



Hanselminutes

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 #158

April 14, 2009

Visiting Fog Creek Software and Joel Spolsky

Scott's in New York this week and he stops by the Fog Creek Software offices on Broadway and chats with Joel Spolsky. Why did they write their own compiler? How long have they used VBScript? What does Joel think about online community? All this and less in this episode!

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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 #158, recorded live Wednesday, April 15, 2009. Support for Hanselminutes is provided by Telerik RadControls, the most comprehensive suite of components for Windows Forms and ASP.NET web applications, online at www.telerik.com, and by .NET Developers Journal, the worlds leading .NET developer magazine, online at www.sys-con.com. In this episode, Scott talks with Joel Spolsky from Fog Creek Software.

Scott Hanselman: Hi, this is Scott Hanselman and this is another episode of Hanselminutes and I'm down here in New York on Wall Street hanging out with Joel Spolsky at the Fog Creek Software. What are we on, 25th floor here?

Joel Spolsky: Yup, the World Headquarters.

Scott Hanselman: The World Headquarters at Fog Creek. Thanks for taking the time to chat with me and inviting me down, and we had a lovely catered lunch. I thought it was for me.

Joel Spolsky: Thanks for having me on the show.

Scott Hanselman: Yeah.

Joel Spolsky: You know, we have lunch here every day and it's brought in at about noon by our good pretty caterer so...

Scott Hanselman: That's pretty sweet.

Joel Spolsky: Happy.

Scott Hanselman: So we were just sitting here chatting and then realized we should just record this so I figured we bust out the recording equipment and chat. You guys make FogBugz and that's the product you're known for...

Joel Spolsky: Yeah.

Scott Hanselman: And you're coming out with FogBugz 7.0.

Joel Spolsky: Yeah, FogBugz 7.0 should be going into beta on Friday for the very first couple of beta testers.

Scott Hanselman: Cool. Friday would probably be the day that this podcast would go up so that will be today.

Joel Spolsky: Okay.

Scott Hanselman: So congratulations on...

Joel Spolsky: So if you're a FogBugz user and you want to try out the early version of the beta, just twitter me at Spolsky.

Scott Hanselman: Cool. A couple of years ago, I was reading about how you guys who wrote this in a language that you're in, I thought that was really interesting because originally this was in VBScript?

Joel Spolsky: Yeah. I mean, FogBugz has been around for absolutely ages and in fact the very first early version, it has all be rewritten, but very, very early versions I wrote just to learn VBScript when it first came out and I think there was a window of opportunity there. I mean this was before Java, this was before anything, when VBScript was just about the only reasonable touring complete language you could find to run on a web server.

Scott Hanselman: And this was like you would wind it with C++.

Joel Spolsky: Right.

Scott Hanselman: Yeah. So you did this in VBScript. So this was ASP, classic ASP.

Joel Spolsky: Classic ASP, yeah.

Scott Hanselman: All in one file, Master.ASP.

Joel Spolsky: You know, we had a lot of little files, they were all included in one big file, yeah.

Scott Hanselman: But you want it to be cross platform. That was really important.

Joel Spolsky: The first one that we had, I mean we had this big codebase in VBScript that we had modified. It was very clean, it was actually astonishingly clean, elegant, well-structured code. It was very, very functional, and the first problem that we had was customers asking to be able to run this on UNIX. The only solution for running VBScript on UNIX was something called Chilisoft which was a thousand hours per server and that was kind of expensive and we couldn't get anybody to go for that, and so what we did was we did was we took a summer intern and said, here, write a VBScript to PHP compiler. So this is a classic compiler, it's not a translator. It had a lexer and a parser and a code generator. The code generator generates PHP given VBScript.

Scott Hanselman: Why is that not a translator?

Joel Spolsky: Well, I get into debates all the time. No, no, a compiler and a translator are basically the same word.

Scott Hanselman: Okay.



Joel Spolsky: People sometimes think of a compiler as being the thing which generates machine language or something but that's actually not true. It rarely, rarely does. A compiler generally generates some other language. They may or may not be human readable. The old compiler generates assembler which was human readable. The first C++ compiler is generated C just because it was easier, and then they had all existing C compilers available to get into assembler.

Scott Hanselman: Right.

Joel Spolsky: There is no reason to take that extra step and we took that inspiration of the early C++ compilers which were called Cfront, the first AT&T C++ compiler. We took that inspiration to say, well, let's make a compiler and instead of going to the trouble of generating something which can be run at the machine level, let's just generate PHP.

Scott Hanselman: So you didn't do this as a translator in the sense of it wasn't a simple search and replace operation.

Joel Spolsky: Right. This thing is not...

Scott Hanselman: This thing brought in the syntax tree and admitted another syntax tree.

Joel Spolsky: Exactly and it basically did a true lexing and parsing as oppose to just fancy, regular expressions...

Scott Hanselman: So then at this point, they're putting up PHP for the UNIX version and they're using the standard VBScript on with those.

Joel Spolsky: Exactly.

Scott Hanselman: And this goes on for a number of versions and people are happy and...

Joel Spolsky: Not so happy. I mean PHP is not a good language, Scott. I hate to say this.

Scott Hanselman: Really, oh my gosh. The world is going to explode because isn't Facebook, the operating system for the internet, running entirely on PHP?

Joel Spolsky: Maybe it is. You know, good programmers can write good, clean code in any language no matter bad it is but there will just be difficulties. The PHP version always had issues. New versions of PHP will come out with incompatibilities. PHP never had good Unicode support. They never really solved that problem correctly. All kinds of issues around the way that references work in passing their reference into a function and just all the kinds of stuff was obviously

invented by somebody that didn't have a lot of computer language experience and so they did some fundamental mistakes.

Scott Hanselman: So this is pre-PHP 5.0 and you're not enjoying yourself at this point.

Joel Spolsky: Right, not enjoying ourselves and to this day we're not enjoying our PHP port.

Scott Hanselman: It still exists though.

Joel Spolsky: Well, I mean FogBugz 6.0, which is their current shipping version is PHP 7.0.

Scott Hanselman: Oh really.

Joel Spolsky: It's at a point where we're still releasing patches every once in a while on FogBugz 6.0.

Scott Hanselman: Oh no, and is that going to stop now? Is that dead?

Joel Spolsky: Well, that's dead for the FogBugz 6.0 train of thought. What we do with FogBugz 7.0 is almost a complete rewrite of the compiler into a thing called Wasabi. The current version of Wasabi takes a version of VBScript which has added a lot of features. We've added a lot of features to the input language, the language to the compiler. Just to give you an idea to some of those features, they're all these basically modern programming language features that are just starting to show up in C#. So some of them are like convenience features like the ability to have a string that spans to multiple lines, like a really long string using the triple quotes and this is a simple kind of convenience feature. Some of them are necessary because we now generate real CLR. So we're now at .NET language. Wasabi is a .NET language effectively.

Scott Hanselman: So to be clear, you emit assemblies that contain intermediate language and no one needs to know that.

Joel Spolsky: Right.

Scott Hanselman: And it just works and it runs inside of the CLR.

Joel Spolsky: It runs on CLR either regular IS or the UNIX version will run on Mono. Then we have access to first class .NET language. We can link with C#...

Scott Hanselman: All right. So you can call a few of these things, you really are first class.

Joel Spolsky: Yup.



Scott Hanselman: And do you have references to other assemblies that are not written in Wasabi?

Joel Spolsky: Yes. FogBugz 7.0 has a plug-in architecture. You can plug into any .NET language.

Scott Hanselman: So let me kind of take a small change. I want to come back to this but my first kind of like visual reaction is, but you make bug tracking software, why is there – there are six billion people on the planet, some of them are programmers, none of them had a solution for you so your bug tracking software company wrote a new language.

Joel Spolsky: Yeah. Well, I wouldn't say it's a new language. I mean, we have a specific set of constraints that not a lot of other people do. Number one constraint was existing legacy codebase that worked that was debugged in VBScript and VBScript is a bad language to programming. It's missing a bunch of stuff, but we added it. The truth is I think a lot of the fundamental reaction -- I mean, there was a lot of reaction against Wasabi saying, you know, WTF-wise why are you guys running a compiler, and I think that fundamentally comes from the fact that a lot of programmers, especially a lot of -- well, I won't use nasty -- generally I would say a lot of beginning to intermediate programmers.

Scott Hanselman: Sure.

Joel Spolsky: They might think that there's something magical about a compiler, that this is too hard for them to do, that a compiler is like an operating system, it's for the gods of Redmond, Washington to create and maybe like a couple of genius that work for Google, but this is not code that I could ever write because it is something magical and incredible and mysterious and it's like creating Adam, you need a somewhat...

Scott Hanselman: I remember I think my compiler class was at 300-level class.

Joel Spolsky: Yeah, it's 300-level and so anybody that's learned how to program Java at the Java in 21 Days course at the Airport Marriott or who basically learned how to program by downloading assorted JavaScript from websites in their early dotcom boom might think that a compiler is something that they would have no idea how to ever go about doing that, but anybody who has taken the compiler course knows that it's a one-semester project and so...

Scott Hanselman: And you had an intern to it.

Joel Spolsky: Yeah, we had an intern to it. Later we had fulltime employees who work on it.

Scott Hanselman: Sure.

Joel Spolsky: But I mean we know that it's a matter of a couple of months to get ready the compiler.

Scott Hanselman: So you're answering my kind of like and you're building a compiler with -- well, it's not that big of a deal to build a compiler.

Joel Spolsky: Correct.

Scott Hanselman: We had a great codebase of input.

Joel Spolsky: Yeah,

Scott Hanselman: Your input was really a domain specific language at this point. I mean, it is called Wasabi but it's FogBugz VBScript.

Joel Spolsky: Essentially.

Scott Hanselman: And you had a large existing DSL, why not exploit that?

Joel Spolsky: It was easier for us to do that than to port. I mean, we just sat there and made the decision to write this compiler or do we port all of our existing code.

Scott Hanselman: Right, write it to VB under MVC.

Joel Spolsky: Right, and we just thought this was an easier way to do it and would leave us in control in a way, and I mean Wasabi is a better language than either VB or C# for our needs both and essentially it is guaranteed to correctly compile our existing code but also in the sense that we've added features to it like for example type inference, a complete type inference system that figures out the type of everything without our having to declare them and it's better than the typed inferences in C# because it works across parameters on it, that kind of stuff, the kind of thing that modern programming languages coming out of academia -- by modern I mean 1990 or your Haskell -- and they all have this type inference.

Scott Hanselman: So I'm playing devil's advocate a little bit.

Joel Spolsky: Yeah.

Scott Hanselman: Could one read into what you're saying and let's say that someone is listening to this podcast in their mind...

Joel Spolsky: In bed.

Scott Hanselman: Yeah. Maybe there are two or three people who are listening and they're thinking,



wow, Spolsky is like blah, blah, I'm smarter than Enders.

Joel Spolsky: No, I'm not definitely.

Scott Hanselman: Blah, blah, the modern programming language...

Joel Spolsky: Definitely it has been Jake and the people who worked on the compiler. I'm not...

Scott Hanselman: But you know what I'm saying.

Joel Spolsky: Yeah.

Scott Hanselman: Someone could be hearing and saying, wow, what arrogance to go and write a new language.

Joel Spolsky: Yeah.

Scott Hanselman: Do you look at it that way?

Joel Spolsky: No.

Scott Hanselman: No and why don't you...?

Joel Spolsky: Plus don't forget, I don't think anybody else in the world will use Wasabi otherwise you would...

Scott Hanselman: That's exactly my next question, it was why and why not writing with Wasabi?

Joel Spolsky: Unless you have a body of code in VBScript that happens to use the same subset of VBScript as FogBugz does, this is probably not the ideal language for you. It's not very well...

Scott Hanselman: If somebody does, then I suppose they'll call you and you licensed it to him or whatever.

Joel Spolsky: If they want, but they will discover...

Scott Hanselman: There are a lot of people out there with a lot of code in VBScript who would very much try and call ADO and doing random...

Joel Spolsky: Well, that's the thing. For example, we use probably 5% of what ADO makes available and if somebody uses a different 5% we would never bother implementing that. So there's a bunch of stuff where, like I said, there's only one program that we have to compile with Wasabi and that makes it a very specific kind of compiler, and to actually make it something that would make it take any arbitrary VBScript that anybody has run in the world.

Scott Hanselman: You see, that's really interesting when you said that, but really you wrote a compiler that compiles not just to -- it compiles one language but it really compiles to one program. So if they're interested in compiling FogBugz, then this is the language for them.

Joel Spolsky: Exactly and in fact I'll get a free copy of the compiler one day by FogBugz, it will be there in the accessory directory so they can compile FogBugz.

Scott Hanselman: Really.

Joel Spolsky: Yeah, we shipped the source.

Scott Hanselman: Now, when someone creates a language, even a language that compiles one program, there's user things like debugging and debug stacks.

Joel Spolsky: Yeah, Visual Studio.

Scott Hanselman: Really.

Joel Spolsky: Yeah.

Scott Hanselman: So it figures out everything for you and you're able to get the stack trace look like it points to the right line and says, yeah, everything is cool.

Joel Spolsky: I don't want to say it's like the world's best debugging environment but it's definitely better than printf debugging.

Scott Hanselman: So you're not doing the old style got here debugging.

Joel Spolsky: Yeah, no. There are a couple of cases. The truth is that the dev team here, if they could, would always write a new code, would always rather write a new code in C# and so FogBugz 7.0 has a big plug-in architecture. The plug-in architecture can take in plug-ins written in any .NET language, and so we tend to write, if we can write a new feature by making a plug-in we will do that and then we will be able to use C# and we'll get all the benefits of all those tools. I think somebody has written a couple of examples in IronPython 2, actually a plug-in.

Scott Hanselman: So before you had .ASP files, and I know how that entry point into IIS works and how you get ahold of the request job and responses and that kind of stuff.

Joel Spolsky: Yup.

Scott Hanselman: Now, are you an HTTP handler? I mean, what's your relationship with IIS?



Joel Spolsky: I'm pretty sure -- I don't know, sorry.

Scott Hanselman: Okay. Your folks write in .NET language so you must be in there with...

Joel Spolsky: I think it's still kind of one entry point where like where you just have one big gigantic monolithic blob of code of that runs in a bunch of classes. I think it's kind of the same.

Scott Hanselman: When did FogBugz start?

Joel Spolsky: We've been shipping FogBugz since November 2000.

Scott Hanselman: 2000. Yeah, you've got the 10 years thing coming up pretty soon here.

Joel Spolsky: Yeah.

Scott Hanselman: And when did you start joelonsoftware.com?

Joel Spolsky: A little bit before that, 1999, I think I had an article and mostly in the summer of 2000 before I start Fog Creek.

Scott Hanselman: And when did people found value in it?

Joel Spolsky: Never.

Scott Hanselman: I was giving a talk at Devscovery just a little while ago and one of the people said why bother writing a blog and I said, well, so I can go back and Google myself later, and you know, I just went back to September of 2002, when I started it, and just looked at the first post while we're there on stage and it said, well, it looks like I'm blogging, we'll see how long this lasts.

Joel Spolsky: That's everybody's first and most people's last post.

Scott Hanselman: Yeah, a lot of people don't last.

Joel Spolsky: You know, a lot of people blog. It's interesting to see some of the classic bloggers, the shape of their blogs, they make it clear while their blogging. So for example, Dave Winer, every once in a while will have a post where he says this not going to be interesting to anybody but I'm just posting this so I can find it in the future, and at some point there was a point in I would say 2001, 2002 when Google got so good at finding things.

Scott Hanselman: Yeah.

Joel Spolsky: That everybody started to learn that stuff on the internet could be found, whereas they used to have the assumption that it couldn't. So for

example, until then everybody had 4,000 bookmarks because they wanted to be able to get back to the Microsoft homepage again because they didn't know how then to make a bookmark to the Microsoft homepage so they could find it.

Scott Hanselman: On their own site.

Joel Spolsky: Yeah.

Scott Hanselman: Because everyone's own site became their homepage, right?

Joel Spolsky: Their bookmarks which exactly are the bookmarks, and then in the original version of Netscape the bookmark was an HTML file so you couldn't make that your homepage. But as soon as people discovered that you could trust Google to find things for you again, they started putting stuff out there simply so that they could find it again, and so a lot of programmers, that's when their blogs are, just a lot of kind of I need this again and there are definitely posts like that, of that form on Joel on Software. There are other kinds of bloggers, and I think that really Raymond Chen is a great example...

Scott Hanselman: Oh yeah.

Joel Spolsky: Besides the fact that he has brilliant and interesting things to say, and almost everything he posts sort of fun and interesting, but that his titles are almost always questions and his post is an answer to that question and you can tell that from the beginning he was conscientious that what he wanted to do is a canonical answer to a question for a particular narrow and easy question about the Win32 API that he absolutely know the answer to.

Scott Hanselman: In the talk that I gave on social networking today, I said that you'll start blogging and, you know, I said everyone here should have a blog, and some people said yes, I'll dedicate myself, I'll get a blog. I said, "All right. Well, you're going to blog in a vacuum for a year and no one is going to read anything that you've ever written and no one is going to care and you're going to feel bad about that, and then one day you'll write a post that will be the post you'll become known for."

Joel Spolsky: Yeah, I guessed that.

Scott Hanselman: Then I asked Jon Robbins who was there, I just said, "You, John, what is the post that everyone...?" And he said, "How to install Vista 64 on MacBook Pros."

Joel Spolsky: Yup. Style of yours?

Scott Hanselman: Exactly a direct question and a direct answer, and not in anyway what he was interested in blogging about but he just happened to



answer a question and his post became the kind of canonical answer to something. For me it was a tools' list that I wrote, it was Scott's Ultimate Tools' List.

Joel Spolsky: Cool, cool.

Scott Hanselman: And then that just became like the thing sort of over a year almost and actually now this is the first year that I've skipped the year, I didn't do it last year and now I'm getting complaints, where is this year's list.

Joel Spolsky: Right, you might as well do it. Mine is probably that article about Unicode although I had readers before that, but still probably the number one post on my site in terms of getting traffic is that little tutorial about Unicode that I wrote.

Scott Hanselman: It had kind of, what we would call today, kind of a classic link-bait title because it was so declarative, what every developer absolutely needs to know.

Joel Spolsky: Yeah, yeah, absolute minimum.

Scott Hanselman: Absolutely minimum, no excuses.

Joel Spolsky: Right.

Scott Hanselman: I mean, it's almost that the title just calls you an idiot and begs you to read it and it's a great post and that is to this day, the kind of the canonical...

Joel Spolsky: Right.

Scott Hanselman: Were you worried that it wasn't correct? Were there any errors in it?

Joel Spolsky: I was pretty sure it was reasonably correct.

Scott Hanselman: Yeah.

Joel Spolsky: What I was worried about at the time I was writing it was that there were nine million other issues in internationalization and the people that tend to be concerned about internationalization and nationalization, localization, etc, all tend to be monumentally nitpicky...

Scott Hanselman: Yeah.

Joel Spolsky: And I thought that I would start to get long letters about how I hadn't said anything about how when you translate to German all the dialog boxes all the words will get longer and you'll need to leave space for it, and I didn't say anything about that and I didn't talk about month, date, or the...

Scott Hanselman: It wasn't supposed to be the canonical...

Joel Spolsky: It was about character sets in Unicode.

Scott Hanselman: Exactly.

Joel Spolsky: And what was interesting is that so many people to this day don't know that stuff and I read a book by Michael Kaplan who now works at Microsoft...

Scott Hanselman: I love Michael Kaplan.

Joel Spolsky: Yeah.

Scott Hanselman: A great guy. He has a really great blog called Sorting It Out.

Joel Spolsky: Right. Also a lot of stuff about character set and localization, especially on character sets, and he wrote a book, I think it was called Internationalization with Visual Basic, that I actually used to try to get an early version of CityDesk working with some reasonably good Unicode level of support and that's how I kind of learned the stuff because he explained it in a way that made sense to me for the first time since the day we ever did try to make that before.

Scott Hanselman: When that post happened, was that when kind of what Chris Sells calls obscurely famous began?

Joel Spolsky: No. I think I was sort of -- I mean, there were lots of other posts that are written on Joel on Software that have gotten linked to by the people that read Joel on Software and there was nothing special about that post in terms of the traffic that it generated. Probably the turning point that the post the generated the most traffic was the How Microsoft Lost the API War, which got a monumental amount of attention including a lot of internal attention at Microsoft and I've been told that it was -- I think that wasted a longhorn reset.

Scott Hanselman: This was a couple of years ago?

Joel Spolsky: Yeah. It was basically, in some way, inspired by some of the things that I mentioned there and you know I don't want to get credit for that, that's the way...

Scott Hanselman: No, of course.

Joel Spolsky: But there were conversations inside Microsoft that were instigated by this How Microsoft Lost the API War.



Scott Hanselman: Do you know how to make the possible out of the impossible? Well, the .NET ninjas at Telerik do. They just released a huge pack of web controls all built on top of ASP.NET AJAX that will help you build impossibly fast and interactive applications in no time at all. It made the impossible possible in desktop development. If you think you can't have a carousel component in Win Forms, well, you can. There are Windows Form suite that features a super powerful GridView Control and 32 other crazy desktop components that will give you a dazzling WPF-like feature, but in Win Forms it will do the same thing in reporting solutions with the new designed surface like nothing else. It looks just like graph paper, gives you advanced page layout capabilities, makes it feel more like a graphic design software than a reporting solution. Go check them out at telerik.com and be a .NET ninja. Thanks for listening.

It's amazing how bloggers can affect things inside of Microsoft. There are really great bloggers that I really enjoy but I don't think enough people read Long Zheng. He is a guy out of Australia and he has a blog called I Started Something.

Joel Spolsky: Oh, yeah.

Scott Hanselman: It is such a thoughtfully written blog and he doesn't just complain, which a lot of bloggers do, but he also takes action.

Joel Spolsky: Right.

Scott Hanselman: So for example, he doesn't like UI inconsistency. So rather than complaining about it, he actually made a website that's a community site that does nothing but collect screenshots of dialogues with inconsistencies so that people can document and then download them. This was done a couple of years ago but it's kind of a Stack Overflow for one thing, UI inconsistencies.

Joel Spolsky: Yeah.

Scott Hanselman: He's got one for Windows 7.0.

Joel Spolsky: Cool.

Scott Hanselman: One for Vista and one for Mac OS...

Joel Spolsky: That was really bad.

Scott Hanselman: Yeah and that took a lot of attention and internally at Microsoft people were like, oh, wow, look at this, a screenshot, nice bug report, I mean it was bug tracking for that kind of stuff. I don't enjoy reading complains on blogs as much as I could.

Joel Spolsky: You're right, because if you're just complaining, then it's like, yeah, I know, telephone company's stuff, I'm sorry you had a bad

experience, it's all on company. But am I really going to continue to read this until the end of time?

Scott Hanselman: Exactly.

Joel Spolsky: And if everybody is going to have a blog, are we all going to write the same post about the bad thing that AT&T did to you? You know, at some point that's not necessarily the most productive...

Scott Hanselman: So how much are you blogging now? You do it once a week or...?

Joel Spolsky: No, not even. I hardly ever had time to blog anymore and I've also kind of run out of things to say because a lot of what I was writing in the early days was, you know, accumulated now on a couple of decades working in software and once I had gotten the main point out that I wanted to get out, you know, I guess I try to maintain the same level of filter that I always had. If it's not relatively novel and I feel like I have a kind of interesting thing on it and people seem to be missing the point, I won't write it, and one thing that has happened is so many other good bloggers are out there now that I don't have to be the one to write these posts...

Scott Hanselman: It is a little intimidating though, I must say. Like Jeff Atwood has -- there's a cadence to his blogging, just once a day and even though sometimes I'll go, come on Jeff, it's Tuesday, that was a crappy post, you just threw that one away, it's just that every week day, there's a good post from Jeff.

Joel Spolsky: Yeah.

Scott Hanselman: I remember years ago, he posted that you had jumped the shark.

Joel Spolsky: Oh yeah, I think that's probably still one of the top Google hit from my name.

Scott Hanselman: For those of us who aren't necessarily from the U.S who are listening to this podcast, or who may not speak English, "to jump the shark" is actually a reference to an episode of the American sitcom Happy Days when somewhere in the fourth or fifth season they decided to set up a very silly spectacle where the Fonz would jump a shark on a pair of skis and it was a ridiculous, silly stunt.

Joel Spolsky: To try to get viewers in a fading...

Scott Hanselman: In a fading television show. So then "to jump the shark" became the mark of when something that you once loved has finally peaked and is now heading downhill.

Joel Spolsky: Right.



Scott Hanselman: So Jeff said, in a very public post dedicated to Joel Spolsky, jump the shark, we once loved him and now it's over, let's all watch him go down in flames.

Joel Spolsky: Okay.

Scott Hanselman: Now you guys are like hanging out all together. You got a podcast you're going to record in an hour and you're in a business venture.

Joel Spolsky: Yeah.

Scott Hanselman: How if I insult you – do we hang out more if I blog mean things about you?

Joel Spolsky: Scott, I'll hang out with you whether or not you blog about me, but go ahead, it's not crazy.

Scott Hanselman: How in the world did that turn into best friends?

Joel Spolsky: Well, actually I didn't know about that post and so I had a pretty...

Scott Hanselman: Weren't you insulted?

Joel Spolsky: No, I'm not really insulted by thoughtless, meaningless nonsense like -- no.

Scott Hanselman: So you really didn't know about that? It wasn't like on your...

Joel Spolsky: No, I didn't know that. I didn't know about that. I thought that Jeff was a good blogger and an important blogger and so that's kind of more important to me than the fact the he have insulted me once.

Scott Hanselman: He did the same thing to Paul Graham and now they hang out.

Joel Spolsky: Oh really?

Scott Hanselman: Yeah. He said that you look, go Shrinkster blog for Paul Graham and he went on about how he sucks and now Jeff and Paul talk so I guess it's a great way to meet famous people.

Joel Spolsky: There's something that's kind of important if you're a blogger that I want to tell people, it's that as an early blogger one way in which you can get fame is by trying to take down people who were more mighty than you. So I can write a post saying How Microsoft Lost the API War because Microsoft is mightier than I am and you know I can do that. On the other hand, now that I've got Fog Creek Software, we have 25 employees, we're making millions of dollars a year, we're highly profitable, we have this big beautiful office, and I have a blog that's read by a million people, for me to attack some

bloggers and say they only has 200,000 readers instead of a million readers would be cool.

Scott Hanselman: Yeah.

Joel Spolsky: And whatever point you are on the scale, you're allowed to poke at the people that are above you but it's not very nice, it's not polite really to attack the people that are weaker and smaller than you. It's just not basic manners, I think.

Scott Hanselman: Huh.

Joel Spolsky: Whereas I used to get a lot of joy out of writing a blog post making fun of some start-up with a ridiculously idiotic idea, just because nobody knew who I was. It was ridiculous and idiotic.

Scott Hanselman: Right, it's mean.

Joel Spolsky: Now I sort of feel bad. I'm not going to attack two guys working on a little iconic start-up that have a ridiculous stupid idea.

Scott Hanselman: Yeah.

Joel Spolsky: They don't need to be attacked by me. That's just like beating up little kids on the playground...

Scott Hanselman: So speaking of two guys working on a ridiculous start-up with this stupid idea, Stack Overflow...

Joel Spolsky: Yeah, exactly. Poor guys though. Yeah, yeah.

Scott Hanselman: Yeah. So you and Jeff are partners on the Stack Overflow thing and it's going like a rocket. I went on compete.com and the traffic is looking great.

Joel Spolsky: Yeah, their numbers are terrible. We don't hesitate to publicize their numbers but they're substantially higher than what compete.com shows by orders of magnitude.

Scott Hanselman: Oh, really?

Joel Spolsky: Yeah.

Scott Hanselman: So Compete is wrong.

Joel Spolsky: We are...

Scott Hanselman: They said like 14 million pages are used last month.

Joel Spolsky: Yeah, that's our number. That's not Compete's number.



Scott Hanselman: Oh, I thought Compete said that.

Joel Spolsky: No.

Scott Hanselman: Okay.

Joel Spolsky: Yeah, I don't know how they...

Scott Hanselman: There are all these different things like Compete, Netcraft, Alexa. Everybody wants to know what the hot numbers are.

Joel Spolsky: Yeah, they're all wrong and they're all using Internet Explorer plug-ins that no programmer has so...

Scott Hanselman: Oh, that explains why they would be so low.

Joel Spolsky: Right. The current numbers are about, let's see, 14 million pages a month, 6 million visitors a month, 3 millions unique visitors a month, that pretty much.

Scott Hanselman: So 3 millions unique individual human beings.

Joel Spolsky: Well, the way unique is defined is we try to set a cookie and if the cookie is still there we continue to...

Scott Hanselman: Yeah. That's a lot of people.

Joel Spolsky: Some people clear their cookies.

Scott Hanselman: That's a lot of people.

Joel Spolsky: Yeah.

Scott Hanselman: And the thing I think...

Joel Spolsky: That is a lot especially - I mean, the best estimates I've heard about how many programmers there are are 2 to 4 million so...

Scott Hanselman: Two to four million programmers?

Joel Spolsky: Yeah.

Scott Hanselman: No, nonsense. I think you're insane. No, I would totally disagree. That's a very interesting question. We should have some audience participation if we had an audience. I suspect there are probably 3 million C# developers alone in the world. For example in Norway.

Joel Spolsky: How many programmers -- what percentage of programmers do you think are in

the United States, because there is U.S. Department of Labor.

Scott Hanselman: Yeah, actually that's a good question. Let me put it this way. In Norway, there's like what? How many people are in Norway? Six million people?

Joel Spolsky: Yeah.

Scott Hanselman: Someone told me that in Norway there are 30,000 .NET developers.

Joel Spolsky: Okay. We can't extrapolate from Norway.

Scott Hanselman: OK we can't extrapolate from Norway. They're very smart in Norway.

Joel Spolsky: I believe -- here's where I got that. Department of Labor...

Scott Hanselman: Okay.

Joel Spolsky: Can I Google this now or...?

Scott Hanselman: Yeah, please. Okay, he's going to Google now and I'm going to talk while he Google's. So he is going over to Google now, he is not using Stack Overflow to answer this question which I think is pretty sad.

Joel Spolsky: You know what, it will come up at the Stack Overflow probably in the first page.

Scott Hanselman: Oh really? It's going to be in the first page. So it says 3 million programmers in the entire world. I think it's more like 30 or 40 million, that's a lot.

Joel Spolsky: Let's see just type. How many programmers...?

Scott Hanselman: In the world.

Joel Spolsky: Are there in the world? This is actually going to kind of illustrate and so...

Scott Hanselman: Google answers, how many programmers are there?

Joel Spolsky: Yeah, Google answers. That's actually...

Scott Hanselman: No answer. What's the next one? How many programmers...?

Joel Spolsky: This is like there are 6 billion people in the world times one percent.



Scott Hanselman: Right and this is about the same as trying to figure out how many aliens there are in the universe.

Joel Spolsky: Right.

Scott Hanselman: Because you just have to go and guess...

Joel Spolsky: Absolutely.

Scott Hanselman: How many...?

Joel Spolsky: Oh, here is Stack Overflow.

Scott Hanselman: Oh, so Stack Overflow shows up and what do we see?

Joel Spolsky: Well, this guy is guessing 12 million but he's saying one percent of people with computers and that's something that's kind of ridiculous.

Scott Hanselman: Oh, that's interesting, one percent of people with computers?

Joel Spolsky: Here's U.S. government, 3.1 million Americans.

Scott Hanselman: Okay, here we go.

Joel Spolsky: So that's real statistics. Now, the next thing which we might have statistics...

Scott Hanselman: Oh well...

Joel Spolsky: One percent of Microsoft developer product tools revenue comes from outside of the United States.

Scott Hanselman: Yeah.

Joel Spolsky: I'm betting it's about 50-50.

Scott Hanselman: Okay. So there are 300 million Americans. That's counting old people and babies. Three million of them...

Joel Spolsky: No.

Scott Hanselman: That's 300 million Americans.

Joel Spolsky: Yeah.

Scott Hanselman: There are no babies or old people that program, and 3 million of them, one percent of Americans are programmers.

Joel Spolsky: Okay.

Scott Hanselman: So then you figure you can't say 6 million because not everyone is doing...

Joel Spolsky: No, there's no way that one percent...

Scott Hanselman: So one percent of computer users is what you're going to say.

Joel Spolsky: No, I want to just say...

Scott Hanselman: That's like 16 million people.

Joel Spolsky: No, I don't believe so because that means that America has more programmers than...

Scott Hanselman: I bet what you do is take the G-20, right? One percent of the total population of the G-20.

Joel Spolsky: I'm going to go by almost all software companies tend to report that 40% to 50% of their sales are in the United States.

Scott Hanselman: Okay.

Joel Spolsky: And these are...

Scott Hanselman: And everyone else is outside.

Joel Spolsky: Yeah.

Scott Hanselman: Okay. So you're saying that times two.

Joel Spolsky: Yeah, that's why I think that times two.

Scott Hanselman: Six million programmers. Okay, I don't know, and you're getting a chunk of them.

Joel Spolsky: Yeah.

Scott Hanselman: I think that's a little high.

Joel Spolsky: Yeah, it's probably high. Let's see how high it goes because we double every four months.

Scott Hanselman: You see, when you have a lot, if you double and talk to me in four months and you have them all then that would be great. I think really the way that you know -- well, I don't mean you, I mean anyone knows is when you can just mention it to anybody and they go, oh yeah.

Joel Spolsky: Right, yeah.

Scott Hanselman: I mean, I mentioned Stack Overflow today and about 30% or 40% of the audience raised their hands.



Joel Spolsky: That's about what we're seeing. That's what happened at MIX...

Scott Hanselman: That doesn't mean that they're active users, it could mean it's starting to get in their consciousness, they're starting to use it, they're starting to think about it.

Joel Spolsky: Most people will discover because they'll start to come up and Google Search us out and they won't even look at any of this site until about the third time they've seen Stack Overflow and they'll start realizing they're getting better answers from Stack Overflow and so they're doing the Google thing of reaching over three other sites to pick the fourth result.

Scott Hanselman: Because they see the Stack Overflow site, they want...

Joel Spolsky: Yeah, and actually Google detects that and starts to...

Scott Hanselman: Is that so? Really?

Joel Spolsky: Yeah, they start to twiddle what's on the homepage based on they discover people reaching over at another site.

Scott Hanselman: And I've noticed that I get different results from Google whether I'm signed in or not.

Joel Spolsky: Right.

Scott Hanselman: So they know what I prefer to get. All right. Well, that was a big ego trip right there but the point is that you starting to answer questions that people want to get answered.

Joel Spolsky: Yeah.

Scott Hanselman: And it's kind of showing that the full text search indexing is just not the best way to get the answer to a question.

Joel Spolsky: Yeah. There's a general weakness with search engines that comes around any sort of Q and A experts answering questions kind of areas. The reason that they've been pretty weak, this is sort of my guess, although there are a couple of things but the main point is that these programming questions are very, very narrow. So a question on Stack Overflow that's popular will have a thousand people looking at it ever.

Scott Hanselman: That was a little bit of a low...

Joel Spolsky: Yeah.

Scott Hanselman: I mean, I asked the question that I figured just in like peripheral, kind of like

collateral people looking at it and I get a couple of thousand but it's really just a few hundred for very, very narrow, narrow questions.

Joel Spolsky: Yeah and you'll get your answers and not be voted off and the right ones will be voted off and you're getting a lot of people...

Scott Hanselman: That aggregate number is waste more than you would think given the quality of the answers.

Joel Spolsky: Right. So how many people are going to go make a link to your Stack Overflow question?

Scott Hanselman: One.

Joel Spolsky: Right and it will be from Twitter.

Scott Hanselman: Yeah, yeah, one or two. You're absolutely right. That they're all shortening is a huge problem and they're getting the thing.

Joel Spolsky: So page rank does not work for these such narrow topics. Authority doesn't work because authority is like, well, it's site authorized.

Scott Hanselman: So just to make sure that the audience understands, when you're saying page rank does not work, it's that Google is fundamentally built on the idea that people will like your stuff and link to it.

Joel Spolsky: Right.

Scott Hanselman: And what he is saying is that a question is asked, how do I da da da the HTML Serializer...

Joel Spolsky: Yeah.

Scott Hanselman: And the answer comes down, you do it like this, and it's correct and it's perfect but no one ever links to it.

Joel Spolsky: Right because people have no way of knowing that's the best answer.

Scott Hanselman: Exactly.

Joel Spolsky: Right and so that's the first problem. The second problem is think of all the different ways you could phrase that question, and so whatever incoming traffic there might be from the search engine to this question gets fragmented across a much larger spectrum of possible ways of phrasing this question.

Scott Hanselman: And interestingly that is you are phrasing the question is where I think -- I mean, and I think everyone in the audience here will understand -- the audience where we are talking, I'm gesturing



towards the empty cafeteria to my right, where are the audience, that guy over there who is getting tea -- knows that they are probably, just by virtue of the fact that they're listening to this show, that the guy who can Google best or gal who can Google best and we all have that situation where friends say, man, I've Google my brains out, I've been Googleing for an hour, help me get the answer to this, and I looked for it and it's like the first hit. And they go, oh, you're the Google master, baby, you're the Google master. No, I just know how to phrase things sufficiently vague that Google, you know, I pick the right two words....

Joel Spolsky: You picked the right two keywords that you know are going to be the answer.

Scott Hanselman: But that's the huge problem.

Joel Spolsky: Yup.

Scott Hanselman: Because I don't know what is causing the answer to write.

Joel Spolsky: Think of their entire classes of things that cause problems for Google. I'm searching for specifically programming related questions. One great one is let's say that you're searching for a question related to VB 6.0 as oppose to VB.NET, just a typical example.

Scott Hanselman: Yeah, anything old and you're screwed.

Joel Spolsky: Anything old and you're screwed, and anything new and you're screwed. For example, a big complain today, these days, and eventually it will work its way out of the system but right now if you search for ASP.NET MVC things on Google, you wind up getting a lot of stuff about early betas that are either no longer true or no longer correct that's not changed.

Scott Hanselman: And we were trying to put a lot of really good information out really fast to make you feel good and now they're finding all sorts of code that doesn't compile.

Joel Spolsky: Right, right and not only that. That stuff, because there's no page rank, because Google can't look at page rank because there's not enough people linking to these things, it looks at authority and uses other measures of authority like the older the link, the more authoritative it is because Google will generally prefer a link that hangs around for a long time other than something ephemeral and that means that it is actually a constitutional problem in search engines, that if something is wrong out there it's going to continue to be pointed to the search engines. So that's why we knew that Stack Overflow, when we did Stack Overflow we said first of all it has to have voting because we got to have 10 experts on the subject get together and just decide what's

important and they have to use that gesture rather than making a gesture from their blog because that's the only way to make this project right.

Scott Hanselman: This helps you prioritize your search but how do you tell that to Google?

Joel Spolsky: Well, here's the thing. We are prioritizing the answers so as long as Google finds us, is the question, and Stack Overflow has authority because programmers around the world link to it in their blogs to this top level domain then at least Stack Overflow will have a high page rank and our version of the question will be bumped above, let's say, an old used net version of that question, and if that happens once you get into our question -- now, there are two reasons why our answers are going to be better. One is that the answers are constantly going to be resorted and voted upon so whatever is the best answer will be at the top, you don't have to search all the answers, you would at least have a place to look, to find what the best answer is that's the consensus of the people that have looked at this narrow question, the hundred people that have participated in this narrow question. Secondly, it's a Wiki so if it's wrong or if it's out of date or if it's obsolete, somebody is going to hit you out of the button and fix it, make that code compile, and so these old established Stack Overflow topics that have lots of Google karma can continue to come up number one in search results and yet they can change as the technology changes. One great example is think about how many times you've seen an answer to a question that has come up when you're searching for a programming question and it's got a cross-site scripting vulnerability in the answer, or it's a gigantic SQL ejection problem.

Scott Hanselman: Right, it should not exist.

Joel Spolsky: It's going to cause somebody the cut and paste code that's going to be a security problem.

Scott Hanselman: Right.

Joel Spolsky: Can't do anything about it, there's no edit button at most of these sites, and at Stack Overflow you hit the edit button and say, warning, cross-site scripting vulnerability.

Scott Hanselman: Yeah.

Joel Spolsky: Or do not actually run this code because you're just concatenating together a SQL string. I think probably about half of the books that have been published about web programming concatenate strings that they even passed off to a SQL Server.

Scott Hanselman: Oh yeah.

Joel Spolsky: And there's strings coming to...



Scott Hanselman: Yeah. A buddy of mine is working on some analysis software, it looks at logs and he found that there's a botnet that keeps attacking my blog and it's like the same 3 or 400 IP addresses doing the same 3 or 4 things where they try to drop tables off the end of my blog.

Joel Spolsky: Right, just for fun.

Scott Hanselman: Just for fun. So this thing about where Google is grabbing, or I guess I'm saying Google, I mean any generic search engine is getting their data. Page rank doesn't work anymore. With Twitter, I am surprised how often how I see Stack Overflow appear when I Google results. I cannot remember the time when I've ever seen a result from Twitter show up as the result of a search, even though...

Joel Spolsky: Oh, it actually can't, that's the reason why, that's the only model of Twitter, which is that...

Scott Hanselman: Twitter's permalink don't show up in Google results?

Joel Spolsky: Unless something links to it from a blog in which case it might, but Google can't search all Twitter because they don't have the feed. They have to call the firehose...

Scott Hanselman: Which is why they're looking at the...

Joel Spolsky: The firehose version of Twitter which is only available to search.twitter.com and maybe to one or two other companies.

Scott Hanselman: And then of course we have the URL-shortening issue which is if you're on Twitter and you're trying to fit everything into a tiny, tiny, you know, you only have 140 characters so then you're going to go and use like is.gd...

Joel Spolsky: Yup.

Scott Hanselman: And then the page rank falls down.

Joel Spolsky: Right.

Scott Hanselman: This seems like a huge, huge problem and I don't know if Twitter being bought by Google is just the start of that.

Joel Spolsky: I would assume that there is somebody at Google working on it. I mean that's not a hard problem for Google...

Scott Hanselman: But the URL shortening means that they're going to have to find the APIs for

expansion and for all of these different things, follow them around.

Joel Spolsky: Yeah, not so hard.

Scott Hanselman: You don't think it's big deal?

Joel Spolsky: No. I'm sure they probably have already done half of this. Yeah.

Scott Hanselman: You have a lot of confidence at Google. Yeah, they've got a smart PhD working on that right now.

Joel Spolsky: You don't need a smart PhD, you need a table and the first column is the domain name of your sorting service and the second column is -- sorry, three columns, the second column tells you how to construct the query to URL sorting service, and third column is a R3gx that tells you how to get the correct URL out of the result. This is the kind of thing that they have -- I mean, they have to keep up with all kinds of things all the time.

Scott Hanselman: It sure feels like Google slowed down a little bit on the blog search stuff because there's a lot of -- I mean, I'm finding that you just search Google and now I search Google, search.twitter.com, and Stack Overflow when I want the answer to some and I'm also finding that because Twitter prioritizes results in terms of time.

Joel Spolsky: Right.

Scott Hanselman: I literally can't find anything that's older than a couple of days.

Joel Spolsky: And I think Twitter, I don't even know if that stuff...

Scott Hanselman: Well, people are using it as a link-sharing service.

Joel Spolsky: Right.

Scott Hanselman: Here, check this out link.

Joel Spolsky: Yeah.

Scott Hanselman: It's interesting, the whole kind of check this out link. First it was an email, right, hey, check this out link. Then it became people who do throwaway blog posts.

Joel Spolsky: Right.

Scott Hanselman: Check this out.

Joel Spolsky: Right.

Scott Hanselman: And then no one uses the Delicious site. The stats in delicious.com, which is a



fantastic social book-marking service, virtually no one use it. It has very, very small...

Joel Spolsky: I think that's kind of weird.

Scott Hanselman: Only the most alpha-geek use Delicious.

Joel Spolsky: Yeah.

Scott Hanselman: It's such an extraordinary service. So then now people are using -- I know there's a Microsoft blogger named Elijah Manor and all he does is twitter links, like every 20 minutes or so, hey, check this out link, and then...

Joel Spolsky: Uh-hum.

Scott Hanselman: Which is great if I want a firehose of links, but I want to know where those -- I mean I want to find them later and I can't because he will give me a keyword or two, a short URL and it's like a firefly, it burst then it was gone.

Joel Spolsky: Yeah. Actually Twitter gives me headaches. Sometimes I feel like going to Twitter and seeing like a list of twits that people have made which are like check this out, check that out, and sometimes I can't understand what's going on, you have to figure out who's...

Scott Hanselman: And then you have to -- this is the problem -- and you have to reassemble the conversation yourself.

Joel Spolsky: Yeah. I can't stand it. Stop it, stop it. You know what, it's just the downfall of discourse. There's just a bunch of people...

Scott Hanselman: Twitter is the downfall of discourse. I shall twit that right now. My wife is getting into that kind of stuff.

Joel Spolsky: You could put something on Twitter and you don't even have room to justify what you said. It's not even possible to make an argument on Twitter. All you can do is say your final conclusion or your opinion on a thing that just happened.

Scott Hanselman: That's so funny because people are arguing on Twitter. They're using it like it's IRC with permalink.

Joel Spolsky: But it's a different kind of IRC where the people that you're talking to, you're not actually listening to them.

Scott Hanselman: That's true.

Joel Spolsky: You're not following because there isn't reciprocity with following which there is on IRC.

Scott Hanselman: This is like me not listening to you right now because I'm twittering. Twitter is the downfall of this course, and I kind of remember how I feel -- I'm doing this with one hand though. Discourse, period, quote at Spolsky. How do you spell discourse? I'm thinking I just made you Spolsky. Enter. Here we go. Now I feel complete. I put that out there.

Joel Spolsky: Okay.

Scott Hanselman: You see; there's a funny Twitter.

Joel Spolsky: Now, the great thing is that I never -- I didn't have to back that, you don't have to backed that up, I don't have to backed that up, people can argue with us but...

Scott Hanselman: Well, there's no proof that you even said it, right. Just because I twittered it doesn't mean it really happened. Oh cool. Well Joel, thanks so much for sitting down with me today and talking...

Joel Spolsky: Sure, I appreciate it.

Scott Hanselman: It's great to have a tour of the place...

Joel Spolsky: Yeah.

Scott Hanselman: And I hope I get to hang out with you again next time I'm in New York.

Joel Spolsky: Cool. That will be awesome. Thanks for having me on.

Scott Hanselman: All right, this has been another episode of Hanselminutes and I'll see you again next week.