes site, including two really great Channel 9 videos, one with Mike Harsh at shrinkster/14e, and one with the lead PM, Joe Stegman at shrinkster/14f. There's also a WPF Blog at shrinkster/14p.

I think that WPF/E is for my mom, for the public, going to be a more interesting thing than WPF proper. I think we'll see applications written in WPF for the back office, for Intranets, but I can really see myself making a pretty amazing banking application, a better experience with WPF/E.

Now, we should talk about this versus Flash, because a lot of people say, "Well, this is just Microsoft beating on Flash, what's the point?"

Carl Franklin: Sure, arguably, this is their offering in that space, this is what they want to compete with Flash with.

Scott Hanselman: I think you probably agree with me when I say that, frankly, I don't understand why Flash didn't take off. I've seen some really amazing...

Carl Franklin: Well, why do you say that it didn't take off? I thought it was like one of the most popular plugins for browsers in all history.

Scott Hanselman: Let me rephrase. Not take off in the QT ad, QT game kind of sense, but in the - why people didn't write entire applications on Flash. I mean here we are flexing with AJAX, we're putting together angle brackets and bailing wire, we're fighting with JavaScripts and DOMs, and there's 20 different, more than 20, probably 50 by now, different AJAX Frameworks where people want to string together this stuff, but here we've got Flash, that is cross-platform, runs on Linux, runs on Mac, runs on Windows, why aren't we willing to write an application that fills up the browser and runs everything as Flash.

Carl Franklin: I have my ideas, I don't know, I'm sure you do, pretty much what hits me right away is development.

Scott Hanselman: It is confusing.

Carl Franklin: Development for Flash is limited, I mean it's -- you use ActionScript, there is stuff that you can and you can't do.

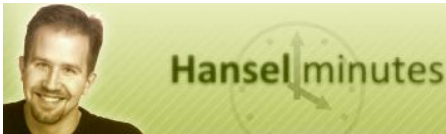
Scott Hanselman: Is it ActionScript now or Lingo?

Carl Franklin: Well, before, it's been ActionScript for many years, but...

Scott Hanselman: Wow, I'm getting old then. I remember when it was FutureWave, do you remember that, FutureWave Technologies, it was called FutureSplash?

Carl Franklin: Yeah.

Scott Hanselman: I'm getting old, but yeah, you have to use their tools, their language, and it speaks a binary thing. Now, arguably with Microsoft, if you use "their tools, their language", but interestingly you've got Adobe coming up with XAML Exporter, where you can load something up into Illustrator and go file save as, and XAML pops out.



Carl Franklin: Yeah.

Scott Hanselman: Why is it that you can spit out XAML so easily, and people were so quick to jump on the bandwagon, but I don't know, can you go into Illustrator and then export a SWF file, a Flash file?

Carl Franklin: I don't know. I don't even live in that space.

Scott Hanselman: Yeah, I don't either, which is kind of a nice thing, which gets into what you were talking about before with the way the developer flow should work. Like at Corillian we do eFinance. We have a full time Interaction Designer, and she manages user interface and experience for all the applications. I would love it if she had a bunch of designers under her writing a UI, and I'll worry about the inner workings, and plug them into each other. If she wants to do it in Microsoft Expression or if she wants to do it in Illustrator, I don't really care.

Carl Franklin: Yeah, it is interesting, we'll have to wait and see what happens with that. I'm very curious as to how it's going to play out.

Scott Hanselman: Yeah. Right now, I just want to make it easy for me to get into it and play with it within Visual Studio 2005, because that's kind of where I live. So, Shawn Burke has made a Toolkit Extender at shrinkster.com/l4j, that once you have the SDK installed, you do have to do a little bit of manual installation with some unzipping of files into your Visual Studio directory, but this allows you to drag WPF/E components onto your desktop.

I think that the summary that we want to leave people with is just kind of a reminder about what the difference are between these different things. So, .NET 3.0, which was previously WinFX, this is Avalon, Indigo, now WPF, WCF, the .NET 3.0 requires the .NET Framework 2.0. so once you have those two things on your system, you can run Windows Presentation Foundation Applications that are compiled. You can run them that are ClickOnce or you can run XBAP, XAML based browser applications, these are with a XBAP extension, all those you can run when you have .NET 3.0. You get all of .NET 3.0's functionality, you get all of WPF, and the applications including like XBAP, they live in a Sandbox, it's like a ActiveX document, they're running inside the context of IE. Now, those only work on Windows Server 2003, Vista, and XP, and they're not cross-platform.

Carl Franklin: So, WinFX is not cross-platform.

Scott Hanselman: WinFX is not cross-platform. WPF/E is cross-platform with a very small subset of the 3.0 stuff. They live in the browser, just like the XBAPs, except they're cross platform and they do not have access to the entire .NET Framework, they have a very, very small subset.

Now, at some point WPF/E I'm sure will live outside of the browser, you'll be able to use it in a WinForms Applications as a component. I think we'll see more and more sharing of component tree as people write shims that let you talk back and forth, but right now the WPF/E stuff, you can talk to it via JavaScript very, very easily. So there's an object model, you can pull information in and out of WPF/E. So, if you've already made some investment in AJAX, but there's perhaps some aspect of your application that you weren't really satisfied with, WPF/E could potentially add that level of rich interactivity to your existing site, without you having to change a lot of stuff. You can still call Web Services or Jason Applications from your WPF/E components.

So, I think you would look at it as something that would augment your strategy as opposed to causing you to shift your strategy entirely in a different direction.

Carl Franklin: Scott, are we going to see support for WPF/E in Visual Studio 2005, or we're going to have to wait for Orcas for that?

Scott Hanselman: Yeah, so you actually can do this in 2005 now. You do need to get the Web Applications Project Support, so you have to go to shrinkster.com/l4m. Once you have that support, you can get the Getting Started stuff under shrinkster.com/l4l. Once you get the Getting Started stuff installed, you have the SDK, the docs, and the runtime for WPF/E, remembering that your end users only need the runtime. There are some projects types that you have to go and manually install, you unzip them into your Visual Studio Project Types folder, and that will let you go File, New, and actually say, WPF/E application from within Visual Studio 2005.

Carl Franklin: Okay.

Scott Hanselman: Then of course your XAML can be written in any application. You can get trials of Expression. Expression stuff can be downloaded at shrinkster.com/l4j or you can use any tool that will export XAML. Actually, enough people are excited about XAML, there's lots of conversion tools. So if you have some SVG, Scalable Vector Graphics code out there or even some old fashioned Windows Meta Files, you can



get those converted into XAML fairly easily, which can take existing applications that are Vector based, move them into this realm in a fairly painless way.

Carl Franklin: Okay. It sounds like a show.

Scott Hanselman: Yeah, there's so much stuff to look into about this, I could talk even more about it, and maybe we'll do another show some time and talk more about the samples and writing your first application.

Carl Franklin: Well, I think we're going to have a lot of more interest once we get out of CTP land and into some shipping code.

Scott Hanselman: Yeah, I think definitely the first half of 2007 is going to be really, really interesting if they hit their schedule on WPF/E, and if some of the speculations out there about possible Linux support, better support for C# and the CLR, if those things come to pass, it's going to look great for everybody.

Carl Franklin: Awesome. Scott, thanks a lot of being sick and doing the show.

Scott Hanselman: I hope it was not too hard to listen to me.

Carl Franklin: No, not at all. We'll see you next week on Hanselminutes.

(Music)