



Carl Franklin

Carl Franklin and Richard Campbell interview experts to bring you insights into .NET technology and the state of software development. More than just a dry interview show, we have fun! Original Music! Prizes! Check out what you've been missing!



Richard Campbell

Text Transcript of Show #303
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Ken Levy on Visual Studio Extensibility (VSX)
January 1, 2008
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[Music]

Lawrence Ryan: Hey, Rock heads! Quit degaussing your joystick and listen up! It's time for another stellar episode of .NET Rocks! the Internet audio talk show for .NET developers, with Carl Franklin and Richard Campbell. This is Lawrence Ryan announcing show #303, with guest Ken Levy, recorded live, Tuesday, December 18, 2007. .NET Rocks! is brought to you by Franklins.Net - Training developers to Work Smarter and now offering SharePoint 2007 video training with Sahil Malik on DVD, dnrTV style, order your copy now at www.franklins.net. Support is also provided by Telerik, combining the best in Windows Forms and ASP.NET controls with first class customer service, online at www.telerik.com, and by Data Dynamics, makers of ActiveReports.NET, simple, powerful and cost effective reporting for Windows Forms and ASP.NET web applications, online at www.datadynamics.com. Support is also provided by CoDe Magazine, the leading independent magazine for .NET developers, online at www.code-magazine.com. And now, the man who's spending New Year's Eve down at Hannafin's Pub while I'm editing this f*cking show, Carl Franklin.

Carl Franklin: Thank you very much. Happy New Year everybody and welcome back to .NET Rocks! It's Carl Franklin here in New London, Connecticut, and Richard Campbell in Vancouver, British Columbia. How are you sir?

Richard Campbell: Happy 2008 man.

Carl Franklin: 2008. Now you're going to get used to writing the right date on all those checks.

Richard Campbell: Oh yes, put it on a sticky note, stick it in the middle of your screen.

Carl Franklin: Exactly. Don't do it, just don't do it. So, 2007 was a good year for us. We had 21 million downloads or something like that, ridiculous, 22 million somewhere in there, absolutely ridiculous.

Richard Campbell: That's a lot.

Carl Franklin: And 2008 is going to prove to be even bigger for .NET Rocks! and for you, the listener, we have some prospective deals going on. We won't say what but just stay tuned. Some good

stuff is going to happen this year. Anyway, let's get right to our little segment I'm calling Better-Know-A-Framework.

[Music]

Richard Campbell: All right, Mr. Franklin.

Carl Franklin: Well, the namespace today is Microsoft.VisualBasic.Compatibility.VB6.

Richard Campbell: Oh.

Carl Franklin: Yeah. Now, when you upgrade a VB 6.0 application using the built-in wizard of Visual Studio, what it doesn't do is rewrite all of your VB 6.0 code to use the standard .NET framework objects. What it does do is it maps all of the VB commands to commands that are some managed code and some not managed code in this namespace. So, for example, opening files using the syntax of VB stays the same.

Richard Campbell: Right.

Carl Franklin: There are a few things that you want to avoid in Microsoft Visual Basic compatibility VB 6.0, namely the collection, horribly slow, horribly, horribly slow.

Richard Campbell: Yeah. I'm sure we talked about that in some show.

Carl Franklin: Yeah. I think we did. Well, it's a good way to get going and get started I suppose, but interop is definitely the best way to go and we just did a dnrTV with Rob Winsor that you can see at dnrtv.com, just look in the archives. Rob Winsor talked about VB 6.0 interop all the way from interoperating with classes, all the way to Windows Forms.

Richard Campbell: Nice.

Carl Franklin: Yeah. So you can call Windows Forms from VB 6.0 forms and vice versa.

Richard Campbell: It's good to know that the VB 6.0 investment that we made is still supported. I mean they still ship the runtime with Vista. It's not going away anytime soon.

Carl Franklin: Nope, it isn't.

Richard Campbell: It's been -- I mean it's now 2008.

Carl Franklin: Right.



Richard Campbell: It's been a lot of years since .NET shipped.

Carl Franklin: Right, absolutely. All right Richard, you got an email for us?

Richard Campbell: I do have an email and the subject line is fabulous. The subject line is "Episode #300, no Spartans, but just as good." "Hello Richard and Carl, in no particular order. After my short Christmas break from work, I have just enjoyed show #300 while driving to work. There are a couple of issues that arose from that show that I must address. One, it was a shame that none of your listeners including me didn't get around to contribute," which is fair. We only vaguely asked, just on the blog.

Carl Franklin: Yeah, we halfheartedly supported that.

Richard Campbell: "Two, it was a good job that they didn't contribute because I really enjoyed the tales that Richard shared with us."

Carl Franklin: Yes.

Richard Campbell: "And three, please, please, please give a warning not to listen while driving as I was laughing my ass off. And four, where can I get a cool magnet to play with? Seriously, #300 was a nice break from the norm and although I really enjoy your shows, it was great to get to know Richard that bit better. Usually, I do have a chuckle at your shows, but I have listened to this one four times already. Keep up the good work and all the best in 2008. Thanks, Allan Surijan."

Carl Franklin: Or something.

Richard Campbell: Wow, that's a heck of a last name. Allan, you're welcome.

Carl Franklin: And, you know, if you want to get that more casual side of Richard, you can always listen to Mondays, mondays.pwop.com, not safe for work, but it is a lot of fun and Richard finds geeky toys on the Internet at the end of the show.

Richard Campbell: Yeah. Am I that serious a guy?

Carl Franklin: Uh, yes.

Richard Campbell: Oh well. You know, on .NET Rocks...

Carl Franklin: Compared to the rest of the nutcases on Mondays, yes, you are very serious.

Richard Campbell: You're right, okay. You know better. We traveled across the United States together, you know better.

Carl Franklin: That's true.

Richard Campbell: But I guess on the show, I like to focus on the guest.

Carl Franklin: Yeah.

Richard Campbell: And don't really worry about anything else.

Carl Franklin: As do I.

Richard Campbell: Yeah, but show #300, that was a fun distraction just to do something a little different.

Carl Franklin: It was lots of fun.

Richard Campbell: It was. I think you called it -- it was a great holiday show.

Carl Franklin: It was a perfect holiday show, yes. Kick back and get to know Richard a little better and I highly recommend it. So, Richard, the Sleepless Road Show is happening January 12, 2008, beginning January 12th. The deadline to apply is January 6th and here is the deal. Infusion is calling all insomniacs again. Sleepless is back and this time we're bringing the best of SharePoint, Office Development and Silverlight training, training to you, for a chance at \$100,000 in prizes including an all expenses trip to Microsoft's Office System developer Conference in San Jose. We're coming to Atlanta, Dallas, Los Angeles, Silicon Valley, Chicago, and Washington D.C., and we're bringing SharePoint's elite including Microsoft product team members and SharePoint MVPs who will train you. Now, this is all free if you qualify, if you win. They will train you on SharePoint, Silverlight, and Office Development. They will provide a mystery game show. There's going to be an overnight developer competition which is as you know Richard was a lot of fun when we did it in New York.

Richard Campbell: Yeah. We participated in that.

Carl Franklin: And for the winner -- the winning team -- an all expenses paid trip to San Jose for the Microsoft Office System developer Conference. You can apply at www.infusion.com/sleepless. Do that now. Hey, shrinkster.com is back if you haven't heard and we're hosting it and, well, there you go.

Richard Campbell: There you go.



Carl Franklin: Not much more I can say about that.

Richard Campbell: Nope.

Carl Franklin: Shrink those long URLs. Go for it, have fun. It's on us, we don't mind. All right, Richard. Let's bring on our guest, Ken Levy. He is the community program manager on the Visual Studio Ecosystem team focusing on developer community for VSX, which is Visual Studio Extensibility. The VSX community includes developers who build extensions like tools, editors, designers, languages, and stuff for Visual Studio using the VS SDK found at the VSX developer Center, which is msdn.com/vsx. Ken was previously a product planner on Microsoft's Windows Live Platform team working on developer community and future product planning and before that, before working in the Windows Live division, Ken was a product manager in the VS Data team responsible for Visual FoxPro product management, the VFP developer website, as well as sponsorship of the new XML tools in Visual Studio 2005 created by the WebData XML team. And his qualifications go on and on and on. Ken, you have been the community guy it sounds like in all your jobs.

Ken Levy: Yeah, I've been doing a lot of community back from my FoxPro days when I was a developer outside of Microsoft and building tools, put them on CompuServe and then on the Internet. I was an MVP for most of the 1990s until I joined Microsoft.

Carl Franklin: You did some consulting at NASA, the JPL, is that true?

Ken Levy: Yeah, yeah. That's actually -- they had a lot of FoxPro out there because that's where dBASE, XBase was invented and I lived in LA and then I actually got to work on developer tools for other teams of developers and those are the early days of object-oriented programming and I built this utility called GenScrnX and it was like about a little over a hundred thousand people downloaded and used that thing on a regular basis and that's what got me in the community, speaking at events and writing articles and all that stuff.

Carl Franklin: Yes and then eventually you got pulled into Microsoft.

Ken Levy: Yeah, first as a consultant, what they call an orange badge if you're familiar and then eventually a blue badge employee.

Carl Franklin: So, community has been in your blood then the whole time and now it's all about Visual Studio Extensibility.

Ken Levy: Yeah. It's a new effort that I took on this new role early this year, it's a full position just dedicated to do community work targeting .NET developers in general outside of the VSIP partner program and getting developers to extend Visual Studio, share the components where making the tool set a lot easier to use. It's going to be a significant effort starting now essentially. You'll hear a lot about it through the next year and stuff

Carl Franklin: Is VSX only for tool vendors or is this for end-users as well? Would an end-user want to extend Visual Studio?

Ken Levy: That's a good question. I think that -- I try to define extensibility in two main ways. I mean a traditional way is someone who builds an add-in or takes the Visual Studio SDK and extends Visual Studio by building something, building some component inside the IDE and a new developer tool, new language, new project system, but extending Visual Studio can also be installing the power toy, just taking something that someone else built whether you buy it from a vendor, a partner that has a product that they sell, or just a free tool that Microsoft or some developer created and you simply install it and you add a new menu items and you get a new tool window like the Source Code Outliner type power toy or something like that and your essentially extending Visual Studio. We try to look at extensibility as both developing something and installing, so it's like an overall ecosystem. There's like partners, there are general developers and then there are people who consume it all.

Richard Campbell: Yeah, I was sort of working on gnawing on the term ecosystem around Studio because I can see ecosystem inside of Microsoft that there's a number of different groups around that are involved in creating and implementing in Studio but I guess this is really the first time we're opening that up to the world.

Ken Levy: Well, yeah, the evolution of it all is that Microsoft initially built Visual Studio so that it was pretty much only extensible by Microsoft and then a little bit later, it was opened up for partners and created VSIP program, Visual Studio Industry Partner Program. It cost a few thousand dollars to join and you get a lot of marketing, business benefits, technical support, and then the SDK became available free a little over a year ago.

Richard Campbell: But hasn't there always been since the early days of Studio some sort of available library? Like something you -- there were ways to hook into Studio.

Carl Franklin: Yeah or even going back to the old Visual Studio, there were ways to hook in.



Ken Levy: Mostly just by add-ins and there's limitations there.

Carl Franklin: Yeah.

Ken Levy: There is a simple automation model. As for the real sophisticated integration, it's always been what we call the Visual Studio SDK where you get direct access to the core APIs and there's really -- any real third party vendor that you buy, it uses the SDK and not an add-in to do it, and what Microsoft did is take the SDK and make it available for free. For a while, to be honest, we're just kind of sitting there on MSDN downloads and then Microsoft realized, "Okay, we need some community effort around improving the SDK, getting awareness, building a kind of a guru community around it and just get the word out, so to speak, that, hey, this process of extending Visual Studio is now free outside of the evolving VSIP program." We're still working on -- we have about 200 partners in the VSIP program. We're always looking for new strategic partners and keeping existing ones, building products around Visual Studio, but we want thousand and thousand of developers to actually extend Visual Studio with the SDK that's now free outside of that program. So, that part is new.

Carl Franklin: Now, Ken, I went looking at your blog, which I shrinksterized at shrinkster.com/syr, Sierra, Yankee, Romeo, and I found something that was weird which was the words Visual Studio and World of Warcraft in the same sentence. Can you please explain this to me?

Ken Levy: Yeah. In one quick note as I kind of have two blogs. I have my own blog at blogs.msdn.com/klevy and then I pretty much blog solely on the VSX team blog and that's the one you're looking at and I recently posted a bunch of news item and one of them is Microsoft worked with a vendor to create this tool using the new VS Shell, the VS 2008 Shell, and built a full World of Warcraft development environment using the Visual Studio platform. That means that you can now -- without having the licensed copy of Visual Studio, any version, you don't even have to have Express installed or anything, you can now install the free, license free, royalty free, you know, VS Shell runtime and then install an application that was built on it, in this case, World of Warcraft development environment. It's called the Add-on World of Warcraft Shell and our developers can build applications for World of Warcraft using the VS platform and there's no royalty. It's a free tool. It's on CodePlex open source.

Carl Franklin: Wow.

Ken Levy: So, that really opens the door to discuss what this new VS Shell is about. It plays a

role in this whole VSX platform so to speak, its extensibility, and with the release of VS 2008, codenamed Orcas, last month, Microsoft also released the new VS Shell and what this is, is a free runtime. There's an integrated mode and an isolated mode. What that means is the isolated mode is kind of like you install this runtime and if you don't have VS on your machine and install all the core bits of Visual Studio including the cool XML editor that's in there and everything. You just don't get C#, VB, C++, but you get the property sheet, you get the whole IDE tool, whatever; and using the Visual Studio SDK, developers and companies can build what we call packages, the same way you build something for Visual Studio when you have standard or above. I mean now you can deploy them with a free runtime and you can actually give away your application or sell it, either way. So, there's a whole opportunity there. We have a sample in the SDK called IronPython, you heard of this?

Carl Franklin: Yeah.

Richard Campbell: Oh yeah.

Ken Levy: One of the things we released a few days ago along with the World of Warcraft thing is we took that sample and before, you pretty much have VS standard or above, download the SDK and install it, then go to the IronPython sample and then compile it, run it, and you'd have IronPython, but we took the IronPython sample and had a vendor put it inside the VS Shell for free in isolated mode and we put it online. It's got over 10,000 downloads without hardly any promotion in the last few days. Essentially now, you can build IronPython applications with IntelliSense, debugging and everything. You don't need a copy of VS at all. I mean you get the VS Shell isolated mode at runtime. It's just part of the install and then of course this few megabytes of install, that's the IronPython piece itself uninstalls and it looks like a standalone product. It's co-branded, its custom branded, meaning you start up, you got your own splash screen, it says a little thing Powered by Visual Studio on the bottom right corner, but essentially the caption and the About box, everything, it's just a standalone development edition of IronPython. It's open source now.

Carl Franklin: Tell us about the Storyboard Designer.

Ken Levy: Yeah, that's another one. So we had a vendor called Clarius Consulting in Argentina. They have a really good developer we work with named Pablo Galiano and he has been working with the SDK for a long time and he's also worked with DSL tools and a few months ago, the DSL tools team and, by the way, DSL stands for Domain Specific Language.



Carl Franklin: Yup.

Ken Levy: A lot of times people say modeling, the class designer modeling tool. It looks like Visio inside Visual Studio. That's the best visual way to describe it.

Carl Franklin: Right.

Ken Levy: But that team, mostly based out of Cambridge, UK, merged in with our VS ecosystem team, so now those people are on the same team that built the SDK and the whole DSL engine is included in the SDK. So, to promote and show off how cool you could take DSL modeling and then deploy it with the VS Shell in a free application, we created the Storyboard Designer and it targets a non-developer. Now, certainly a developer could use it, but the idea is, hey, you want to storyboard something, a presentation, a podcast, a movie, a script, some kind of workflow, and you open it up, you create a new project, a storyboard project, you get a custom like toolbox set of controls that are things like Visio. They look like designer tools like start-end persona, scenario, flow, decision, yes or no, which way does the flow chart go, and you glue this little thing together, it looks like you're building a Visio kind of thing and then anytime you can right click to the project and then save to an HTML file. It builds up a whole set of multiple HTML files that are linked together to document your workflow and you could publish it or share it and someone can download this and use it and it's not even a developer. It's just the idea of showing off how you could build a free or a pay product using the shell in DSL. When I gave the keynote at DevTeach in Vancouver a few weeks ago, there was someone in the audience that came right up to me after the keynote and says, "Oh, I have a client that could use that Storyboard Designer right away." That was kind of interesting. Again, he said client, right? I was pretty sure the client was not a developer, it was just someone who maybe wants to storyboard something. It's like a whiteboard thing.

Richard Campbell: So, it's not necessarily related to coding per se.

Ken Levy: Yes, that's correct. The very popular ways to DSL is you model something, you're editing an XML file under the hood and you can do code gen, that's certainly what commonly is used in development environment for DSL like you're building some C# or VB code or you might be just updating the database or you might be generating a document or something like that. In this case, it is just building the document but you could generate code from this model if it makes sense to do so. I mean you're just adding some kind of custom XML file. That's what the DSL tool do in the end.

Carl Franklin: Hey, this is Carl. I just want to take a minute out of the show to tell you about Telerik's Q2 2000 Tools update, which can be summed up this way: Blazing fast performance for ASP.NET, WPF like visual effects for Windows Forms, and codeless reporting. The AJAX-based content editor is now 76% faster and much more intuitive. The grid also received a performance boost, plus PDF export, frozen columns and they've even added a new awesome scheduling component. What I find even more intriguing is Telerik's Windows Forms Suite. It's unbelievable that it offers WPF-like visual effects like scaling, rotation, object motion, transparencies, and so on without WPF. As a result, you could have grids, tree views, ribbons, and more with a previously impossible level of interactivity and appeal. Telerik has recently added CAB support, which makes the component setup a perfect fit for large enterprise applications. Lastly, with Telerik reporting, you can create advanced business reports in Windows, web or PDF format using pretty much design time only. Wizards, expression builders and converters help you with the design, styling and integration. You'll also be amazed to see some unique features like CSS-like styling and conditional formatting. See what all the fuss is about. Download a trial at telerik.com and don't forget to thank them for sponsoring .NET Rocks!

Richard Campbell: Yes, it's interesting how blurry the line between code and reality gets when you start getting into these domain specific languages. You're getting so abstract now and it could be almost anything.

Ken Levy: Here is a great scenario to think about, let's suppose there existed -- there are lots of frameworks out there for .NET developers.

Richard Campbell: Oh yeah.

Carl Franklin: Yup.

Ken Levy: They're not just the paper ones, but a lot of companies who have teams, you'll find that they have their own mini custom framework that they build overtime or a solid developer who has his own library. So now imagine a company -- let's say you had a .NET Rocks! framework, just hypothetical, right?

Carl Franklin: Yeah.

Ken Levy: What you could do is take the VS SDK with the Shell runtime, and you can build something called the .NET Rocks! Studio and you could either give it away or sell it, and it could be a development environment that allows you to model components of your framework, has business rules,



different things, helps the developer use it, and it can code gen around those classes and you can have productivity tools and stuff like that. You could build the whole tool set both for productivity and code gen around that framework and again, you could label it your own .NET Rocks! Studio and you could put it on your website and you give it away for free and you sell it or a little bit of both like kind of a...

Richard Campbell: So it's Studio but it's got all the languages taken out of it. What's missing? What is the Shell?

Ken Levy: So, the shell is kind of like that whole IDE without the languages. You get the property sheet, you get the error list, you get the debug, you get the XML editor, you get the menu system, you get the server explorer, you get the project explorer, you get the project system, you can create your own project types, you could -- Intel has Fortran .NET.

Richard Campbell: Oh no.

Ken Levy: Or COBOL. Yeah I know, but, again, what they could do now essentially is release a version of it that doesn't require someone to have Visual Studio licensed copy.

Carl Franklin: Right, right.

Richard Campbell: Yeah, I guess that's what's really powerful about this is now, yeah, you want to promote your own language, here is a way to package it that other people could use it or already know how to use it.

Carl Franklin: Even if you're not doing a programming language like the DSL stuff, the designer surface is really valuable in itself for doing all kinds of things. Tell me the difference between isolated mode and integrated mode.

Ken Levy: I was actually going to jump to that point on my next thing, yes. So the integrated mode is a little more like just coding for Visual Studio with the SDK today, but you can install the runtime without having VS standard or above and what happens is it runs like the isolated mode, but when you install VS standard or above, or if you already have it, it runs side by side. So, let's look at it this way. Let's say somebody took the IronPython project and made a version of it for the integrated shell, right? Well, they can certainly run it standalone without VS, but let's say they bought VS Pro, they installed it, then suddenly it will run side by side integrating Visual Studio. It kind of shares the same binaries so you're no longer running isolated. You're kind of like, "Oh, I can go create a new C# project, a new VB project, a new IronPython project," all in the same environment.

Carl Franklin: That's great.

Ken Levy: It's almost like getting somebody a package together with VS but before they have VS installed. They may not have it installed right then.

Carl Franklin: Right, that's isolated.

Ken Levy: You're targeting the person that's going to have VS.

Richard Campbell: Yeah, targeting a developer then.

Ken Levy: Yes.

Carl Franklin: Cool.

Ken Levy: Well, you can still target a developer but you're just targeting a non-Visual Studio developer if you use isolated mode and keep in mind, you could have isolated mode shells running side by side with Visual Studio like you can have Storyboard Designer on the same machine as you have VS Pro or VSTS and it's just going to run independently. The download right now with the runtime, this isolated mode, it's a little over 300 meg only because we bundled in .NET framework 3.5. We are considering having a separate download that doesn't include .NET framework 3.5 for those people that are going to install it to a machine that doesn't already has it. It will make a much smaller install.

Richard Campbell: Yeah. How much of that 300 meg is the framework?

Ken Levy: Something like 200 meg, I mean almost all of it. It's like 50 to 100 meg I think is the shell and then usually you're application is just a couple of megs depending on, you know, like the World of Warcraft and the Storyboard Designer, IronPython, those are just a few megabytes after they're packaged.

Carl Franklin: There's also extensibility points for Team Foundation Server in this version? Is that right?

Ken Levy: Essentially, there's always a layer of extensibility that's exclusive to the Team System version.

Carl Franklin: Yeah.

Richard Campbell: Yeah, it's the whole shell so that means all the team system stuff as well. I'm just starting to get a vision of a non-programming tool that would take advantage of team system and all of this



sort of management stuff. I could almost see a CAB program or an interior design program.

Carl Franklin: Or a network topology design program.

Ken Levy: Yeah. That's right. You could use the DSL tool mix together and do something like that. There's no doubt, one of the reasons that we try to create a diverse set of things, when you look at the World of Warcraft, I mean I think at Dev Connections as well as TechEd when that were shown, people were like, "Okay, what's Microsoft doing creating the developer tool for World of Warcraft?"

Carl Franklin: Is World of Warcraft managed code?

Richard Campbell: Oh, I'm sure it's not.

Ken Levy: I don't think so.

Carl Franklin: So, how does that work?

Ken Levy: In fact, the two primary things it uses are Lua scripting language, just based out of Brazil, it's been around awhile. It's commonly used in video games on a PC and then it uses XML files and most people use Notepad I think to edit...

Carl Franklin: I see.

Ken Levy: An XML file and a Lua scripting file and then they register it in the World of Warcraft file system and all, but what happened, what's kind of cool is when you edited what the World of Warcraft Visual Studio edition, when you hit F5 and build it, it actually goes to the World of Warcraft registry set of files and it registers your project with it and you can just run World of Warcraft right then after you hit F5...

Carl Franklin: Wow.

Ken Levy: And you will see it in the add-on list.

Richard Campbell: So what kind of add-ons are we talking for World of Warcraft?

Ken Levy: Well, one of them that was done in a screen-cast is kind of this opponent analyzer, this little thing where all you do is you hover over opponents and I'm not a World of Warcraft player, but at least watching the demos, you hover over your opponents and it gives you like this box, it's like a tool tip, it gives you all kinds of profiling information about the various opponents you're playing.

Richard Campbell: Right.

Ken Levy: But that's just one example.

Richard Campbell: This guy will kick your ass.

Ken Levy: You could add your own characters.

Richard Campbell: I got to imagine this is what the evaluation ultimately comes down to can he kill you or not?

Ken Levy: Yeah, you should look at the source code at some of this stuff. I've never seen a source code comment that says, "If kill occurs, do this; if death by sword..." There's all this dialogue inside comment code. It looks like you're reading some kind of sci-fi book.

Richard Campbell: It's a long way from a CRUD app.

Ken Levy: Yes, but again, what we do is we have a series of these shell applications Storyboard Designer, the IronPython Studio, and the World of Warcraft shell and they have different target audiences but that part of the example is -- these are just three that were just released in the last few weeks and they weren't that big of a project, each one. What we could see happening is businesses and developers going off and building their own applications with the shell using the VS SDK and we expect to see a lot of cool things in 2008. This whole VSX thing, we think is going to take off in a lot bigger way in 2008.

Richard Campbell: And there's still a market for -- it's not like you're giving Studio away per se. For developers, we still got to buy the actual prod that has the pro edition with the languages and all that good stuff in it.

Ken Levy: Yeah. One of the things that happened last month that's not really talked about a lot, but you guys will get a kick out of this, is the license agreement changed with Visual Studio 2008 and the SDK. What this means is, is that you can now build packages for Visual studio or things with the shell, the new shell that targets something that competes with Microsoft. It's okay. So, that means you can build something for the JAVA platform or you could build an iPhone SDK in the Visual Studio shell and give it away or sell it.

Richard Campbell: And you're not breaking any licensing rules?

Ken Levy: Right. In 2005, there were some restrictions around targeting competitive environments and platforms, but that's all been



released with VS 2008 so if you want to build something with VS 2008 SDK and/or play with the VS 2008 shell, it can target a competitive platform in Microsoft and it opens up the door to a whole lot more and so I kind of refer to it in the keynote at DevTeach. It's like this interesting perfect storm. You've got the new VS 2008 SDK, you've got the VS shell and this new license agreement. It opens up the door to tons of new opportunities that didn't exist before last month.

Richard Campbell: If you think you can make a better C++ than Microsoft, go for it.

Ken Levy: Yes exactly.

Carl Franklin: Tell me about Beth Massi's demo that she did with you on stage.

Ken Levy: That was an interesting thing because what we tried to do is show off how add-ins are useful even though they're not as near as powerful as the overall VS SDK. Add-ins is included with Visual Studio. There is no extra download. You can just open up Visual Studio today and just go create a new add-in project and code away or apply it to an existing project, so what Beth did is she worked with someone you probably know who works at Microsoft named Sara Ford. She worked on shared source, open source, now she's a PM on the CodePlex team.

Carl Franklin: CodePlex, right.

Ken Levy: And she had a real popular blog focused in a lot of topics around Tip of the Day on the VS IDE and so Beth liked a lot of these tips and she created a VB Win Form client that read the RSS feed filtered on the Tip of the Days, pulled down the XML, cached it, created a little like Internet Explorer Browser control on it, had a grid, had a filter, and then she loves LINQ so she took VB using XML LINQ and it allows you to search and do cool queries to filter like if you're searching for something. It's like a really cool rich client for Tip of the Day content, kind of like when you buy a new product and you see this dialogue come up and it's got tip of the day, but this one has searching and it actually accumulates the RSS feed so even if the RSS trickles away like on a limited amount, then you're going to still cache it all. Well, what she did on the keynote, and this is something I discussed with her around extensibility is, she showed how you take this existing VB project and she went in and created like an add-in project and added it to that solution and just wired it up with a couple of lines of codes so when Visual Studio starts, she goes into the event on startup and just says, "Show this form," and then in the Wizard, she said, "I want a command button, a menu item to launch this on demand and gave it a name." So, then she ran it

and then every time she ran Visual Studio, this form just comes up like Tip of the Day form and if you close it, you got a menu item to launch it on demand. You can do this with anything and it was just a way of showing, hey, anyone can extend Visual Studio with a Wizard and a few lines of code and that is add-ins. She got a lot of downloads on that tool and she blogged about it. So, the code, how that was done, everything, it's on her blog.

Richard Campbell: It's an interesting point to bring up that add-ins is still there, still usable, lots of people have done stuff with them, I think you're going to continue to do so. You don't have to use VSS.

Ken Levy: Yeah. To be honest, more people do simple add-ins than extend Visual Studio with the SDK only because a lot of times it's a simple automation thing you're looking for. I mean if you really want to build a nicely integrated tool, then you probably want the SDK but you can do a lot with add-ins even macros alone. Macro is a little more animation. Add-ins, you can get any to build your own tool Window Access, what code is being edited. You could select code and you could have like another little tool window, DOC window kind of thing. It comes up and shows you what you're editing, insert code automatically, all kinds of stuff like that.

Richard Campbell: What exactly can you do to World of Warcraft with this add-in? I mean as soon as I think about altering the code in a game like that, I think cheating.

Carl Franklin: Yeah, I'm still thinking about that.

Ken Levy: My understanding is there's a whole sophisticated add-on model in World of Warcraft. I haven't personally gone out and see what all kinds of things that they've done but I do know that Blizzard, the company that made World of Warcraft, has not ever created a development environment for it. It's kind of like, "Hey, we threw it out there. People go create XML files and Lua scripting and then they throw at the process manually and that's how a lot of people have been doing it and I think there is quite a few extensions that really add to the game on the PC platform, but I don't know what the degree of extensions are. I'm not...

Richard Campbell: Yeah. You're not a player so I got to imagine until you play, you don't really...

Ken Levy: Marcus Egger, Nick Landry, those guys are already told me in email like yesterday that they're planning on spending part of their holiday season to play with this new Visual Studio World of Warcraft tool.



Richard Campbell: That's what they think is fun.

Ken Levy: Yeah, especially Nick. He reminded me at DevTeach he's like level 70. I have no idea. It sounds really cool but I guess that means...

Richard Campbell: Well, apparently you topped out at level 70. You don't go any higher than that.

Ken Levy: It's pretty high, yeah.

Carl Franklin: Is that true, Richard?

Richard Campbell: It is true. Oddly enough, a friend of mine who makes a living playing online massive multiplayer games...

Carl Franklin: Crazy.

Richard Campbell: Contacted me about the World of Warcraft package literally yesterday.

Carl Franklin: Wow.

Richard Campbell: So, he is looking at that from exactly the point of view as a serious player, what does he think he can do with this. It's all very coincidental.

Ken Levy: What's really interesting is I think at the typical TechEd, DevConnections type conference, you don't see -- I think the percentage of people that play World of Warcraft is pretty low, but there are millions and millions of people that play that game and there is quite a few people that extend it but now what this is going to do is help do some interesting bridge between people that program in Visual Studio and may want to try to play around with extending World of Warcraft or people that play World of Warcraft that don't even have a copy of Visual Studio and now want to install the free shell developer edition and suddenly they're using what we call the VS platform. You hear the word platform a lot, right?

Richard Campbell: Oh yeah.

Ken Levy: You got the Windows platforms, you got the .NET platform, and one of the things that I told about in the keynote at DevTeach was you guys remember egghead software?

Carl Franklin: Sure.

Richard Campbell: Oh yeah.

Ken Levy: Things like that before you had Best Buy and CompUSA, whatever I need. You go and egghead and you'd see rows and rows of Windows software, a few aisles of DOS software, this

is like in the 1990s and then you see that one little small section of Mac software.

Carl Franklin: Right.

Ken Levy: It really wasn't because Mac was a bad OS at all. It was just that Microsoft really focused on making Windows a platform.

Carl Franklin: developer friendly.

Ken Levy: And that's when Steve Ballmer is jumping around singing his song "developers, developers, developers," he's thinking about Windows more than Visual Studio even because it's about a platform, developers build on that platform.

Carl Franklin: Right.

Ken Levy: So, now we're starting to think of Visual Studio as a platform itself.

Richard Campbell: Yeah. This is a big change because up to now it's been a product. Now, it literally is a platform for delivering other capabilities.

Ken Levy: And it's just beginning, meaning we -- next year, one of the things... So, we're already starting the planning phase of what we call VS 10, also Dev 10 is part of a codename. It's kind of like VS 10 is next version of Visual Studio, Dev 10 is kind of like the next version of Visual Studio with the next version of .NET framework 4.0 and all that. In the meantime, our team, the VS Ecosystem Team is going to be very busy enhancing the VS SDK on a regular basis. That means every two to three months. We use Agile development. We have scrum meetings. We post new free SDKs every couple of months with CTPs and all. Our goal is to build tools for tools. We want to build tools in the SDK that actually use DSL modeling to help code gen things for you, create better wizards. We want people to be more productive in using SDK so we plan to really evolve the development of extensibility on a regular basis as we evolve into VS 10 and then we certainly have a goal on the next version of Visual Studio to make extensibility even better and more powerful and easier.

Carl Franklin: Can we talk about that?

Ken Levy: We can talk about it based on you telling me what you'd like to see and I'll give feedback to the team.

Carl Franklin: Yeah, I guess I'm not qualified to do that.

Ken Levy: In terms of the next version of VS, we haven't really hashed out the exact specifics



but when we talk about what is it that people want, we know a lot in terms of pain points and certain things need to be easier. We need a better way of the programming model against all of the various APIs because remember VS today is a mixture of like COM and managed code...

Carl Franklin: Right.

Richard Campbell: Right.

Ken Levy: And sometimes when you're coding with the SDK you got to flip to different APIs to get to different areas because remember VS wasn't built from the ground up with the .NET developer in mind to extend it. It was built what a C++ developers in mind. Most of our VSIP partners are C++ developers.

Richard Campbell: Right.

Ken Levy: Whereas a lot of people that want to download run the SDK are VB C# developers. Now, we've been getting about 15,000 to 18,000 downloads of the SDK a month and we've released this thing called a VB Pack a few months ago for the VS 2005 SDK because we did not have VB support, any of the samples or wizards before for VB. It was just C++ and C# but when we did the VB Pack, it's got about 20,000 downloads and just the blog page alone for that has got like 50,000 hits. In the Orcas version or VS 2008 SDK, we put VB first class up in there, so that means you don't need that VB Pack for the new VS 2008 SDK. You got samples in VB, you got the wizards included with VB, so we think VB developers want to extend the Studio to create productivity tools because they like productivity tools.

Carl Franklin: Hey I just want to give a shout out real quick to our friends at Data Dynamics, who makes ActiveReports.NET among other really awesome things. ActiveReports.NET is great, because it allows you to just build your reports with an easy editor, embed them right in your application, provide PDF and HTML output, give your end-users a report editor royalty free of course. A great Access report upsizing wizard, and all of this for a price that isn't going to break the bank. ActiveReports.NET from Data Dynamics; go check it out now at datadynamics.com.

You know, some of the coolest stuff that I've ever seen done in Visual Studio has been done by DevExpress, the refactor and CodeRush things.

Ken Levy: Yeah, Mark Miller?

Carl Franklin: Yeah, like playing a video game and that's all. Is that using the VSX library too

or are they going directly against the CodeDom? What are they doing?

Ken Levy: There is nothing called formally a VSX library. What we have is the VS SDK and in the SDK we've got raw APIs to shell and then we got something called MPF which is Managed Package Framework which is a .NET wrapper class around a bunch of stuff. There's DTE, Development Tool Environment, API which is more COM-based, add-ins use that a lot, and you can kind of navigate around all these different APIs and get to things.

Carl Franklin: Yeah.

Ken Levy: Some people including DevExpress created their own layer of API because they have a product. I think a lot of partners do this. They create their own library and they have something called DX-Core. That's a free thing.

Carl Franklin: Right.

Ken Levy: It's kind of like another layer of programming that does certain things easier. Certainly, that's something worth looking at just to learn from, just to get an idea of what you can call into.

Carl Franklin: We did a video series on dnrTV on the DX-Core. He showed what you can -- I think he took a request for an add-in from a listener and built it on the fly.

Ken Levy: Yeah. That's all part of what we call VSX Extensibility, meaning that everything that they're doing is using the VS SDK. They're building on top of it and I expect to see more of that around the community, more stuff on CodePlex in terms of techniques or libraries of useful things, that kind of stuff. We're getting into a mode where we're building a community around people that are not necessarily partners. Now, Mark Miller is a good example, someone who's kind of both. He's in the .NET community, he's also a VSIP partner, but then there's a lot more people that are .NET developers who are starting to spend a lot of time extending Visual Studio and they're starting to surface with cool stuff, blogs. They're becoming experts. We actually expect to see a job market for people that know how to extend Visual Studio.

Richard Campbell: Yeah.

Ken Levy: There are already partners that are begging for new -- good .NET developers that know how to use the VS SDK, so if people are looking for a new up and coming area, the VSX area is going to be a hot area starting next year.



Richard Campbell: So when do you think we'll see in the implementation of FoxPro underneath the VSX space?

Ken Levy: That's interesting. Keep in mind the goal is not to replace the FoxPro IDE. What they're doing is that there are lots of developers now who have FoxPro apps that are using .NET with FoxPro, meaning they are either doing side by side, certain components are in .NET, certain are in Fox, or they are migrating into some componentized way or whatnot, and when you are in Visual Studio environment, they wanted to basically be able to compile certain components and blend in certain functionality and DLLs as part of the FoxPro side of things into the MS build, into the project system and so a lot of it is just bringing FoxPro components into the development environment of Visual Studio but not necessarily replacing what you would do in FoxPro completely. It's an open community project kind of thing. It will probably get used by people who spend time both in FoxPro and .NET and who continue to use FoxPro. It is certainly an interesting community project from the aspect of to see what they can do, to see what things they can innovate around it because the people like Alan Stevens and Craig Boyd, they're really smart guys and Craig Boyd is a Fox and I hope he does a lot of .NET. Alan Stevens actually works for the company that has had a project that runs in the Pentagon for the last I think about 15 years.

Richard Campbell: Wow.

Carl Franklin: Good customer.

Ken Levy: That's 15 years that runs all the military logistics for all US troops and supplies worldwide.

Carl Franklin: Shh. Shh. You can't say that.

Ken Levy: It's actually a FoxPro .NET SQL Server project that's been around for years.

Richard Campbell: I remember hearing about this project a long time actually.

Ken Levy: Yeah. There was a time when Microsoft bought FoxPro. I had a product that I created at a company in California that was used for police and fire department control dispatch communication for all like public safety, who ever bought this, and competed with Motorola. That's when I programmed with low level, with like integrated circuits and all this stuff, but I used FoxPro as a touch screen with DOS on the front-end. So that project and this other project, we got to sit down, myself and this other guy, Brian Jones, sat down with Bill Gates for like a half an hour and showed him demos of what we did and it kind of got recognized a lot after that. In

this project, this Pentagon project that they did has been evolving since 1991, since the Gulf War, but it has a lot of FoxPro components still because FoxPro manipulates data on the local engine side really well, but they got a lot of .NET, SharePoint, SQL Server going on there, but Alan Stevens is working on that. He's got a Channel 9 video about the VSX. He's really hot on extensibility. He's kind of a research-architect kind of guy that works on that team.

Richard Campbell: You know, earlier you mentioned Marcus Egger and of course Marcus is the publisher of CoDe Magazine. I understand that they're doing quite a bit as far as VSX is concerned.

Ken Levy: Yeah. So, a lot of people listening are familiar with CoDe Magazine. One thing that you may also be familiar with is something called CoDe Focus Magazine. This special edition of CoDe Magazine they called Focus, usually they don't have a date on them and they're just focused around one product or technology.

Carl Franklin: Yeah.

Richard Campbell: Oh.

Ken Levy: They've done about eight or nine of them so far. I got to work on the first one. It was on FoxPro 8.0. What we did when we worked on it, I said, "Okay, let's make this very community oriented," and come up with this idea of sidebars where we have all this product team members, have a photo and a quote blended in with the articles written by expert community members. The nice thing about CoDe Focus issue is the PDF and HTML for each article is online like the PDF for the whole magazine, a free download and you can go to code-magazine.com/focus and then see all these Focus issues going back to whenever. They've done tablet PC, mobile, Visual Studio Tools for Office, and all that, and when I took over this role earlier this year, one of the first things that I really wanted to do since VSX was new was create a Focus issue, CoDe Focus issue on VSX so I worked with Marcus, Ellen Whitney and a bunch people that worked on CoDe Magazine, Rod Paddock and all, and we had Microsoft people also contribute content to that issue. It's about 76 pages I think and it came online a couple of months ago and of course we got about 30,000 copies sent out to events and mailing list and all that stuff.

Carl Franklin: Yeah, I got my copy.

Ken Levy: Yeah. It's a good introduction to the overall extensibility. You get information about the new shell that we talked about. You get information about packages and Rod Paddock has an article on add-ins. You got how Microsoft uses the SDK internally for the XML tools and other things and



there are some case study kind of things where you've got this VS SDK assist project on CodePlex by Pablo Galiano and that's a cool tool to just kind of get familiar with the SDK around and XPath Mania by DonXml. So, it's a pretty good intro edition. We may even do another edition in about a year from now or so too like in a more advanced version, but we're all happy with it. It actually helps get the community to read it and be familiar with the overall picture of the VSX as well as the people on the team. We have like 20 people on the team that have like photos and quote and stuff in there.

Carl Franklin: Do you guys do any funny extensibility internally that you don't share?

Ken Levy: Funny?

Carl Franklin: Yeah. Just like jokes?

Ken Levy: Not too much, no. No, I don't know of many things like that. You mean like Easter egg kind of thing inside...

Carl Franklin: Yeah, yeah. Exactly, exactly.

Ken Levy: I'm pretty sure stuff like that has been done a long time ago but nothing lately. Most of us have been trying to figure out what does a wide range of audience want to do, what are those scenarios.

Carl Franklin: Right. So, you don't have any fun at work is that what you're saying?

Ken Levy: Yeah. Yeah, there's not... I think you could do some cool Easter egg things or install something that does something interesting on the machine but I haven't heard much. I think a lot of those things had been done a few years ago when you could do it and then it's not as an interesting scenario anymore.

Carl Franklin: Bill sent that memo and everybody is afraid to do it now.

Ken Levy: No more Easter eggs, right?

Carl Franklin: Yeah, I know.

Ken Levy: Quality control.

Richard Campbell: Yeah, it's funny how effective that actually has been, but yeah, it's really sort of ended that whole -- we used to really enjoy looking for those things, you know?

Ken Levy: Yeah like in Excel or in any product, you used to get -- there was a thing in Excel

where you got like a mini thing of Doom. It was like a mini visual thing with DirectX or something.

Carl Franklin: I remember that.

Ken Levy: It was like a mini version of Doom or something. I don't know how they did that thing...

Carl Franklin: Yeah, there's a walkthrough kind of thing. It just walked around I think. I can't remember.

Ken Levy: Right.

Richard Campbell: Yeah. This is a bunch of very - - and there was also how many different incarnations of flight simulator turned up in different programs.

Ken Levy: Right. So, the CoDe Magazine was pretty successful in terms of the reception, the way it's a good starting point for people to look at, and you know, it's content online, so that means you don't have to have a printed copy to go access the PDF or all the HTML. That's searchable in each article.

Richard Campbell: Or a Xine Viewer that does the -- it's all based on WPF.

Ken Levy: Yeah. I started playing with that and I really like it.

Carl Franklin: It's pretty cool.

Ken Levy: The Xine is a WPF client and I find that it's actually nicer to read the magazine content from that viewer than like a PDF file especially because you could resize it nicely and it kind of automatically sizes it.

Richard Campbell: Vector graphics, good.

Ken Levy: Yes, exactly. So, you can now download Xine and get all the CoDe Focus issues including the VSX issue free. You don't have to have a subscription to get that content, so at least you can get the free Xine client and then like get content just to try it out.

Carl Franklin: Yup. So, Ken, can you point us to some places on the web where we can find some interesting resources and information?

Ken Levy: Yeah. The best place, the homepage, you know, this is where you get a shirt that has the URL on it, msdn.com/vsx. That's the VSX Dev Center. I control the content on that site. You'll see on that homepage that there is stuff about getting started and downloads. You get the SDK download, you get the shell runtime download, you'll



get Getting Started as in links to that CoDe Magazine we just talked about, a little guided tour around the SDK, different types of information, overviews, stuff like that, our team blog which I post to, the VSX team blog as well as about eight people on our team that have their own blogs and some community blogs type of stuff. Now, in early January, which I think is about the second week of January is the current plan, we plan to update the homepage to look more like the current VB and C# homepages, a little more community oriented, got this new blue kind of box template so it will just be a little bit new and improved in about the second week of January. So, if anyone visits the site before then, check back, you'll see it updated. It will have RSS feeds, different things like that. We're going to make it its own dev center. Before, it's kind of been under the VS Dev Center, so the tabs for learning and community weren't their own, but we're going to make its own standalone dev center.

Carl Franklin: Cool.

Ken Levy: So, that's pretty much all the content, anything that you want to find, it's discoverable almost from that homepage alone, if not, just on the dev center.

Carl Franklin: Okay, and of course your blogs, both of your blogs, you're constantly posting about this stuff?

Ken Levy: Yes. The VSX team blog, that's kind of like information from the team that I blog and in my own blog. That's all on that VSX, the msdn.com/vsxdevcenter. One thing to add is there's a VSX forum, an MSDN forum. It's called Visual Studio Extensibility, so that the forum where we have our team members and MVPs and other developers that go there and ask tech questions and stuff like that. You certainly want to open up the dialogue with developers to find out what they'd like to see that we don't offer, how we can make things easier, what features we can expose in the future, what scenarios they would like to do. One of the things we're going to keep working on, we're working on a new training package that will come out in several months like a whole kind of like a hands-on lab type training thing and we really want to educate developers on what it is you can do. In January, we plan -- around January, maybe February, probably January, we'll launch two new sites on MSDN. One is a Visual Studio Gallery. It will be msdn.com/vsgallery. It will probably get you there and it will be a listing catalogue of various partners in community content that's online. It will link you to stuff that's there that extends Visual Studio. Then there's going to be a new MSDN Code Gallery. It's kind of like based on the CodePlex engine but it's going to be for code fragments, stuff that's not an open share source project either stuff from Microsoft

or from the community. We can just say, "Oh, here is a bunch of code and snippets," or "Here's a cool utility I created," and you just go post it there.

Carl Franklin: Sounds great.

Ken Levy: That could also relate to extensibility although it doesn't have to. It could be just something like how to use LINQ with VB or C# and it's a cool thing. The other thing is it could be something that runs extensibilities so we have those two things coming. It should be pretty cool.

Carl Franklin: Ken, are there any last minute things you want to mention before we sign off?

Ken Levy: Well, what our goal is, is to create a kind of new independent community around the VSX Extensibility. We know that a lot of developers can't actually extend Visual Studio full time, but what we expect is just like a lot of people that build .NET applications do web development part time, of course some do it full time, some do it part time, we expect Visual Extensibility to become more of a commonplace for a lot of developers whether they are building something for themselves, something for their team, something to share online, something to possibly even sell, so we expect to go back to that word ecosystem, expect the growing ecosystem around the VS platform and maybe in a year or so we'll have another chat and we'll discuss about all the cool stuff that's been going on the last year as a result of all this.

Carl Franklin: Awesome a n d i n the meantime, we'll be watching your blog.

Ken Levy: Cool.

Carl Franklin: Ken, thank you very much. It's been great.

Ken Levy: Yeah, thank you guys.

Carl Franklin: All right.

Ken Levy: Talk to you later.

Carl Franklin: Very good and we'll see you next time on .NET Rocks!

[Music]

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Ken Levy on Visual Studio Extensibility (VSX)
January 1, 2008

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