

Olivia Ryan: Today is June 28<sup>th</sup>, 2006. Could you state your name please?

Zach Lipton: I'm Zach Lipton.

Olivia Ryan: And Zach, when did you first begin using computers?

Zach Lipton: Using computers, maybe when I was about four years old. I got my first computer when I was – or, my family got its first computer when I was five years old.

Olivia Ryan: And what kind of computer was it? And do you remember the first sort of programming project that you did?

Zach Lipton: It was a Mac, an LC2, with 8 Megs of RAM and an 80 Meg hard disc - top of the line at the time. And I guess the first real programming project—I got involved in after-school Basic class that the teacher at school taught in second grade.

Olivia Ryan: Oh. And did you have any sort of formal training outside of that? Or are you mostly self-taught?

Zach Lipton: Not a whole lot, more recent--mostly self-taught. You know books and websites and --. One thing that's so great is working with Mozilla projects is that you, you have something real to teach yourself with. You have actual working examples that you can take and work with, rather than just sort of these abstract things in books. More recently I have done some more formal instruction with Java in some areas. But it's primarily self-taught.

Olivia Ryan: And is Mozilla the first open source project you got involved in?

Zach Lipton: Yes.

Olivia Ryan: And have you been involved in any other open source projects?

Zach Lipton: I've been involved in minor ways with the Pearl Project, and I did a little bit with OpenOffice when it first started. But beyond that, pretty much Mozilla would be it.

Olivia Ryan: And when did you start with Mozilla?

Zach Lipton: It would have been in 2000, 2001. And I would have been—it was the summer before I was in seventh grade.

Olivia Ryan: And you started off volunteering?

Zach Lipton: Yes. I volunteered. I sort of started—I downloaded a build that was just sort of a nightly build – although maybe a milestone at that point. It was long before there was an actual sort of shipping product people could use and played with it a little bit; and found a bug and kind of got into the QA, the Quality Assurance Committee from there.

Olivia Ryan: So did you find it sort of difficult to enter into the community? Or was there a lot of preparation you needed to do before you started actually contributing?

Zach Lipton: Not really. From the development side there is, because it's such a huge code base. It's a really hard project to work on. On the QA side it's not so much, because if you know, if you know how to use computers, you're comfortable using a web browser, then it's just a matter of sort of applying that and trying to break this thing, but can sort of learn things as you go. So no, it wasn't particularly.

Olivia Ryan: And what—how has your role sort of changed over time?

Zach Lipton: Well I mean I guess it's sort of have been more formalized in that this summer and last summer I've been working here as an employee of the Mozilla Corporation, which has been, which has been great to be able to do, and been able to take on more projects.

I've always sort of shifted a lot into the tools side of things. I've worked on Bugzilla, which is the, Mozilla's bug tracking software, for a number of years. And also now I'm on Litmus, which this new tool I've been developing to manage testing, and manage all of our test cases.

So it's sort of nice because I get to combine kind of the programming aspect with the QA and testing side of things.

Olivia Ryan: And what would you say is the primary reason you decided to volunteer?

Zach Lipton: I guess there's something, you know, at least initially, where if you're thirteen or fourteen, and you're interested in computers and you know what really can you do? This is one of those areas where I guess, you know, the old saying on the Internet 'no one knows you're a dog' is kind of true. And that you can go and really be treated as--You're treated based on the merit of your work and what you're able to contribute, not who you are or what you've done in the past or anything like that.

So you know, it was really something where I was able to make a substantial contribution to a real project that other people use. And there's something really satisfying about that.

Olivia Ryan: Do you get the sense that that's why others volunteer? Or do you think there are a range of reasons why?

Zach Lipton: I think that that's one of the main ones, is that—especially Firefox is so popular now—is that you know lots of people who use the product that you help make. And you talk to them. And they complain to you if something doesn't work right and, you know. There's that sort of motivation that what you make is something that people are going to use and you know them. Rather than just sort of an abstract concept of releasing things that go off into a black hole.

Olivia Ryan: And how do you generally communicate with those who you work with? Now you're not, you don't live in--?

Zach Lipton: I do live in - I live in San Francisco.

Olivia Ryan: Oh you do, okay.

Zach Lipton: So I'm here in the office during the summer, but during the school year I'm not, obviously. So Mozilla is such a distributed organization that there's people who are paid employees who some of them are in the office, some of them are all over the world.

And then there's contributors from all over the world in different time zones. So obviously IRC – Internet Relay Chat – is a major component in that. And email, and telephones as well in some cases. But you know, maintain a pretty constant level of discussion with people you're working with.

Olivia Ryan: And do you find that any particular mode of communication works better than others?

Zach Lipton: I'm a big fan of IRC. I admit it can be fairly distracting; and that it's easy to get into just sort of fun conversations that have nothing to do with any productive purpose whatsoever. But it's so immediate, just to be able to ask someone something, get a quick answer and talk to them in real time. And you can copy and paste things directly to them, which you can't do in a phone call, so.

Olivia Ryan: And when you're working sort of in groups with people, how is the division of labor generally determined? Who decides, or how is it decided who works on what?

Zach Lipton: It tends to be, I mean, because when you're talking about volunteers, volunteers tend not to like to be told what they should do for obvious good reasons. So it really is, it's pretty open, in that people tend to gravitate towards what interests them the most. Obviously within the office, within sort of the corporate structure there's some degree of 'you do this part of this' and 'you do that'. But still even

there it's, you know, sort of people let their interests and what excites them guide them towards areas.

And certainly within the community people sort of find a little niche of you know, this is the feature I like to work on or this is the sub project that I'm excited to work on and they'll kind of become responsible for that area.

Olivia Ryan: So when somebody's responsible for a particular area and say, for whatever reason that person leaves, either leaves the project or goes to another, then how—how does somebody else then step into the leadership role?

Zach Lipton: I guess, I mean sometimes it's more formalized in that there'll be kind of an official, you know 'okay you're the module owner for Buggzilla, and you're in charge of the bug tracking system and coordinate that work'. And if that person leaves then someone else who's already sort of established as a strong developer in that area would take it over, and kind of get that official title. In a lot of areas where there's, there's not necessarily an official title that you have, 'you're in charge of this'. It's just much more organic. And people will kind of fill in too.

Ken Albers: Do you find that that process works generally? Do you think that, you know, sort of letting it play itself out in that way is efficient?

Zach Lipton: It does. I mean, sometimes I guess, you know on the development side, there are issues and that there's things that aren't necessarily quite as fun to do as others. So I guess one could say that there are holes that get left. But you know, yes. People--people cover a pretty wide range of jobs and areas of the project.

Olivia Ryan: How important do you think comments in that code are to sort of smooth development?

Zach Lipton: I don't do a whole lot on the actual product development side. I do some. I do more sort of QA for the product and then development of tools. From what I've seen, they vary. I mean sometimes there's useful comments. But I think people are tending towards documentation that's a little more substantial on like development on Mozilla.org, DevMo, and things like that, rather than comments which - because comments are inaccessible to people who aren't developers.

So if I want to know how, you know, the new [inaudible] interface works, I'm not going to read through the code to look for a comment. I want some sort of actual documentation that's going to tell me that. So I think there's been a shift in focus to provide more of that.

Olivia Ryan: To what extent would you say Mozilla relies on the work of volunteers?

Zach Lipton: A lot. Now so—now there are more sort of paid people that are coming on board as the corporation grows. But you know Mozilla would not be what it is without volunteers. And also people who are not part of the Mozilla Corporation, but who are paid to work on Mozilla for their employer, like Red hat or IBM or Sun or other corporations that sort of might have people devoted to specific areas of Mozilla. But you know if Mozilla was sort of a closed source product it would not be able to happen with this many people, just here.

Olivia Ryan: Do you—have you ever noticed sort of like natural disagreements or tensions between those who work on the front end and those who work on the back end?

Zach Lipton: [sigh]

Olivia Ryan: Or maybe a better way to put it is sort of, how much communication and coordination is there between these two groups?

Zach Lipton: I guess, I mean I see it somewhat from the testing side, in that sometimes there's things that I'll see that someone's made changes on the back end that aren't reflected in the front end yet. Or vice versa, where you know things are broken because that link didn't happen yet. But obviously, that gets fixed before we ship. But sometimes there are – one piece of that will land in the code and the other side won't be ready - won't go in until that's done. So there's a couple of days where that's sort of missing from there.

Olivia Ryan: So I'm sorry, what year did you say you began working, was it in 2001/2002?

Zach Lipton: It would have been 2001.

Olivia Ryan: 2001. So during that early development of Firefox, I understand that the UI was restricted to a small team of people. From your understanding, why did that take place? And what—do you think that was a good way to produce that?

Zach Lipton: I think so. I mean I think what happened was, when Firefox started it was sort of this skunkworks project to very quickly come up with something that was the antithesis of the Netscape browser. Netscape Marketing had done so much to monetize the browser, I guess you could say. To try and put in all these features that users didn't want, but that would lead to revenue streams, or that would make the browser seem cooler than it was, or whatever whims they had in mind on a particular day.

And there were a lot of people at Netscape who were pretty frustrated with this, and a lot of people in the community who were frustrated with just sort of the state of the hugely bloated interface that was the Mozilla browser.

So I think that the motivation for keeping the UI Team really close-knit was to—was to resist influence from outside forces to say, no you need this, no you need that. Because that's one thing is, you know no one's ever said that design by committee works well. But in open source it's kind of what you've got, except that everyone is part of the committee; and everyone thinks they're a UI designer.

So keeping it closed, at least initially, meant that they could say, okay, this is what we're starting with. It's really stripped down, it's really limited, which I think has helped to make Firefox really popular. People don't want tools to create web pages built in their web browser. People don't want email and newsgroups, and Chat Client, and all this stuff built into their web browser.

They just want a really simple, small, sleek, fast browser, like Firefox. Now I think certainly stuff has been opened up more. There's sort of a UI review process. But it's not quite as territorial as it was initially.

Olivia Ryan: So would you say that Firefox has enjoyed sort of popularity because it was focused on the end user?

Zach Lipton: Definitely. Where maybe the initial Mozilla browser there were - you know users were obviously concerned but sort of the initial spec for that was driven by Netscape Marketing. Firefox came from sort of this idea of let's take, let's take as much out as is possible and still have a working usable browser.

Olivia Ryan: And what kind of role do you think marketing has played in the success of Firefox?

Zach Lipton: I think so much of the success of Firefox is, it's really user-to-user. It's, I guess like Apple, we've enjoyed a certain degree of, one can say religion around Firefox; that people will – people see Firefox and they say Wow, this is awesome! I'm going to tell everyone else about it. And they do, at great lengths.

And you know most of the sort of successful marketing efforts have come from people—they put links on their blogs, they tell their friends, they pay money to put an ad in the New York Times. They do these things. We're only just now getting into sort of more organized, more traditional forms of marketing. But I think that kind of person-to-person contact is still the best way to—the word of mouth is still the best way to spread it.

Olivia Ryan: And do you think that, like grassroots marketing techniques are part of an open source in like a larger open source movement? Or do you think it's kind of not a good parallel to open source software?

Zach Lipton: It's hard to say. Because honestly, I think you know, out of the millions of users we have, I'm not sure even that a great percentage understands we're open source.

And of that I'm not, you know, convinced that that many of them really understand what it means. I think sort of these ideas of freedom and openness do resonate. But right now I think, for average users, they're downloading it because they like the product, not because, not because it's open source.

Olivia Ryan: And – this is sort of broad, but how would you define a successful open source project?

Zach Lipton: It is a broad question. I mean, I guess it can come on several layers. To me you can have a successful open source project where you know, I guess I would say when you've built something, you've learned from it and at least one other person has taken advantage of it in some way. I think that that's important because the whole idea of open source is that people can come and use what you've created. So certainly Mozilla has done that.

And they've, you know we've had people come in and use our platform to build their products. And there's something, there's something satisfying about making something that other people can benefit from in some way. So for me it's, for me that's what it is.

Olivia Ryan: How would you list Mozilla's priorities? And have you seen sort of a change or a shift at all since you've been working at Mozilla?

Zach Lipton: I think starting from the formation of the foundation, well, I mean Mozilla's priority has always been to, sort of this lofty goal of promoting choice and innovation on the Internet in some way, shape or form. I think initially, back in from sort of the release of the code, it was much more about technology, and creating this technology platform.

And while we're still about that, starting with Firefox, it's been far more user focussed. Where it's not necessarily about pleasing the most intense power user, though we have ways for them to be happy, but about creating something which the majority of the people who use the web can and want to use.

Olivia Ryan: Would you, do you consider--?

Zach Lipton: Well, I guess I'd also want to say that Mozilla's become much more product focussed before, where sort of when Mozilla was being initially developed it was about creating this, you know, Gecko, this whole new rendering engine and this whole new, this whole new project where, you know, nothing out of—from scratch essentially.

And the actual product that it resulted in was really just a test bench for that project. But it wasn't about creating product for people to use. Well now it's really about creating products that end users can download and use.

Olivia Ryan: And why do you think the focus on marketing has mainly been on one product instead of all the other Mozilla products?

Zach Lipton: I think Firefox is something that's easy for people to understand, and easy for people to get behind. In terms of other products there're some that are really oriented towards developers, like Bugzilla. Which, Bugzilla's done very well with really no actual marketing because you know it's being used by a couple hundred major companies – which is great! But it's not something that we do anything to promote, you know. It's a tool that's out there. It's one of the top open source bug tracking systems and people use it.

Thunderbird, I guess I'd feel that it's not, not quite there. It doesn't really have the resources in terms of development devoted to it that Firefox does. So I think it's just somewhat of a level of 'this is what we have, this is what works really well, and this is what people really seem to like'. So, that's why we're going market it as well as we can.

Olivia Ryan: Do you consider open source software as a public service?

Zach Lipton: I do. But I guess the reason why I'm involved in open source software is because I—I like it and I learn from it. It's for me, much more about, I guess it's kind of selfish, but it's much more of a personal thing for me that as a developer, how much I'm able to --

You know there's something - as a student - where if you're doing, you're learning the program, you're doing software development projects, you can do things kind of by yourself; where you make these little examples and you know, no one else really sees them. And you just stick them someplace and that's okay.

But with open source you get to work with other people in a team, which is so wonderful because that's what programming is about. You're not just doing it by yourself. You have to know how to split up a project and work with others and then plan and collaborate. But you also get to use, get to work on something that other people are going to use. So I really get that benefit out of it.

Olivia Ryan: What do you think the popularity of Firefox either has or will do for open source as a whole?

Zach Lipton: I mean there was sort of I guess, when a couple years ago when Linux was this giant thing no one had ever heard of and it was the cover of every magazine. And that idea, when sort of there was this, what is open source, and people began to understand this. I think now people know what it is; they're familiar with it.



Mozilla kind of has proved that you can bring open source to the desktop. You can have open source software that average end users who use, you know, Microsoft Windows and Office and just sort of a normal environment, will want to download and use.

But Mozilla's been kind of—Mozilla, it's different from some other open source projects in that there is a fair amount of central, there always has been central coordination of it, whether it was Netscape or now the Mozilla Corporation, where there is sort of a group of people directly and officially responsible for it.

Where other open source projects they may have a maintainer, or several maintainers, but there's not kind of one organization that directly runs it. And I think that that is something which has helped a lot of end users; helped spur end users to actually use the product.

We have a real marketing department. We have an actual marketing department. People paid full-time to do that, who are in the same place and can work together. We have full-time paid developers but—and management. But, so I'm not, I guess I'm not sure whether our model necessarily applies to a lot of other open source projects.

Olivia Ryan: Do you think that model though is sort of crucial for longevity?

Zach Lipton: I like it, because there is a certain degree of stability to it. And I think that for a project this large you kind of need some sort of more formal coordination than just people running around and emailing each other willy-nilly. But it's not quite as organic as other open source projects are.

Olivia Ryan: What do you think the future of open source is?

Zach Lipton: The future of open source. That's a lofty [laugh] question. I guess – I don't think it's going away, certainly. There's been you know so much of a push with Linux on servers and trying to get Linux out to the desktop.

I think that you're going to see more companies developing software, look to figure out how they can tap into open source and how they can just release their products as open source. They, you know - and why not? I guess you see it as sort of free money almost; and that hey, if we do this thing it means that random people on the Internet are going to come and help us out. So I think, I think you'll see a lot more of that in the future.

Olivia Ryan: Do you think open source techniques can be applied to other areas of production?

Zach Lipton: I mean, software is sort of unique in that there's this distinction between, here's your source code, and here's your binary, and there's a very clear idea of what

open source means. But I guess maybe not necessarily the idea of open source but open-ness in general, certainly, can be applied to lots of things.

And I think the groups like Creative Commons, who have sort of taken an open source model for copyright, in general have done that. I think that there is, you know, general efforts to encourage openness in pretty much every area. And that's you know, that's certainly a good thing.

I guess in Mozilla we struggle a lot with openness because it's hard to be, it's hard to be transparent. Just—naturally you're going to talk to the person who sits, you know, in the same building as you about an issue rather than involve the broader community, without sort of this conscious effort to go out there and really be transparent and open. But—

Olivia Ryan: So do you think it's a balance that people are trying to strike?

Zach Lipton: I'm not sure if it's so much a balance, because I think everyone—I mean there aren't people who say this should be a closed project, and it should just be the people here; certainly the people value contributions from those who are outside the corporation. But it's just hard. It requires time and effort to be open and transparent. And I guess the default sometimes just out of simplicity, is to be closed, which doesn't particularly work in the project's favor. But –

Olivia Ryan: Do you find it more difficult as more people work on it? The more people who are involved it's more difficult to be transparent?

Zach Lipton: Well, I mean I guess there was sort of a dip, in that originally when Netscape ran the project there were a lot of things that weren't transparent, because it was you know, a big software development team working sort of in one place under one architecture or management.

When Mozilla split off from Netscape and the foundation was founded, it became a lot more open. Because there were now very few actual employees, you know they started with four, I think. So pretty much everything was open just out of necessity. Anyone who was going to work on this needed to be able to participate fully.

And now certainly it hasn't gone nearly as far. But it's swung a bit the other way in that with more people sort of under this umbrella of the corporation, it's easy to forget that when you're talking to this group of people, that you're not talking to certain community members who might be affected. Or that that there's community members might want to be able to do more but have sort of been pigeonholed a bit out of that role because they're not part of the corporation, so.

Olivia Ryan: So what's next for you? Did you just complete high school?

Zach Lipton: I just graduated high school, yes. I just graduated high school in the beginning of June, and I'll be a freshman at Cornell in the fall, so.

Olivia Ryan: Oh great. Well good luck.

Zach Lipton: Thank you [laugh].

Olivia Ryan: Do you plan to continue to work for Mozilla?

Zach Lipton: Definitely. I'm going to be here at the corporation till the end of the summer. And then I'll be doing a computer science major at Cornell. And you know, hope to continue, hope to contribute as much as I can. I don't know, time-wise, how that will work. There's obviously a lot to juggle.