Entrepreneur Journeys

Copyright © 2014 Sramana Mitra
All Rights Reserved.

Carnival in the Cloud

Sramana Mitra

To All Cloud Entrepreneurs in 1M/1M

Contents

Deconstructing the Cloud

- Interview with Greg Gianforte, RightNow
- Interview with Sinclair Schuller, CEO, Apprenda
- Interview with Ranjith Kumaran, YouSendIt
- Interview with Henry Schuck, Co-Founder, Discover.org
- Interview with Chris Cabrera, CEO, Xactly
- Interview with Jonathan Bush, athenahealth
- Interview with Brian Behlendorf, CollabNet

May 10,000 Cloud Startups Bloom

- Interview with Ryan Allis, CEO, iContact
- Interview with John Wallace, CEO of DataSong
- Interview with Itai Sadan, CEO, DudaMobile
- Interview with Alex Fuller, Co-Founder and CTO, CloudSense
- Interview with David Barrett, CEO, Expensify

How To Navigate The World of 'Fat Startups'

- Interview with Nir Zuk, Palo Alto Networks
- Interview with Sunny Gupta, CEO, Apptio
- Interview with Andres Rodriguez, CEO, Nasuni

Maximizing Valuation

- Interview with Christian Chabot, Tableau Software

Epilogue

May 10,000 cloud startups bloom!

- Sramana Mitra

Deconstructing The Cloud

At the turn of the millennium, a new form of computing swept over the world.

Netscape went public in 1995, heralding the birth of technology's most exciting gilded age. David Einstein of The San Francisco Chronicle had interviewed John Doerr, General Partner of Kleiner Perkins, as he covered the incredible interest in the initial public offering of the Netscape stock, and the madness that followed.

Doerr famously said: "It's possible that the Internet in fact has been under-hyped. I think we're witnessing the creation of a brand new medium that will possibly be more important than network television."

Indeed, the twenty first century has seen that under-hyped technology trend boldly and assertively come of age.

'Software is eating the world,' says Internet pioneer and Netscape founder Marc Andreessen, now Silicon Valley's most high profile venture capitalist. Computing went from centralized mainframes to distributed desktop PCs, and is now going back to another centralized model: cloud computing, which lets users access and manipulate data from applications stored on the Internet rather than computer networks.

Here's a rundown of the different flavors of cloud computing.

Software-as-a-Service (SaaS) is the most well-known and oldest type of cloud computing: Hosting applications online, not on enterprise computers. A number of public companies like Salesforce.com and RightNow (Customer Relationship Management), Concur (Expense Report Management), Omniture (Analytics), Taleo and SuccessFactors (Human Capital Management) have attained critical mass and legitimized the category. Of these early winners, only Salesforce.com and Concur remain independent. Oracle acquired Taleo, SAP acquired SuccessFactors, and Adobe acquired Omniture. In this collection, we have included the RightNow case study.

SaaS pioneer Salesforce.com has more recently pioneered Platform-as-a-Service (PaaS), whereby the San Mateo, Calif.-based software maker opened up its platform for other application developers. This opened the floodgates for small start-ups aspiring to build SaaS applications as well as businesses around the applications. At the same time, Salesforce's move has prompted many other larger SaaS companies to also consider opening up their platforms to developers. In time, I expect that all major SaaS vendors will also become PaaS vendors and encourage an ecosystem of developers that create innovative application businesses. In this volume, we look at the Apprenda case study in detail as an example of a PaaS venture.

The next piece of cloud computing to look at is Infrastructure-as-a-Service (IaaS). In the past, we routinely bought backup devices, external storage drives, and so on, to complement our core computing infrastructure. Enter remote backup, remote storage and remote hosting–infrastructure moves to the Internet. While these technologies are not new, they have only recently gained recognition as part of the hyped cloud computing story. A big proponent of the

IaaS category is Amazon's AWS, which allows companies to contract or expand their computing capacity in the cloud. Box, DropBox, and many other IaaS companies have now proliferated the market. In this collection, we have included YouSendIt as an example of an IaaS venture.

Along comes Data-as-a-Service (DaaS), another variation of cloud computing. A good example would be Waltham, Mass.-based Salary.com, which pioneered the data-on-demand category offering salary data from various companies to HR departments looking to formulate compensation for their new hires and employees. Salary.com went public in February 2007, raising $60 million. The company was acquired by Kenexa, which in turn was later acquired by IBM. Included in this volume is Discovery.org, yet another example of a cool DaaS venture.

San Francisco-based InsideView also takes an interesting spin on DaaS by bringing together data from many different providers, as well as data collected by its own artificial intelligence technology, and packaging it with software to build a comprehensive dashboard for sales people. In a sense, this puts InsideView at the cusp of SaaS and DaaS, and makes it a truly innovative company. Xactly, a case study we have included in this volume, follows similar principles in the domain of sales compensation management.

Another layer of cloud computing innovation has come from San Ramon, Calif.-based Sabrix, which developed software that automatically calculates taxes for companies. Sabrix started life as an enterprise software vendor, but has morphed into a SaaS provider that also does business process outsourcing (BPO). In other words, Sabrix's customers have asked the company to not only provide the SaaS, but to also take on their tax management function. In this

collection, we have chosen to highlight athenaHealth as an example of SaaS-enabled BPO.

And finally, open source SaaS has become quite exciting as a phenomenon. CollabNet, a commercial open source company is our showcase to illustrate the mechanics of the sector.

And so it goes. The technology industry and its ingenious innovators continue to push the envelope and do things differently–and in the process, create new and exciting trends.

And in that process, the entrepreneurs have continued to play the central role: conceiving ideas, creating technology, building markets, and amassing wealth.

Business software was once only accessible to the largest of enterprises. Today, even the smallest businesses are voracious users of technology–a phenomenon that has driven productivity through the roof. It has also dramatically increased the total available market for new technologies, a development that is closely observed and leveraged by entrepreneurs and investors alike. In fact, enterprise class technology has even become accessible and affordable for consumers.

This volume chronicles the entrepreneurial journeys of an exciting collection of entrepreneurs who have made their mark on various parts of the cloud.

Software-as-a-Service (SaaS)

Interview with Greg Gianforte, RightNow

The first time I sat down with Greg Gianforte in his modest San Mateo office, I knew I'd found a kindred spirit. The CEO of RightNow is a hardcore capitalist, and like me, believes that entrepreneurship is the solution to the world's economic problems. But even more precisely, Greg is so concerned about the obsession among entrepreneurs to raise external capital that he wrote a bootstrapping book to teach his hard-learned tricks.

And tricks, he has no shortage of. Industry observers say that RightNow's early product left a lot to be desired. There were other, superior products in the market from companies swimming in venture capital. However, Greg managed to get the last laugh, refining his product over time, while maintaining financial control of his company, and his destiny.

Sramana Mitra: To start, let's talk about your background.

Greg Gianforte: I'm an engineer. My undergraduate degree is in electrical engineering and my master's is in computer science. I attended school at the Stevens Institute of Technology in Hoboken, New Jersey.

Sramana Mitra: Can you give us some background on Brightwork?

Greg Gianforte: Brightwork was a company I co-founded to develop network management applications. It was founded in 1986 in a sunroom in New Jersey. We developed tools focused on the Novell Netware solutions, since they were the dominant player back then. Ultimately we sold the company to McAfee for about $10 million, hence the Montana retirement before RightNow.

Sramana Mitra: The network market was chaotic at that time. How did

you break through as a bootstrapped company?

Greg Gianforte: We had a good product for Novell Netware environments. But sales were terrible. We didn't have a reputation, so nobody would talk to us. We knew we had to leverage somebody else's credibility to break into the market, we just weren't sure how.

Since Novell was the dominant player in the market, and our product focused on the Netware environment, we figured with their endorsement we could get a solid foothold. Since we didn't know how to get their attention, we decided to buy a 48-foot-long billboard across from their corporate headquarters. Novell was headquartered in Provo, Utah, and billboards there didn't cost too much. I think it was $200 a month, including lights.

The billboard had eight-foot-high letters that read, "Don't just network, Brightwork." The very next day we received a phone call from the senior vice president of communications at Novell asking for our PR department. My partner had answered the phone, so he put his hand over the receiver and asked if I wanted to be the PR department. He passed the phone over, and I picked it up and said, "PR department."

I asked what prompted the call and the reply was, "A billboard you have in front of our building. We're trying to figure out who you guys are." To which I replied, "Where are you located?" The answer, of course, was Provo, Utah. I said, "You mean those marketing people put one in Provo, too?" We ended up flying out to meet with Novell, and we left with a distribution deal. All of this occurred in just six weeks.

We shipped $100,000 worth of our product to them, which they put in their warehouses. Two months later they tried to return it; fortunately our contract

did not allow them to do so. From that point on we were able to use the fact that Novell was distributing our product as a point of credibility when calling banks and larger corporations around the country. It gave us the start we were hoping for.

Sramana Mitra: What were your revenues at Brightwork?

Greg Gianforte: Ultimately it grew to $10 million a year in revenues.

Sramana Mitra: Nuggets of knowledge you took away from Brightwork?

Greg Gianforte: Brightwork was my first entrepreneurial endeavor, and I had a steep learning curve. I remember very early on looking for mentors to help me understand business. I think every family has somebody who's the "business expert," and mine was no different. Uncle Pete was the one in our family everybody said I had to talk to. He gave me a bunch of advice, which I went off and used. About a month later I came back for more advice because I thought what he had given me was really useful. This time he said, "Greg, you're pouring your heart and soul into this thing; I hope they're taking care of you." I didn't realize he had always been in big business. He had a completely different frame of reference, and it was not appropriate for entrepreneurial startups.

That was my big lesson from Brightwork: find an entrepreneurial mentor, and if you're going to bootstrap, find a mentor who has already bootstrapped a business.

Sramana Mitra: What was your exit from Brightwork?

Greg Gianforte: McAfee acquired Brightwork. At the time we were 50% larger than they were.

Sramana Mitra: Why were they interested in purchasing Brightwork if they were in the security market and you were in the networking market?

Greg Gianforte: At the time, McAfee owned about 67% of the antivirus market compared with Symantec, which had 14%. They were interested in leveraging our sales channel since we had good relationships with network managers and a strong telesales process. McAfee had been selling to very large customers like the government and Ford Motor Corp. They realized they were going to need to start expanding their sales channels in order to maintain their market lead and continue growth. They also needed to change their sales approach, and we had a proven telesales approach that worked.

Sramana Mitra: Your sales methodology at Brightwork was telesales?

Greg Gianforte: Initially, yes. We had a very viable model financially. We hired telesales people, and they would be profitable in 30 days. By that I mean we hired them, trained them, and within 30 days they were covering their costs. We hired sales individuals in classes of five every month until we had 75 people selling.

Sramana Mitra: How long did it take to hire those 75 people?

Greg Gianforte: That occurred over an eight-month period. We also did it organically; we didn't use external financing to fund the growth.

Sramana Mitra: How did that transition to McAfee?

Greg Gianforte: At McAfee we had 300,000 people a month downloading our software. At the time we were the most profitable software company in the world on a percentage basis. The year I started there, it was 72% pre-tax profit.

Our job in sales was to get the pirates to pay us. It was really profitable, largely due to our strategy of giving it away and then tracking down the big violators of our licensing agreements.

Sramana Mitra: Can you quantify the results in terms of revenue?

Greg Gianforte: When McAfee bought us they had $25 million in revenues. A year later they had $60 million. It was a combination of telesales and Web sales, but it was largely based on what we did at Brightwork. We were even selected by *Fortune* as one of the "10 Coolest Companies in America" because of our sales approach.

Sramana Mitra: What came after Brightwork and McAfee?

Greg Gianforte: I retired to Bozeman, Montana in 1995. I used to vacation in Montana when I was a kid. I did some backpacking trips there. I decided to retire there because I thought it would be a good place to raise my family. We ended up buying a house outside of Bozeman with a good amount of land. It was a lot of fun at first with all the camping and fishing, but it just wasn't enough. I didn't want my tombstone to be: Dedicated to Fishing! I had the talent for starting companies, and I felt that it was unethical for me to waste that talent. So, I decided to create 2,000 high-paying high-tech jobs in town. I launched an incubator and started mentoring local entrepreneurs. Eventually, I decided I really needed to start another venture, which was RightNow. That company has about 700 employees now, so it's almost halfway to the goal of 2,000.

Sramana Mitra: What is the story of RightNow?

Greg Gianforte: We're a SaaS company – our applications are delivered on a

hosted basis. We've had eight straight years of revenue growth and a successful IPO. I think it's a good success story.

Sramana Mitra: Can you walk me through the founding and startup phase?

Greg Gianforte: I started RightNow in an extra bedroom in my house in 1998 with $50,000 cash.

I had a crazy idea that the Internet was going to change how companies communicated with their customers. Consumers used to communicate about products with retailers, but when the Internet came along they started going directly to the companies. Dealing with this increase in direct consumer communication was going to increase costs for companies. I wanted to see if there was a business I could create to solve that problem.

Sramana Mitra: Can you tell us more about the bootstrapping elements of RightNow?

Greg Gianforte: Confucius said you are never in a position to learn until you are totally confused. When I make presentations I tell people there's a process of immersion that's required, and that's where I started. Immersion is done by making a lot of phone calls, so I started by calling companies and asking if the Internet was changing the way they dealt with their customers. What I heard, and I heard it over and over again, was that they were having a hard time dealing with all the e-mails and inquiries they were getting because the distribution channels were collapsing.

When I asked companies how they were going to handle it, the answer was that they were going to hire more people. So I came up with the idea of putting

dynamic questions on a Web site which allowed customers to help themselves. It didn't require any special software. I wrote down a couple ideas that I thought companies would be interested in buying, and started making calls. I asked, "If we had a product that allowed us to put questions and answers on your Web site, and this product would make all the e-mails go away, would you buy it?" Now here's a good lesson in bootstrapping: I did all of this before I had a product. When I asked if they would buy it, they said no. Better to find that out early on! I then asked companies why they said no, wrote their answers down, and moved on to the next phone call.

This was an iterative process that took about 400 phone calls to complete, but when I was done I was able to hone in on an initial product.

In just one month, which is how long it took me to make those 400 phone calls, I knew exactly what customers would buy. That's when I went and built the initial product, in just 45 days, because I didn't have to build a huge application, just the pieces I knew customers wanted.

Our first customer was PictureTel, followed by Time Warner. They paid us almost nothing – I think it was $250 a month. It didn't matter to me; at that point you just have to get the cash started somehow.

Sramana Mitra: Indeed. How did you conduct sales at RightNow?

Greg Gianforte: Primarily through telesales, which was combined with Internet-based demonstrations and trial periods of the product. I couldn't afford a phone switch, so we put in separate 1-800 numbers to each person's desktop. By the way, we eventually got a phone switch that we bought used off the Internet. I used to joke around that a new phone switch wouldn't give us a better sounding dial tone.

Sramana Mitra: No, it wouldn't! How did you approach companies? Did you sell to mid-level managers or senior executives?

Greg Gianforte: I had no trouble finding companies that did a lousy job of serving customers over the Internet. Most had a Web site with a button that said "Click here for customer service." Back in 1998, I could click on that and find a phone number. Who goes to a Web page hoping to dial a phone? Nobody, but companies didn't know any other way to work!

My sales reps would search the Web, find customer service numbers, call up the customer service department, and tell them, "I've been on your Web site, and I have a suggestion for how you can improve service for your customers." The rep in the call center couldn't handle that type of request and would transfer the call to their supervisor. Our sales rep then talked directly to the supervisor and told them we had a way to help them improve service. We then approached sales on a trial basis. We let companies try it for a while to see if they liked it, because in order for us to do business they had to recognize the value. Typically, we eliminated 50–70% of the e-mails coming into the business.

So when we came a month later to shut down the trial application, the companies would say, "No! Where do we sign?"

Sramana Mitra: What was your growth like?

Greg Gianforte: In 1999 we did about $440,000 the first quarter. The second quarter we did $697,000. By the third quarter things had really picked up. We did $1.5 million in the third quarter and $3.3 million in the fourth. In 2000 we did $25 million. We passed $100 million in 2006, and we were one of the top IPOs of 2004. We beat Google in total appreciation in percentage basis, although we don't have their market capitalization.

What I like to emphasize is that we doubled revenue and the number of employees every 90 days for three years without outside funding. This is because of our sales process. I hired six salespeople before I hired the first engineer. I had 30 salespeople before I hired someone for marketing. Sales are the lifeblood of a business, period.

Sramana Mitra: True, but in this case, you were playing the role that a good product marketer would play. Not all entrepreneurs know how to do that. They should, though.

Greg Gianforte: I say this a lot:

In war there are only two jobs: making bullets and shooting bullets. In business there are only two jobs: making the product or service, and selling the product or service.

Every other function in the business supports those activities in one way or another. That's why we waited so long to create a marketing department. In my mind, a marketing department should provide sales tools, shorten sales cycles, and develop leads. At RightNow we were going to the companies we wanted, reaching the people we wanted, and making the deals we wanted.

It is important for bootstrappers to know exactly what marketing can and cannot do. Why organize a focus group to ask prospective customers if they would buy a product, when you could just as easily go ask them yourself and build those all-important, one-to-one relationships at the same time? Contacting prospective customers doesn't cost anything, and when you're finished you either have a stack of orders or know what will get you a stack of orders. If no one wants to buy your product, then you've learned quickly and relatively inexpensively that you didn't have a viable business idea.

Sramana Mitra: Is there any particular market segment that you've targeted, or do you simply focus on companies by size?

Greg Gianforte: We have about 1,800 clients who tend to be larger organizations. Over 60% of our business is with corporations that have over $1 billion in revenue. Some of our larger verticals are telecommunications, which accounts for 19% of our revenues, and technology, which accounts for 17%. We also earn 14% of our revenues from government agencies and educational institutions, 13% from consumer products companies, 8% from financial and insurance, and 6% from both manufacturing, and travel and hospitality. We don't have a single client that accounts for more than 10% of our revenues, so our client base is diversified and distributed. This goes a long way to showing our strength as a company.

Sramana Mitra: You sell on a software-as-a-service model, so I'm assuming you have monthly or annual fees and do not offer perpetual licenses?

Greg Gianforte: We did have some perpetual licenses, but those were discontinued in 2007. We're now a SaaS model with a two-year time-based agreement. Customers don't have an obligation to continue service; however, this has not been a problem. We've been growing very strong.

Sramana Mitra: Can you name some of your clients?

Greg Gianforte: Sure. Medicare, Motorola, Black and Decker, Briggs and Stratton, and Nikon are some examples. They are big organizations with a focus on the consumer.

Sramana Mitra: How long is your sales cycle?

Greg Gianforte: It typically ranges from 60 to 180 days.

Sramana Mitra: I know you've expanded into CRM. Could you identify your main products and discuss how they correlate to your annual revenue?

Greg Gianforte: Our CRM solution accounts for about 80% of our revenue. We've expanded this tremendously over the years. RightNow Service provides an integrated, multi-channel customer service capability that captures customer interactions across traditional and online channels. This is the product we have evolved from the initial days, and we have now developed patents on this technology.

We now have RightNow Marketing, which is designed to deliver the functionality needed to manage multi-channel, multi-stage marketing campaigns. It automates standard campaign activities, optimizes resources, and leverages the information captured in sales and service interactions.

Another product we've developed along the way is RightNow Sales, which simplifies the sales process so that sales organizations can more easily manage accounts, track leads, organize contacts, and basically sell more, all while leveraging the customer information that's already in the common platform.

Sramana Mitra: Are all of these products sold via your sales force, or have you now developed partnership programs?

Greg Gianforte: We do have strategic partnerships, which are our indirect channels. At the end of 2007 we had 63 partners in our worldwide partner program.

Sramana Mitra: Can you disclose who some of them are?

Greg Gianforte: They include folks like West Corporation, Lockheed Martin, and Convergys. We also brought on IBM in 2007.

Sramana Mitra: Is your market based solely in the US, or do you serve an international market as well?

Greg Gianforte: We have a significant international market, which is growing. International sales accounted for 26% of revenue in 2006, and 29% in 2007. We plan on having continued growth in international markets.

Sramana Mitra: Have you taken any venture capital funding with RightNow, or has it been solely bootstrapped?

Greg Gianforte: We raised about $27 million in 1999 and 2000. The first key is that our partners were really good. We also were a good size; we had about 160 people on board. We had a $6-million-a-year business, and they gave us a $130 million valuation. On those terms, I would probably raise money again today.

Sramana Mitra: You did two rounds, then? One in 1999 and one in 2000?

Greg Gianforte: Yes, we raised $15 million in 1999, and $12 million in 2000. In both rounds we used Greylock and Summit.

Sramana Mitra: By waiting as long as you did, you were able to gain a great valuation. Did you also maintain a significant portion of ownership in the company?

Greg Gianforte: I still own about 28% of the equity, and 70% of the equity was owned by the employees of the business when the company went public.

Sramana Mitra: You frequently caution people against taking venture capital. Why?

Greg Gianforte: I definitely discourage venture capital in the beginning of a business because it provides a false sense of security. If you have too much money in the company, it removes spending discipline. During the startup stages an entrepreneur should be focused on customers, not on raising money.

Sramana Mitra: Let's move on and talk about your book. What are the core principles of bootstrapping? Why should people bootstrap?

Greg Gianforte: If you get a bunch of MBAs together and ask them how to start a business, they'll tell you to write a business plan, raise money, and then start a bonfire and pitch the money on the bonfire. Hopefully there's a company there before the money is all burned.

Bootstrapping is how most entrepreneurs in the country start businesses. There are hundreds of thousands of businesses started in the US every year, and fewer than 1% raise money from venture capitalists or professional sources. That kind of begs the question: What did the other 99% do? I think they bootstrapped.

Bootstrapping is a discovery process. Rather than building an ark, waiting for animals to come, and hoping the tide rises – you take an incremental approach and discover a legitimate, real-world value proposition.

That means you only have to build a product that customers will actually buy. I also like bootstrapping because it forces you to start the sales and learning process sooner. The only activity in an early-stage bootstrapping company is selling.

Sramana Mitra: You can only sell what you know you can deliver.

Greg Gianforte: Absolutely. You don't want to mislead anyone, but there's nothing wrong with asking for money because that's how you really determine market demand. If you just pick up the phone, within a few days you'll know if you have a stupid idea or a good one. Bootstrapping accelerates your time to market, which means you start making money faster.

Sramana Mitra: Not only that, but it keeps you in touch with reality, whereas if you have loads of venture capital you can get complacent.

Greg Gianforte: It's hard to have a false sense of security with bootstrapping. The mantra of a bootstrapper is, "There is always another way," because if there isn't, then you won't have any money!

That changes when you have VC money.

Not only is there a false sense of security, but when you raise money you take on a new set of masters. When I start a new business the only master I want is my customer.

I believe entrepreneurs get pushed out of businesses by financial backers because the market timing isn't right, or the strategy was wrong.

It's hard to make a fatal mistake in business when you don't have money. Having venture capital masks the hard questions about business viability. If you don't have VC funding behind you and you need to put food on the table, then you're forced to figure out how to find another customer. I think that's a good thing. I think that's business.

Sramana Mitra: In your opinion, what are some of the typical

misconceptions entrepreneurs tend to have?

Greg Gianforte: I think the biggest problem is they think they have to have a perfect product before they can go to market. The reality is that learning does not start until you have some value proposition. When you go through the process of selling a product before you actually have a product, you learn a lot about the wants and desires of your target customer base.

Another problem is that entrepreneurs fail to immerse themselves. You have to figure out who your customers are, and spend time with them. You have to know their industry. When you think you've figured out the solution to their problem, go back and ask them for money. Do not say, "If I had this would you buy it?" Say, "I will do this for you, and I want you to write me a check." When they say no, then the learning begins. You take their input and modify your product concept, then call the next person on the list. This is an iterative process you do until companies start writing checks. The key is not to promise something you can't deliver in eight weeks. Find the feature that delivers critical value. Once you have your customers' commitment, go build it.

I also think a lot of entrepreneurs don't know the equation of business. That's sad. The equation of business is simple: Income – Expenses = Profit. You cannot influence profit directly. You can only influence income and expenses. Your value proposition to your customers needs to revolve around income or expenses.

Sramana Mitra: One of the things that stood out to me when I read your book was your discussion of the "Art of Thrift." Would you mind going over that for my readers?

Greg Gianforte: The first myth is, "I need an office to impress my clients." I don't agree. If you're bootstrapping, you need to spend your money where it can make a difference. Unless you're an accountant or a lawyer, your office is not going to make you money.

Second, don't get caught up in the "I need a really expensive IT system" idea. You can go a long way with used computers, open source software, and hard work.

The third myth is, "I have to pay full price for phone bills." You might be surprised what types of discounts you can get if you ask. You can go out and buy calling cards if the phone companies won't give you a break.

The fourth myth is related to the third. A lot of people think they need an expensive phone system. You don't! You need something that meets your needs, and nothing more. The dial tone does not sound any better on a more expensive phone system.

Fifth, a lot of entrepreneurs think they cannot afford a salesperson. The real question is, "How can I employ someone for nothing?" My first employee at RightNow, Marcus Bragg, was only offered a commission structure. The thing is, he was selling a product that we knew the market wanted.

The final myth is, "I am too small to ask for a discount." That is not true. Call large suppliers and ask for a deep discount. If they turn you down they will do it nicely, so what's the harm? If they say no, then ask them what performance level you need to reach before you get a discount.

Sramana Mitra: You have said many times that business is not just about money. Can you comment on that?

Greg Gianforte: It used to be that if you asked kids what they wanted to be when they grew up, they would say they wanted to be a fireman, policeman, or an astronaut. Today all they say is, "I want to be rich." I think that's really sad. Greed is not a virtue.

There is nothing wrong with making money, but I believe that when you build a business you need some form of higher purpose in the work you do.

Sramana Mitra: Would you describe it as an ethical value proposition?

Greg Gianforte: If you want to describe it that way, yes. At RightNow we help companies serve their customers. I think every one of us is given certain skills, and ultimately we'll be held accountable for how we use those skills. Here in Bozeman the average salary of our employees is $50,000. That's more than double the average salary in the community. I think that's a great accomplishment that resulted from my ability to build a business.

Sramana Mitra: Congratulations, on many levels! This has been an incredible story, and I look forward to watching your company's progress.

Note: RightNow was eventually acquired by Oracle for $1.5 billion in October 2011.

Platform-as-a-Service (PaaS)

Interview with Sinclair Schuller, CEO, Apprenda

Sinclair Schuller is the CEO of Apprenda. With his two co-founders, Schuller has secured $16 million in VC funding to date. Investors include NEA, Ignition Partners, and High Peak Ventures. Apprenda delivers private and public PaaS to enterprise developers. The company is headquartered in Rochester, New York, and surprisingly, managed to raise significant amounts of venture capital without having to relocate to Silicon Valley. Also, the Apprenda team bootstrapped the early phase of the company by holding onto their jobs- a technique we espouse, when possible, in 1M/1M. We call it 'bootstrapping using a paycheck'.

Sramana Mitra: Sinclair, let's start with the beginning of your personal story. Where did you grow up?

Sinclair Schuller: I am a first generation American. My father is from Romania and my mother is from Italy. They immigrated to the United States in the late 1970s. My father's family has a tradition of entrepreneurship. I was born in New York City but was raised in a very rural area in upstate New York. I had 20 people in my high school graduation class.

Growing up in a rural area is a bit different. There was not a lot of science culture to be exposed to. I had to figure things out on my own. My father was very interested in science and had started medical school but was unable to complete it for various reasons. He went on to start several businesses in Manhattan before we moved to upstate New York.

I learned a lot about science from my father as he helped me with my homework. He also taught me how to program when I was very young. When I

was 7 years old I had an Apple IIe and I learned Basic. I went on to learn C++ when I was 11.

My father passed away when I was 15, and that was a big turning point for me. I no longer had him around to teach me. He also left behind a small business that my mother took over, and I was able to help out with that business. I believe that running the business with my mother really developed my work ethic. I also learned the value of focus when it comes to building a company.

Sramana Mitra: Where did you go to college?

Sinclair Schuller: I went to Rensselaer Polytechnic Institute in upstate New York.

Sramana Mitra: What did you do after RPI?

Sinclair Schuller: RPI was interesting because I went in and got a computer science degree along with a math degree. I ended up getting job offers from a bunch of different companies of various sizes. A few of the job offers were focused on the math degree. I received offers from hedge funds that wanted me to do modeling. Companies that were attracted to my computer science background offered me engineering roles.

I ended up doing some internships at Morgan Stanley, and after school I worked there as a software developer in enterprise IT environments. Like in any enterprise IT shop, I received requirements for custom application development, at which point my team would go off and build an application to meet the requirements.

That environment is challenging to creativity. It is also challenging to turn around application development projects quickly. I had a lot of negative

experiences working at that size of company. Those experiences eventually led to the creation of Apprenda.

Sramana Mitra: What did you do after you left Morgan Stanley?

Sinclair Schuller: I went to work for a startup in upstate New York that focused on help desk software. I worked as a Java developer inside of a really small company. At Morgan Stanley I experienced software development in large enterprises, so it was a new experience to work at a firm that small.

Sramana Mitra: What timeframe was this?

Sinclair Schuller: I graduated in 2004 and I started Apprenda in 2007. I had about three years of experience in the field as a developer.

Sramana Mitra: In 2007 the iPhone had just come out. What did you notice about the ecosystem at that time?

Sinclair Schuller: The world was starting to focus on the cloud. I looked back at my experiences at Morgan Stanley and the small company I had just left to see where improvements could be made, and that led to creating Apprenda. One of my co-founders and I were college roommates. We ended up working at this startup in upstate New York together. Our third co-founder was also working at that startup as the webmaster and designer.

The three of us started talking about our common experiences. We realized that we had all experienced some common trends. First, inside of large enterprise IT environments, it is very hard to get an application deployed. It is a multi-month process that involves 10 or more teams. It was a process that was mind-boggling to us. We could not understand how enterprise IT could function that way.

Second, we noticed that cloud applications were becoming more prevalent. The way applications were architected was more sophisticated and complex. People were using multi-tenancy, scale-out, and high availability architectures. These were all qualities that were very difficult to engineer, and most developers had no idea how to do it.

The three of us saw an engineering opportunity. First, we wondered if we could build a software layer that would make it simple to get an application up and running on an existing infrastructure. Second, we wondered if we could commoditize the sophisticated development patterns so that an average .NET or Java developer could write an app and actually get a powerful cloud outcome with our technology. That led to the founding of Apprenda in 2007.

Sramana Mitra: Did you bootstrap the company?

Sinclair Schuller: We invested sweat equity and our own money. After six months we realized the scope of engineering effort our project was going to require. Apprenda is like an operating system layer that sits across the entire data center. We pull the various server instances that are running in a data center into one logical fabric. There are a lot of engineering challenges in doing something like that.

We realized that we had more R&D investment to make, so we brought in $250,000 of friends and family money. We then raised a seed round of venture funding with a firm in the New York area named High Peaks Venture Partners. We had a total of $1 million in funding, and with that we hired employees to add to the R&D capacity of the company.

Sramana Mitra: You established your company and got it funded in upstate New York. That is not one of the entrepreneurial hubs in the

country. Can you describe the environment and what it was like to get a company off the ground in that area?

Sinclair Schuller: It was less challenging than we thought it would be in many regards. In terms of getting the company started, we found that we have a very engineering-centric culture here. There are a lot of computer engineering and computer science graduates. If you look at the density of math and computer science PhD holders in comparison to the average US population, you will find that upstate New York has a rich talent base.

That was surprising to us in a good way. It enabled us to find good, strong software developers to bring onto the team. Our biggest challenge was finding investors. It's not a hub, so when you go talk to a VC, the first question they ask is why we are located in upstate New York. They were very unwilling to invest in a company from that location.

We started in upstate New York out of pure inertia. We all kept our day jobs while we were starting this company. We ended up being able to raise a $5 million round from New Enterprise Associates. They really took a bet on us in this region. We had originally intended to move to Silicon Valley once we got the company started, but now we are excited to break the geographic boundary here and help jump-start the entrepreneurial scene in this area.

Sramana Mitra: Your seed round came from friends and family, correct?

Sinclair Schuller: Yes. We also had a small regional VC put in $500,000 at that time.

Sramana Mitra: What were you able to accomplish as a founding group that led to the seed capital?

Sinclair Schuller: We started with the hypothesis that a software package could be built that large enterprises would want to use which would commoditize all of the complicated workflows and architectures. We invested our own money and time to prove that hypothesis. We worked to get a prototype in place to show that our concept was possible as well as to simplify explaining our goals to potential investors.

We started talking to people we knew inside of enterprises. We took their feedback and incorporated it into an initial build of the product. We then used that initial build of the product to demonstrate to friends and family and give them a view of our vision. We used that same prototype to pursue some seed stage funding.

Sramana Mitra: You had a prototype. Did you have customers validate that prototype?

Sinclair Schuller: Not at that time. That prototype was purely speculative based on our work experience. We did talk with some potential customers and we solicited their feedback, but we did not offer them insight into what we were building.

Sramana Mitra: Would it be fair to say that VCs in your neck of the woods don't see a lot of fundable deals?

Sinclair Schuller: Deal flow in upstate New York is very shallow. The typical flow for VCs was from New York City. Most of their deals were consumer oriented.

Sramana Mitra: In a way, that may have helped you. There was money looking for deals, and you had less competition.

Sinclair Schuller: There was definitely under-leveraged capital sitting on the balance sheet, and they had to do something with it. I think it increases the propensity to invest.

Sramana Mitra: What happened between your seed round and your Series A?

Sinclair Schuller: Our next step was to put the prototype in a potential customer's hand and have a beta take place. We decided to invest the seed money into turning our prototype into a beta product, with the intention of using the beta version to raise capital. We knew we needed to involve a real customer to do this, and we had to figure out who the first customer should be.

We felt that the enterprise was our long-term vision, but we needed to have a different user base to get things started. We decided to target independent software vendors. They face a lot of the same challenges as enterprise developers. We felt that our technology would also help them transition into the SaaS model. That became our beachhead.

We went off and talked to a few small developers and asked them if they would sign up for the beta. We started accumulating data from them regarding their challenges and then put our technology in their hands. Once we had that program in place, we went out and started pitching for a Series A round. That was a challenge because we were based in upstate New York, and our problem was compounded because we were asking for $5 million.

I did not have a dense Rolodex, so I broke the rules and started cold calling. I built a list of every VC fund I could find, and I prioritized them based on their investment portfolios. I would then target the partner at the fund whom I felt I had to be best opportunity to connect with. I then started sending emails and

calling them. Surprisingly, I received a lot of responses and one of them was from NEA.

Sramana Mitra: You closed a $5 million round from NEA and managed to stay in upstate New York. What were those conversations like?

Sinclair Schuller: Each VC we pitched to expressed concern about our location. We told them we were willing to move but we just wanted to get the deal done. As we started building the company, we never had friction here based on our initial hiring, and inertia has kept us in place. We did not find a reason to move. A lot of our customers are clustered in the Northeast. I would rather be close to my customers. The location has turned into a positive.

Sramana Mitra: I am a big fan of opening companies outside of Silicon Valley. I think there can be some definite advantages. For one, you did not have to fight the talent war that companies in the Valley have to fight.

Sinclair Schuller: After having started a company outside the Valley, I am also a fan of that approach. The only caution I would point out is that you have to be aware of the pitfalls. We were able to get great engineering talent, but we had a difficult time finding people with experience building companies. That is why we opened an office in New York City as part of our strategic growth plan. There are a lot of people there who ran sales and marketing functions for enterprise IT startups there.

Sramana Mitra: What were your major milestones after the NEA funding?

Sinclair Schuller: We persevered through a very difficult time for our company. Our strategy to build a beachhead with independent software

developers turned out to be a bad beachhead. We went after companies that were making the transition to the software-as-a-service model, and we hoped to license our software to them. We ended up in a scenario where the sales cycle was very long. We would take on an 18-month sales cycle and make $50,000 or $60,000.

That happened because it was a difficult decision for those companies to move to the cloud. They were worried about cannibalization, technical transitions, and other management concerns. All of those decisions were prerequisites for those companies to purchase our tech, and that slowed down our sales cycle. In addition, most software vendors do not have a budget to purchase software. They spend their budgets hiring people. That meant we had to really fight for budget and help them identify how they would spend money.

During that time we saw our original vision start to manifest. Enterprises started downloading our free product. We were not certain why, but when we interviewed a few of them, they told us they were trying to build a private cloud, and they felt we were well suited for that environment. When we asked them if they were funding the project, we typically heard that it was not funded yet but that they were putting together a pretty sizable budget for the effort. Ultimately, we used the Series A money to prove our original thesis and pivoted the company to focus on the original vision.

Sramana Mitra: How much time did it take you to get the enterprise business going in a significant way?

Sinclair Schuller: We closed the Series A in November of 2009. We ended up spending a year and a half pursuing smaller developers. We repositioned the company at the beginning of 2012. In mid-2012 we did a real launch into the enterprise market. By the end of 2012, we were landing low six-figure deals.

Sramana Mitra: How many customers do you have right now?

Sinclair Schuller: We have two dozen paying customers and a bunch who are in the pilot or POC stages.

Sramana Mitra: What demographic are you focusing on?

Sinclair Schuller: We focus on the global 2000, and we tend to work with companies that have $4 billion in revenue and higher. Our average deal size will be in the $250,000 range.

Sramana Mitra: What strategies are you working on now?

Sinclair Schuller: One important lesson for any startup is to learn the direct sales model. Once you understand the buying model and the basics of your sales process, then you immediately start to look for leverage. Intuition will lead you to partners or channels that give you much more leverage in your model. That is where we are right now. We are looking to amplify our direct sales with strategic partnerships.

Sramana Mitra: What percentage of your business is product versus services?

Sinclair Schuller: Last year it was about 92% product licensing and 8% services. This year it will be 85% licensing and 15% services.

Sramana Mitra: A strong services component bodes well for channel partners. If they can wrap their services around your offering, they will be more inclined to help sell.

Sinclair Schuller: I definitely agree. There are also strategic partners we have where we amplify their ability to sell their product by selling our product.

Sramana Mitra: What does your ecosystem map look like?

Sinclair Schuller: Our vision for a private platform as a service is that it is the equivalent of the application server for the cloud. That requires developers to re-skill themselves to be able to write cloud applications.

When we look at the landscape of cloud computing players, we see three categories. We have SaaS players, who are business application vendors who deliver their apps in the cloud. There is infrastructure-as-a-service, which is the ability to acquire virtual infrastructure in a low-friction way. This is what companies like Amazon do. The layer in between the SaaS players and the infrastructure players is where we live.

Sramana Mitra: The Force.com platform sits at that layer, although you probably differentiate from them by catering to the private cloud. Is that correct?

Sinclair Schuller: To a degree. If you look at Force.com, you will find that it is an extensibility platform around CRM. We are a general purpose platform for arbitrary .NET and Java apps. It's like comparing JBoss to the Office Extensibility Framework. Force.com is built with a custom language to expand that ecosystem, whereas we are focused on helping you build apps from the ground up with .NET and Java.

Sramana Mitra: What is your pricing model?

Sinclair Schuller: Our technology is a peer-to-peer fabric. We will take a bunch of operating systems and stitch them together into one unified piece. We care about the memory footprint of the collective group of servers. We have a per-gigabyte, per-year licensing fee that includes maintenance and support.

Sramana Mitra: The trend of platform ecosystems is very hot right now. Even small startups have significant platform ecosystems they are running. They can have thousands of developers on their platforms.

Sinclair Schuller: We are changing the IT landscape in a profound way. We are the engine behind lines of code being written instead of infrastructure. That creates deep value with our customers. We are the platform they target when they are writing code. Our accounts make big bets on us, and we like that. We want their production workflow. Companies like JP Morgan have 3,000 applications running on our platform. We are the foundation for their app environments.

Sramana Mitra: Can you talk through your team building process? I'm interested in how you have built your executive team and how your location has influenced that process.

Sinclair Schuller: We have talked a bit about our location but one thing I want to point out is that we are not bent out of shape when it comes to the location of our team members. One of our VPs, Garry Olah, is in Silicon Valley.

We have focused on building a very experienced management team. Rakesh Malhotra worked for Microsoft for 10 years and is the VP of Product at Apprenda. He ran Microsoft System Center. Kerry Ancheta is my VP of Sales and he is based out of New York City. He was the VP of Enterprise Sales at MySQL. We have focused on finding the best possible executive management team regardless of where they are.

Every entrepreneur needs to step back and recognize where the team gaps are and find great team members to fill those gaps. I think we have done a great

job of that as a startup. This is important because we are a premium priced product going after enterprises. That is not an easy lift.

Sramana Mitra: How do you find these people?

Sinclair Schuller: We brought in our VP of Sales through executive search. We have brought in everyone else through relationships. I think that is one of the best ways to find people. You have a lot more color on their ability to perform. My VP of Finance was someone in the Albany area that was part of a company that went public and he ran their European operations. I think that using search to field an entire executive management team would be very difficult.

Sramana Mitra: What I find impressive is that you were able to build these relationships being so far off the hub.

Sinclair Schuller: Regardless of location it is important to become part of the hub. I am well connected in the Valley now. I know a lot of people in the Boston area as well.

Sramana Mitra: How has the ecosystem changed in your area over the past five years?

Sinclair Schuller: Upstate New York has been transforming in an interesting way when it comes to technology in general. Albany is a key hot spot for nano tech development. We are seeing a lot of computer engineering and chip manufacturing here. Google acquired a company across the hall from us that built the video codec for YouTube.

The most interesting thing is all of the activity we are seeing in New York City. We are only two hours away now. That vibe has changed from being cash

motivated to being equity motivated. A lot of startup activity is happening in the city. That is good for us since we are building an employee base in the city.

Sramana Mitra: In my opinion New York has overtaken Boston.

Sinclair Schuller: New York City, in my opinion, has the ability to eclipse the Valley over time for a couple of key reasons. On the consumer side, NYC is a retail Mecca. Every retailer buys from New York City. There is an education level around consumer behavior that you do not see anywhere else. On the enterprise IT side New York City has a big play as well. Within 30 miles of Manhattan Island 60% of the world's IT budget is defined. Finally, it is just a dense area and the labor market is very interesting.

Sramana Mitra: One of the advantages of Silicon Valley has been the VC industry. New York is interesting because it has money. The types of deals people are evaluating are more consumer oriented and that is something that investors in New York are more comfortable handling. There are a lot of trends that favor New York.

Sinclair Schuller: I agree. There are some very interesting dynamics and it is an exciting time to be in this region.

Sramana Mitra: Thank you for taking the time to share your story.

Infrastructure-as-a-Service (IaaS)

Interview with Ranjith Kumaran, YouSendIt

Ranjith Kumaran is the founder and chief technology officer of YouSendIt. While we looked at a couple of stories where the products targeted large enterprises, YouSendIt targets businesses of all sizes from the largest to the smallest. Also, note, Ranjith talks about raising money after reaching $1million in revenue.

Sramana Mitra: Ranjith, tell me about yourself. Where does your story begin?

Ranjith Kumaran: I was born in England. My father was there doing his PhD in physical chemistry. I was only there for about a year, but I am still pulling for England in the World Cup. My first memories are in India. My father was a college professor who taught chemistry. We left India when I was five or six, when my father got a teaching assignment in New Zealand. We spent about two years there before moving to Canada when I was eight. I stayed there up until 10 years ago when I moved to Silicon Valley.

Sramana Mitra: Where did you go to college?

Ranjith Kumaran: I went to McGill University and studied computer engineering. My first gig out of college was with Red Hat. I did development there, but I really found that I enjoyed the customer side of the business. When Motorola or Intel would come out with a new microprocessor, they would call us and tell us they needed a compiler, debugger, or something of that level. I

really liked sitting down with the customer teams and figuring out exactly what their requirements were.

I spent a couple of years with Red Hat before I left to come to Silicon Valley for an English startup out of Oxford. The company was Celoxica, and I joined them to do sales engineering on their international team. That was the first time that the YouSendIt concept came up. I was constantly working to manage a team of 11 engineers all over the globe and had to transfer product demos all over the world.

Sramana Mitra: What year was that?

Ranjith Kumaran: I moved here in 2000 and stayed there through 2003. I moved on to work in product marketing and stayed there for a year at another local startup. The work was easy and paid a lot. We got acquired six months after I got there. There was a lot of sizing up who my new boss was going to be and what my role was going to be. On nights and weekends, I got together with some folks I had worked with at the previous company where we kicked around some ideas. YouSendIt was one of the ideas we were kicking around. We got around to putting up a demo site. There were not many blogs back then, but we went to message boards and posted notes telling people about a new large file transfer system which was completely free to use and asked people for their feedback. Within a few months we had hundreds of thousands of people using it.

Sramana Mitra: What was the competitive landscape like at that point?

Ranjith Kumaran: Right around the time we launched another small company out of Los Angeles called Dropload. It did not take off as quickly as hoped. Dropload was a one-to-one distribution system. You could upload a file, send someone an e-mail to tell them it was there, and then once it was downloaded it was gone. We were more open. We allowed files to be sent to five people, and it just fanned out from there. We were very active in going out and touching the photography communities. We even powered a photo community in the early days as part of their discussion board.

A lot of the people on the boards we were posting on were writers and bloggers. We started getting written up in newspapers and magazines. We got written up in Wired and Playboy. Playboy has a photography section, and one of their photography tips was to use our service to send the incredibly large 5MB pictures. We worked ourselves into lots of places where people were writing.

Sramana Mitra: Would it be fair to say that the process you followed for validating your business was building the technology and putting it out there?

Ranjith Kumaran: Ultimately, yes. We talked to IT support professionals at the time about the types of FTP solutions available. It was really the management and security of the FTP servers and e-mail servers we were relying on. I worked at startups where I had that problem and I knew it was impossible for them to manage. It was in our DNA from the beginning. As we rolled it out, we gave it to the IT professionals and they also recommended it.

Ultimately we thought it would be a very horizontal market, and it has proven to be that way. It is transactional, everyone uses it, and it is a global business. It is not a United States-only, small business. It started with casual photographers and grew from there. Even my parents use it to send videos of their grandkids.

Sramana Mitra: What happened in 2003 after people started using it?

Ranjith Kumaran: In late 2003, I had the domain name, and we put out a limited system. We got a minimal response. By the end of 2003 we knew it was sink or swim time. We opened it up to 1GB files and let people send files to multiple users. That is when we saw traction starting. In the middle of 2004 it was up to 500,000 unique senders each month.

Our users started telling us that they realized we had ads in order to keep the lights on, but that they were taking it to work. The security requirements came from that. It was a great way to learn from the market. For the next 18 months we scaled and listened to the use cases. We figured out how people were using the technology at work.

That was ultimately the thesis for the first venture round. We had a few smart guys, a bunch of traffic with over 3 million unique visitors a month, and an advertising based system. That did not monetize as well, but that is where we were in the early days. We started showing poorly targeted ads, but it kept the lights on and paid for the bandwidth.

Sramana Mitra: I understand there were three cofounders. Did any of you take a salary in the beginning of the company?

Ranjith Kumaran: The other guys were still consulting at their previous jobs. I was out raising seed capital to keep the company going because my former company had just been purchased. I was able to generate enough interest from seed investors to enable me to make the decision to plunge forward.

Sramana Mitra: Did your investors find you, or did you find them?

Ranjith Kumaran: We met them through TiE. I had never been to a TiE event, but they liked it right away. I just happened to bump into them there and a couple of weeks later we had their interest. We closed the seed capital term sheet three months after I quit my job.

Sramana Mitra: How much did you raise?

Ranjith Kumaran: We raised $50,000, which was just enough to feed the service more servers and bandwidth. It was a seed to close a $250,000 round, all with the same investor.

Sramana Mitra: That should have been enough to build the entire company.

Ranjith Kumaran: If we wanted to keep it at a point where we just paid ourselves a salary and feed the company servers and bandwidth it would have been enough. It was not enough to try the other business models we had thought about. Our original business plan addressed both the ad based model and the subscription model. We knew that three of us with ad revenue would not turn the corner. It was good to a point of paying servers and bandwidth.

Sramana Mitra: Your thesis was largely a subscription model?

Ranjith Kumaran: That is what we wanted to test. We raised our funding in September 2005, and in February 2006 we signed up our first paying customer. With the money we raised we built a development team, moved the platform from Windows to Linux, built a payment system, and launched two very simple tiers. We had our first paying customer four minutes after we launched the service. It became very clear that the subscription model economics were much better.

Sramana Mitra: What was the free-to-premium value proposition?

Ranjith Kumaran: It was very simple. We wanted to get rid of the ads, allow users to have more storage, and get more users. We had a $5 a month and a $20 a month tier. The thinking was to price cheaply and get as many subscribers as possible, but we also wanted to have some additional value propositions which is what we offered with the $20 tier. Those premium services were things like password protection and recipient delivery validation.

We were able to test if our service was a commodity at the $5 level, or if value proposition would allow us to have premium offerings. Both went well out of the gate, with more $5 subscribers. We felt we were leaving money on the table so within a year we doubled the prices to a $10 tier and sales kept increasing. We did grandfather those who had come in under the $5 tier.

Sramana Mitra: What was the conversion ratio?

Ranjith Kumaran: Over the past two years we have doubled our conversion rate on the free-to-paid subscription side to 4%. Overall, including our transactional pay-per-use which includes enterprise, the conversion rate is close to 10%.

Sramana Mitra: What did it start at in 2005?

Ranjith Kumaran: In 2005 it was less than 2%.

Sramana Mitra: When you were developing your freemium model, what was your plan to attract them into being paid users?

Ranjith Kumaran: There is a big funnel we think about. Every month we get 300,000 new registered users. Some percentage of them will be pay for use, some percentage will be premium users, and some percentage will upsell to a corporate license. Thinking back to the roots of the company, we wanted to build the largest, most reliable platform in the industry. That is good enough to keep people around, but it is not what we use to motivate people to pay.

The thesis of the company is that those are all checkboxes that we have to have. We have to be more reliable and secure, and we must serve the largest user base; that way, when a corporate account comes and states that they have 5,000 users we can easily prove our ability to handle the load. We sign up 30,000 users a day. We can scale and have done that as well. We feel that if our model works that nobody will look around for an alternate service and leave. We have an incredibly high Net Promoter Score based on how many times we save our users on deadline driven transactions. If someone has to get a large file

to be printed by 6 p.m. today, where can they turn knowing the file will be delivered? We have received props for saving people's jobs. Our defensibility is the brand and the quality of the brand.

Sramana Mitra: Are you selling to enterprises proactively, or are they just coming to you from their regular users?

Ranjith Kumaran: To convert an individual user to a paid account we have an upsell. The free service does not have tracking, much like you would get with FedEx. People are obsessed with those metrics. We found when we released our iPhone app that 30% of our tracking activity came from that platform. People check their Facebook, Twitter, and they check to see if anyone has downloaded a particular file.

We have found that if people use our service on more than one platform they are much more likely to convert to a paid user. The conversion rate is three times higher. Engagement, presence, staying in front of our users, is huge. Ubiquity is one of the things we have driven. We have plug-ins for email platforms. Outlook is huge for enterprise, and our desktop application has been installed more than 5 million times. We have plug-ins for Acrobat, Office, Final Cut Pro, and other programs. We want to be wherever people are working.

Sramana Mitra: Did you have to do deals with Adobe and Microsoft for the plug-ins?

Ranjith Kumaran: I call it unilateral business development. They all have architectures which allow external developers, and we just seed those with

programs with our software. There are other deals where we have worked proactively with companies. We have a very interesting partnership with a construction software company where we are bundled with their software application.

Sramana Mitra: Do you work integrated deals with other major software vendors?

Ranjith Kumaran: We have some, but the majority of the time users need to go install the YouSendIt plug-in on their own. We have done a little bit of both, and we would like to do more integrated solutions. We already have users in the video and photography space. We just want to make it easier for those users. We want to be part of their workflow environment.

Sramana Mitra: Once you have the individual, how do you get into the enterprise?

Ranjith Kumaran: A lot of it is grassroots driven. We have done very little outbound sales. We have a very small inside sales team, and that may change over time. Right now we are still proving the enterprise market. We are well established in the small business area and get a lot of five-seat or ten-seat deals. When a large company comes to us we usually already have 300 or 400 people inside of that company using YouSendIt.

Sramana Mitra: Who starts the enterprise buys?

Ranjith Kumaran: We have found that 60% of the buyer engagement comes from the IT department. It is someone who maintains critical infrastructure for the corporation. That is great because it is exactly who we want. The question is no longer, "How many of my people will send big files?" to "How many of my people will ever send a file?" because they don't have to deal with e-mail bounce back, raising e-mail limits for a week, or other management issues.

People are now starting to look at us as an attachment management solution for all employees. Large file sizes are putting increased strain on e-mail systems, plus a lot of people use their e-mail as a file management system. They are not ready to abandon the Exchange infrastructure, but they are willing to put their attachment management system in the cloud. Regulated businesses are not using us so much for large file storage as much as they are for secure file storage. They need an audit trail for compliance.

Sramana Mitra: That is a very significant market. At some point you are going to have to define your business practice area.

Ranjith Kumaran: We are happy to leave that to other companies, it is just that some of our users have had unique solutions with the toolsets we provide. Five years ago I was still assembling servers on my living room carpet getting ready to drive them to the datacenter when the phone rang. It was somebody in the CIO group at GE. He had noticed 150 of his employees using YouSendIt and he wanted me to either sell him some enterprise appliance solution or he was going to turn us off. I told him to turn us off.

That is a business we never wanted us to be in. You have to move so many boxes for that type of enterprise appliance function to be worthwhile that it just does not make sense. I was happy to let GE find a different solution. I like a simple, elegant business model. A lot of the companies that shut us off five years ago are coming back to us now because they have already put so much of their infrastructure in the cloud that they do not have a problem putting their attachments in the cloud as well. We are winning those deals now against entrenched companies with on-premise appliance solutions.

Sramana Mitra: What was your revenue like when you first raised money?

Ranjith Kumaran: It was getting close to $1M. We were three people but we had a very bandwidth intensive service. We had a substantial infrastructure that we were building out.

Sramana Mitra: Talk to me about that. How did you build your infrastructure?

Ranjith Kumaran: Back then it was a data center that we maintained a presence in. We had a couple of cabinets there. We built our own servers and tuned them for big files. We drilled out posts inside of servers so we could fit more hard drives in them. We then wrote our own software to manage those drives. We had a contractor with a similar setup in Virginia to handle all the European traffic coming through because latency was a bit of an issue.

We now have a presence in London which is managed by Rackspace. It is all storage. The brains of the application are all in California in the data centers there. All other data centers are used only for file storage.

Sramana Mitra: What is the algorithm for managing the transfer process?

Ranjith Kumaran: When we started we looked at the geographic location of the sender and we then pointed them to the closest data center. We were seeing a lot of transactions where people sent files to people, roughly in the same geography. Within the data center we look at storage optimization, and we make two copies of everything in each data center. We also look at optimal I/O because it is a complex, multi-minute transaction. We have to shape the traffic so that one server does not become overloaded.

Sramana Mitra: What percentage of your P&L is infrastructure cost?

Ranjith Kumaran: It is substantial, definitely more than the average SaaS provider. They are just maintaining a big database and several web servers. I think this is the most expensive service we will ever offer. I am glad we have the hard stuff behind us.

Sramana Mitra: In 2005 you had $1M in revenue. How did it ramp from there?

Ranjith Kumaran: We just recently started talking about how we have 180,000 subscribers, and the cheapest thing we sell is $10 a month. We have grown substantially. We have had more than 70% growth in the last year.

Sramana Mitra: Has that been steady or was there a hockey stick?

Ranjith Kumaran: It was, but it is easy to get 70% off of $1M. There are strong signs that we will keep growing next year as well.

Sramana Mitra: What further financing have you raised?

Ranjith Kumaran: We have raised three rounds totaling $34M. Our C round was two years ago and most of that is in the bank. We raised money to build infrastructure and platforms. We are starting to go after enterprises so we have started a sales team and product marketing. Historically we have only done things like trade shows.

Sramana Mitra: Who were your investors?

Ranjith Kumaran: Our A round was led by Alloy Ventures and they were joined by Sevin Rosen Funds. Our B round was with Sigma Partners and our C round was with Emergence Partners.

Sramana Mitra: I like that your business is simple and elegant.

Ranjith Kumaran: The roots of the business were very simple. The focus was on the end user experience. It was an easy service to use and the product was not cluttered. If you look at other collaboration services there are 80 services there, most of which are not used.

When I talk to folks on Sand Hill Road, it seems they all want you to be the 'x' of 'y.' Most people are the Google of real estate, or the Google of something else. In that context I described us at the FedEx of digital. It is a real business. For FedEx it is a $30 billion business, and that is what we are starting to eat into. Deadlines are not going away, and the amount enterprises spend on this is definitely not overstated. Perhaps we are taking budget away from FedEx, who knows?

The key is that people who use the service are busy professionals. We could not have a steep learning curve. The purchase model had to be simple and easy. When it came to making a purchasing decision it had to be easy to compare and make a recommendation. Now we are extending that philosophy to the IT organization. We want to make it easy to deploy and train.

We are starting to see networking effects. Our paid users are bringing in more and more paid users. These are users who value the premium services. We are smarter as a company. We learned the hard way on how to handle churn. We saw strange churn patterns among some users who would sign up for three months and then churn away. They would come back and then churn away again. When we asked them what they were doing, we found they were using our service on a project basis.

We have now come up with pay-per-use where you can purchase some credits and use them as you need them. A base subscription costs $9.99 a month whereas a pay-per-use cost, until recently, was $8.99. We had users who would do eight to ten individual pay-per-use transactions a month. For just a dollar more they would be able to get a subscription. They did not do that because

they were just marking it down as a business cost and sending it on to their clients. I found that to be an incredibly fascinating use case.

I used FedEx twice a year, and I am happy to pay $20 to send my passport renewal to the Canadian government. If we can capture that behavior of 12 million–13 million registered users, then we could have an unlimited business.

Sramana Mitra: If you have 13 million registered users and 180,000 subscribers, what is it going to take to make the rest of them pay?

Ranjith Kumaran: Some of the economics are subsidized by marketing.

Sramana Mitra: I understand that, but if you could up the conversion rate by a little bit it would have a huge impact.

Ranjith Kumaran: That is really where I think pay-per-use comes in. Most of those users do not have a need for recurring membership. However, when I show them pay-per-use, we see 10,000 new pay-per-use customers a month. We never had that and that has been one of the fastest growing segments of our business.

Sramana Mitra: Have you done a good segmentation analysis on who these 13 million users are?

Ranjith Kumaran: Yes, but the results are cloudy. It is largely professionals. Our free service is so useful that we get a lot of photographers and others who are able to send unlimited 100MB files. We are happy because they tell five of

their friends, and one of them will lead to a corporate account. We estimate that 90% of our paid business comes from word-of-mouth referral. We have barely scratched the surface on price sensitivity. There is a lot of psychology on pricing. We are excited about the other workflow areas as well.

Sramana Mitra: This is a really cool company. Thanks for taking the time to speak with me.

Note: As of 2013, the company had over 40 million registered users. Most use its free service, while a half-million pay. Competition has escalated with the emergence of Box, DropBox, Google Drive, and others. YouSendIt has since rebranded itself as Hightail, and till date, raised over $80 million in funding.

Data-as-a-Service (DaaS)

Interview with Henry Schuck, Co-Founder, Discover.org

Lead generation is a great Data-as-a-Service application, and Henry Schuck has mapped out a useful service. The company is entirely bootstrapped, unlike the case studies we have discussed so far that bootstrapped first, but went on to raise money later.

Sramana Mitra: Henry, let's start with some context about your personal story. Where do you come from? What is the backstory that leads to your entrepreneurship journey?

Henry Schuck: I grew up in Los Angeles and I did my undergrad studies at University of Nevada, Las Vegas (UNLV), where I studied hotel administration and accounting. During the summer of my first year, I took a job at a lead generation company in Las Vegas. I worked there from the summer of my freshman year until a year and a half after I graduated. The company I was working for was purchased by a private equity firm. After the company was purchased, I transitioned out and went to law school at Ohio State University.

Sramana Mitra: What did you do in the lead generation firm, and what did you see in that environment?

Henry Schuck: It was a very small company that provided leads to technology firms as well as reports on technologies that the companies used. They would source reports from publications and put them all in one place. When I got

there the company was just the owner. He had been running the business for just more than 10 years and was doing just about $300,000 in revenue. When I first got the job, I was essentially doing administrative work for him.

Since it was a one-person company, I had insight into everything. Marketing was done through direct mail. Sales were done via CD. When a client signed up for the service, we burned a CD with the information and we would send it out to the different customers. This all occurred in 2001, right after the bubble. Within the first year I had taken over the marketing function. We had taken sales from $300,000 to a million dollars in the first year I was there. We did that primarily through email marketing. The advent of email marketing and the ability to track emails that were opened, as well as clicked on became a key enabler for our business. Email marketing spiked interest in our company. The second year we did more than $2 million in revenue and the company continued to grow.

It was a very closely held corporation. There was not a lot of interest in building a company. It was a lifestyle business. I got to watch this business, which, while growing, was thirsty for resources it had not been given. There was never an investment back into the infrastructure. We never hired a sales team; the owner always handled the sales. By the time I left, the company was doing more than $4 million in revenue with just the owner and a couple of college kids. At that point I was running marketing, research, and I was interfacing with our outside council on intellectual property protection.

Sramana Mitra: You mentioned that the owner sold this company to a private equity firm. What led him to take that step rather than building the company further?

Henry Schuck: The owner was in a place where he was making a lot of money but he did not like the job. He was not in a place where he could wrap his head around hiring a team to run the business, so he sold the business to a private equity firm. That is when I left.

I worked at that firm with Kirk Brown, who is now my business partner and co-founder. He called me after the private equity firm had bought the company and I had gone to law school. He proposed building a similar business based on a SaaS model. This was in the spring of 2007. When Kirk first called me, I was finishing my first year of law school finals. My immediate reaction was to pass. I was doing well in law school and I felt I was too busy. Law school seemed like the safe career path. I did tell Kirk that if he wanted me to consult with him, he could call me back in a couple of weeks when finals were over.

He called me three weeks later and we had a conversation about what could be done. He told me that even if I did consult on the business that he wanted me to be a 50/50 partner. That was the genesis of the business. We mapped out our strategy.

Sramana Mitra: What is Kirk's background?

Henry Schuck: We went to school together. He has an accounting degree from UNLV. He was also a caddy on the PGA before working in sales at a Fortune 500 company.

Sramana Mitra: When did you kick off DiscoverOrg?

Henry Schuck: In May 2007.

Sramana Mitra: Did you end up joining full time or did you remain a consultant?

Henry Schuck: I joined full time. I left the law firm that I was clerking at. I moved my second year law school classes to the evening. I got up at eight and worked until three then went to law school until nine in the evening. I carried that schedule for my final two years of law school.

That summer I was studying abroad at Oxford University. Between classes at Oxford, we were Skyping and talking by phone about building the business. We had conversations about building the database as well as the marketing list. Our idea was to build a minimally viable product. We felt that 5,000 contacts provided in a SaaS form was enough to get the attention of the clientele.

The beauty of doing this with a focus on IT is twofold. First, the IT departments at these companies tend to have the largest budgets within the corporation. Second, our clients are very easily decipherable. They are companies that sell hardware, software and IT staffing services to technology departments of large companies. It was very defined. It was not like we had to

go do mass advertising. We just had to reach out to the director of sales or marketing for that person to see the value in what we were offering.

Sramana Mitra: Did you focus only on IT, or did you focus on IT only to validate your concept and use the IT list as a minimal viable product?

Henry Schuck: We stayed very focused. People would ask us to create our service for finance, engineering, and marketing. The company was bootstrapped with our savings money and our credit cards. We were in the black almost right away because we primarily put in sweat equity. We sold our first deal to a Comsys, and that deal alone almost put us in the black. We reinvested a significant portion of our proceeds from that point on. That is what enabled our growth and what enabled us to pass on opportunities to expand into other areas and remain focused on IT.

Sramana Mitra: How much were you charging?

Henry Schuck: Our first deal was in the $15,000 to $20,000 range.

Sramana Mitra: What did they get for that price?

Henry Schuck: Access to an online database that had IT org charts and contact information. It had 5,000 contacts at about 1,000 companies. Today we cover 13,000 companies and have 215,000 contact profiles.

Sramana Mitra: What is your current pricing strategy?

Henry Schuck: It depends on what data sets you get and how many users you have. We have four distinct data sets. We have the enterprise set, which is 5,000 or more employees. There is a mid-market list, which is companies with 1,000 to 4,999 employees. There is a SMB list, which is fewer than 1,000 employees. Our fourth list is government and higher education. Depending on which data sets you choose and how many users you have, the price will vary.

Sramana Mitra: Is the focus still on IT buyers?

Henry Schuck: Yes, definitely.

Sramana Mitra: You started the company in 2007 and your first deal was $20,000. Your subsequent deals put your company in the black, with room for reinvestment. What happened next in your story?

Henry Schuck: We were constantly building our database of IT buyers. We hired two employees in the beginning of 2008. They were all working out of our house in Columbus, Ohio. We had a two-story home and the entire second story was basically DiscoverOrg.

Sramana Mitra: How did the company wind up in Columbus, Ohio? You were going to law school there, but where was Kirk?

Henry Schuck: Kirk moved to Columbus. He left his job, packed a truck, and moved to Columbus.

Sramana Mitra: What was happening on the business side during 2008?

Henry Schuck: We were marketing and doing sales. We were basically just splitting our time. We spent half of our time doing data integrity and the other half doing sales and marketing. We did calls to decision makers and sent samples to potential clients. We just built our database during that time.

Sramana Mitra: Where were you finding traction in your sales calls? The VP of sales and the VP of marketing?

Henry Schuck: You hit it spot on. The VP of sales and the VP of marketing.

Sramana Mitra: How did the revenue track in 2008?

Henry Schuck: We did $270,000 in revenue. In 2007 we had done $110,000, which was really just the second half of the year.

Sramana Mitra: Would you talk about the product development process? What were your data sources? How did you put everything together?

Henry Schuck: We were gathering data directly from the companies we were profiling. That is what made our company different back then as well as today. We called into those companies to gather the data and collect the phone numbers, and we updated the information on those people. That is what made all the difference. We did not source data through a crawler.

Sramana Mitra: Would you just call the company switchboard and ask for names and numbers?

Henry Schuck: That is basically it. We would start with some online research and identify some top-level people. We would start there and work on building the organization out.

Sramana Mitra: It sounds like it was very labor intensive.

Henry Schuck: It was very labor intensive. At first it was just Kirk and me. We were spending 75% of our time on the phone and 25% of our time selling the product. The data was always of paramount importance for what we were doing. As we hired new people, we would split their time to 80% research and 20% sales and marketing.

Sramana Mitra: What were some of the other milestones you passed building this business?

Henry Schuck: In 2009 we had a significant turning point in the business. We moved the company from Columbus to Vancouver, Washington. It was the first time we had a formal office. We started hiring people to work on research, sales, and marketing. We really started building the organization from there. In 2009 we saw about $880,000 in revenue. In 2010 we did $2.7 million in revenue, and in 2011 we did $5.5 million in revenue. We are on track to do between $14 million and $15 million in revenue in 2012.

Sramana Mitra: Why did you move the business to Vancouver, Washington?

Henry Schuck: Kirk is from that area. I was done with law school, so I had no ties to stay in Columbus. My wife wanted to move away from Las Vegas, and this just seemed like a logical place to go. We did not move the employees with us from Columbus, we kept them there. Some of them transitioned out and a few others stayed on until earlier this year when we closed the Columbus office.

Sramana Mitra: How do customers use your product?

Henry Schuck: The product is geared for technology vendors who sell into large, midsized and small businesses. Our service puts all of the IT decision makers on an organizational chart along with their direct dial phone number, email address, job description and exact title in front of you. If you are a rep at a technology company and you try to sell into Nike you can just go into our database, click on the org chart for Nike, and you will know who reports to whom, 92% of the time you will have a direct phone number, and 98% of the time you will have a verified email address. You will also have a verified background report on what the company uses in their infrastructure such as SharePoint, Exchange and SalesForce.

You will also have a run-down of real time projects and initiatives taking place at the company. You will know if they are moving from one version of a platform to another, or you will know if the company is looking for WAN acceleration services. When you move through the org chart and you find your decision maker you can pick up the phone and call that person directly. You know what they are responsible for and you can have an engaging conversation with that individual.

Companies spend a lot of money on sales people yet those people spend 4 to 5 hours a day doing research on potential companies versus doing what they were hired to do which is to sell the product or service. We let sales people do sales and we do research. From a marketing perspective all of the data is constantly updated. Every contact is updated once every 90 days. Our list is constantly scrubbed and updated. We cover companies in the US and Canada.

Sramana Mitra: Are companies that forthcoming in sharing this type of data with you? I would be surprised to know that they are willing to share information regarding IT projects.

Henry Schuck: Not every person is willing to share that information. We gather around 70 to 80 initiatives and projects a day. We certainly don't have it on every company but we do gather it in a lot of organizations.

Sramana Mitra: Is your data higher quality for larger companies than it is for smaller companies?

Henry Schuck: It is deeper for larger companies because there are more people in IT, but for smaller companies we are able to cover the entire IT department. We probably won't be able to cover every IT person at Goldman-Sachs but we will have every IT person at a smaller company whose IT department is only 5 people. We get all the IT decision makers at the larger companies. At the smaller companies we have everyone.

Sramana Mitra: What is the smallest sized company that your database covers?

Henry Schuck: We don't cover companies with less than 400 employees. However, there are some fast growing technology companies that are outliers to our rule. Those are folks like Pandora and CraigsList. We will cover those companies.

Sramana Mitra: In the U.S. and Canada, how many companies are there that have 400 or more employees, and what percentage of that market have you penetrated?

Henry Schuck: That is a very good question. The answer is a black box in our industry. No data provider knows exactly what that number is. Even if we knew what that number was, it would not be indicative of how many IT opportunities there are. When you get to be a company of that size, 400 to 600 employees, a lot of the IT services are outsourced. A lot of companies don't have IT people in-house.

Sramana Mitra: In our audience we have a tremendous number of software-as-a-service and cloud computing service entrepreneurs. These are people who are trying to sell outsourced IT to these organizations. They need to find those decision makers.

Henry Schuck: We cover companies that have an IT decision maker. We need to see a CIO, director of IT, or even an IT manager to add them to our database. If a company does not have one of those individuals, we will not cover that company.

When building the small and midsized database, we ferreted out companies that sit on sales reps [in] territories across the country. Those companies do not represent true opportunities because in many cases their IT department is part of a larger company and is profiled in another way. There are probably 20,000 companies in North America with 400 or more employees. We have 13,000 of those company profiles.

Sramana Mitra: When we were exchanging emails to arrange this interview, you told me that you do not have a CEO. What is that all about?

Henry Schuck: Kirk and I have always run pieces of the business. We have always shared decision-making authority on large items. There is nobody above Kirk and me to oversee what we do. I cover sales and marketing, and he covers account development and research.

Sramana Mitra: Do you want to keep this as a private company?

Henry Schuck: Yes. We are growing like a weed, and we will continue to do that until we feel we are playing out of our league. If an opportunity arises to take some financing and get to the next step, we will look at it. Right now we are focused on doubling or tripling sales every year.

Sramana Mitra: Talk to me a bit about you pricing model. If someone is evaluating buying your service, how should he or she look at it?

Henry Schuck: That person needs to know what data sets he or she is most interested in. Is the buyer looking to sell in the enterprise space or the mid-market space? Based on the answer to that question, people can buy access to any number of datasets.

Sramana Mitra: What would be a starting price?

Henry Schuck: You are talking around $20,000. It is a subscription fee model that gives you access to all the data in a set for one year, and it renews each year.

Sramana Mitra: Is the payment due up front, or is it a monthly payment business?

Henry Schuck: It is generally an up-front payment. Generally companies will sign on for a longer commitment.

Sramana Mitra: That strategy indicates you are trying to sell to more established companies rather than early stage startups. Is that correct?

Henry Schuck: You would think, but that generally does not play out. The vast majority of our clients are small mom-and-pop shops.

Sramana Mitra: How many clients do you have?

Henry Schuck: Just over 600.

Sramana Mitra: How does the revenue break up among your customer base? Do you have a few large customers, or are your revenues fairly evenly spread out?

Henry Schuck: We do have some customers who are larger than others, but for the most part it is very evenly spread out. Our large customers probably account for 1% of our revenue.

Sramana Mitra: Do you integrate with any of the CRM systems?

Henry Schuck: We fully integrate with Salesforce.com, Microsoft Dynamics, Marketo, and SugarCRM.

Sramana Mitra: What is your view of companies like InsideView?

Henry Schuck: In a very broad, theoretical framework, they are a competitor. In reality, they are never a direct competitor. They are interesting as they are an integrator of different data. We are a single, primary source for information.

Sramana Mitra: Who do you run into when you are looking to get a deal done?

Henry Schuck: In this space we see Jigsaw or Hoovers the most.

Sramana Mitra: Hoovers does not provide that level of detail.

Henry Schuck: No, but they are the company that most people are familiar with. They do a nice job of bringing together publicly available information in one place. They don't give the level of depth that we do.

Jigsaw is an interesting competitor. The fact that they are a part of Salesforce is a nice thing for them. The differentiator is, again, the quality of the data. From our perspective, you cannot rely on crowd sourcing as the lifeblood of your sales operation. We rely on the same process that company sales reps rely on.

Sramana Mitra: I like the company that you are building, and I like where you are building it. The competition for talent should be a bit less than other places so you should be able to make very good hires.

Henry Schuck: Yes, we can hire fairly well. It would be difficult to run this business out of Palo Alto. Being where we are allows us to get talented people at competitive wages.

Sramana Mitra: What kind of people do you hire?

Henry Schuck: Our research analysts tend to be college educated. We are typically a person's first job out of college, and we are training them in how an IT department operates. Our salespeople run the gamut from highly experienced to folks transferring from real estate or mortgage.

Sramana Mitra: Is there a university close by?

Henry Schuck: Washington State University is up the street. Portland State University as well as the University of Oregon and Oregon State University are feeders into Portland as well. We are about 10 miles from Portland.

Sramana Mitra: I know this space inside out. What you are doing that is powerful is getting the org charts with data integrity. You also get projects. That is great data. That type of research is incredibly time consuming. I think a $20,000 price point that gives you all of that information is valued appropriately. You are solving a serious problem in the sales cycle.

Henry Schuck: I wish we had the same level of information for our own prospects. We don't have the resources to build as comprehensive of a database for ourselves.

Sramana Mitra: How many companies are there out there that sell IT and fall within your customer base?

Henry Schuck: I think there are 10,000 companies. That might be conservative.

Sramana Mitra: This is a very cool story. You are doing a splendid job. Thanks for sharing.

Software-as-a-Service (SaaS)

+

Data-as-a-Service (DaaS)

Interview with Chris Cabrera, CEO, Xactly

Xactly combines the principles of Saas with those of DaaS to create a layer of innovation that is very exciting. While it offers a cloud software-as-a-service framework for managing sales compensation, it also creates a data service based on the massive amounts of data residing on its system.

Sramana Mitra: Chris, let's get started by reviewing your background. Where do you come from? What are the roots of your entrepreneurial journey?

Chris Cabrera: I grew up as one of five kids. Originally I was brought up in Boston, although my family moved a lot. I moved to Northern California for high school. My father was a serial entrepreneur at a time when being an entrepreneur meant you were a bootstrapped entrepreneur. My household was very entrepreneurial. I worked with my dad every summer in his office.

Sramana Mitra: Were your siblings also entrepreneurial?

Chris Cabrera: My younger brother and I have pursued entrepreneurial paths. My older brother is an attorney, and my sisters did not do much in the entrepreneurial path.

Sramana Mitra: What about college?

Chris Cabrera: I followed my older brother and went to USC. I graduated from their business school and went through their entrepreneurship program. Eight years after graduation, I was working at Silicon Graphics. They paid for me to get my MBA at a night school. I earned my undergrad in 1988 and I graduated from Santa Clara in 1997.

Sramana Mitra: By the time you graduated from Santa Clara, the Internet was in full swing.

Chris Cabrera: Netscape had come out. It was a time when the Internet started getting hot. I left SGI in 1997 because the writing was on the wall. After that I had a short stint at a software company before I heard about a software company that was starting up with plans to address the compensation market. Having been in sales my entire career, I was intrigued that someone was tackling the problem of reps getting paid accurately. I went to work for that company, Callidus Software, in late 1998.

Sramana Mitra: Did that company make it?

Chris Cabrera: It is still public today. I spent seven years there. I was a member of the sales organization. I went out and sold the first few customers and ultimately took over the entire sales effort as the VP of sales and later the SVP of operations. I ran worldwide sales, marketing and business development. My teams took the company from zero revenue to a $100 million run rate. We took the company public in 2003, one of the first companies to do so after the bubble had burst. It was my impetus to go and create Xactly.

Sramana Mitra: Selling the first few instances of a new product is vastly different from building a sales organization for a product that the market has validated and accepted. Could you talk about what is unique about the early sales process? You don't have reference accounts, you are selling a new concept. What have you learned over the years?

Chris Cabrera: There are things that a sales person needs to do. When you are making the very first sales, those things are incredibly amplified. We always talk and train on the sales side that you need to have relationship selling skills. You need to be the trusted advisor into the company. When you are selling that first customer it is more important than ever. People believe you and trust you.

I always asked my reps that if you don't believe then how is the customer going to believe? There is a certain level of passion and evangelism that comes naturally to me because I believe in this space. Being credible and becoming an advisor happens because that confidence is visible. You are able to paint a picture for somebody that they can envision this future state of happiness. To a large extent that is what we do today. In the early days you really have to be on point.

Sramana Mitra: Depending on the product you are selling it is often better for the founders to sell the first 10 deals.

Chris Cabrera: I agree. It is really hard to start a small company with no revenues. Selling comes naturally to the right founders. Most of the time it works that way.

Sramana Mitra: Founders who cannot do that initial selling are at an incredibly disadvantage because if you cannot sell your concept then who else is going to sell the concept?

Chris Cabrera: You're right. There are a bunch of super smart engineers who become CEOs and they have a lot of advantages that I don't have. Coming from the sales and marketing background that is one of the big advantages that CEOs who have my background are able to do, we can get those first customers. Folks like me that do not have a technical background get a co-founder who has that technical background. That creates a one-two punch of credibility and passion.

Sramana Mitra: You founded Xactly with Satish Palvai. How did you two meet?

Chris Cabrera: We worked together at Callidus. He left to go start a different company a few months prior to my departure. When I decided I was going to do this I called him up and told him what my idea was. He told me that he liked my idea better, so he scrapped what he was doing and we started Xactly.

Sramana Mitra: What was your observation of the market in 2005 that prompted you to found Xactly?

Chris Cabrera: At Callidus we were very focused on the high end of the market. Our systems were very expensive. We had traditional enterprise software, and companies paid a lot of money to get that installed. These deals could be $5 million or more. We were struggling to find enough companies

willing to pay millions of dollars for the technology, which is a bad thing for a public company.

In the midst of that problem, I had the epiphany that the future was SaaS. It occurred to me that we needed to create a SaaS model. Without going into dirty laundry, I was unsuccessful in my attempts to get Callidus to see that multi-tenant cloud environments would mater. I told them that if they did not believe in it, I would go do it, and they said that I should. Originally we were targeting the market beneath the giant companies. Today that has changed and we now compete head to head.

Sramana Mitra: Did you have customers who had bought into your vision of cloud-based compensation management software?

Chris Cabrera: No. I had a friend and mentor at Salesforce.com whom I had known from my SGI days. He encouraged me to go do this. He was convinced that the world needed a SaaS version of compensation. That is what triggered me to sell the idea to Callidus. Once I decided to go do it on my own, the first call I made was to my mentor, and Salesforce ended up becoming out fifth customer.

We started the company in March of 2005. I went out and got about five customers signed up, loosely, to use our solution. They did not have a contract and had not paid anything, but they told us we could use their logo and that if we delivered the working product that they would buy it. It was a very loose agreement. It was enough to put on a slide to go look for VC money.

Sramana Mitra: Who were your five customers? What was characteristic about them that made them early adopters?

Chris Cabrera: They ranged. I got out there and started talking about it. The good thing about our space is that anyone with a sales force has the pain. Anybody who does compensation in a manual way is not happy. It was not hard to find companies that had the pain. It was then just a matter of finding the right person in the company who had the power and was willing to take a risk. They did not have to take much of a risk because they were not writing a check. All they had to do was commit to purchasing if we delivered.

Sramana Mitra: Companies are not that cavalier about letting startups use their logo.

Chris Cabrera: They were not taking us lightly, but I don't want to give the impression that they handed us checks. They were almost like development partners. We took their requirements into consideration.

Sramana Mitra: Did you build the product around the five companies who indicated they would purchase your solution?

Chris Cabrera: We took all of that into consideration. Of the five companies that we showed to the VCs we ultimately ended up closing four of those companies. It worked out very well and that is what allowed us to get our Series A round of $4 million.

Sramana Mitra: From a timing perspective it was perfect. VCs were in a frenzy to fund SaaS deals, you had great domain knowledge, you were moving successful enterprise software to a SaaS model, and you had strong target customers. That gave you good credibility with the VCs.

Chris Cabrera: You are aboslultely right. They all wanted to get into SaaS and they loved the domain knowledge. They love giant markets where you can sell horizontally on a global level, especially if it is an untapped market. We had all the characteristics of an ideal investment and I think we have shown that over time.

Sramana Mitra: After you got Xactly off the ground and had your Series A, what were the next key milestones?

Chris Cabrera: The first step is to raise enough money to hire engineers to build the actual product. I would lay awake at night hoping our engineers could actually build the product and get it to work. Then you stress about your ability to sell it. Yes, we have sold it five times, but can we sell it 15 times? Each of these milestones coincided with us needing to raise more money.

Then there is the next stage. We have proven there is a market and we have proven people will buy it but will they actually renew? You don't know that until the end of the first year. Once we passed that milestone we knew that we were on to something. It was then all about execution. We did a $40 million round which allowed us to scale. We developed the channel, we hired a sizeable sales force, and did everything we needed to get on the right glidepath.

Sramana Mitra: Was your Series B $40 million?

Chris Cabrera: Our Series B was $8 million, followed by a Series C a year later for $12 million. A year after our C round, we had our big $40 million round. Each round was based on us proving out a new aspect and then accelerating our growth based on that.

Sramana Mitra: So you have raised $68 million dollars?

Chris Cabrera: More than that, we have raised $72.5 million total.

Sramana Mitra: We are sitting here 8 years later, what is your current revenue?

Chris Cabrera: We are within the 12-month timeframe of looking at the IPO market. It is now a question of when.

Sramana Mitra: The period over which you have built your company is also the same time as the emergence of SaaS. What was the hardest aspect of scaling on the customer side?

Chris Cabrera: In the early years there was a lot of skepticism about SaaS. In the early days we were relegated to companies that had 500 reps or fewer. Companies with thousands of reps were still struggling with the advent of SaaS. Every year we have seen improvement in that area. We get bigger and bigger customers, and we are doing deals with thousands of seats. Our customers are now huge companies like American Express and Salesforce.

Sramana Mitra: Where did you get early traction?

Chris Cabrera: Our early traction came, as expected of a Silicon Valley startup, in the high-tech space. During the first three years of the company most of our customers had sales forces of 200 to 600 people. We were not selling to SMBs. We were selling to big companies.

Sramana Mitra: When did you start branching out into the larger customers?

Chris Cabrera: After the third year, we started to realize that we were getting less and less pushback from the larger companies. We started pushing for thousand-seat deals and also went after healthcare, financial services, and other markets. We have a very horizontal app. About two years ago, we realized we were dominating and owning the comp market for any company with greater than 100 reps.

The one place we did not dominate was the SMB space. I did not want someone else to get a foothold there, so we built a separate product on the Force.com platform to address the SMB market. That has been phenomenally successful. These are smaller deals of $8,000 to $10,000, and companies are live in eight hours.

Sramana Mitra: Did you sell it through the app exchange, or did you have your own telesales force?

Chris Cabrera: Both. We are on the app exchange and have a lot of activity there. We also have an inside sales center in Denver where the teams are totally focused on selling that product. That product has been in the market for about a year and a half, so it does not account for a huge amount of our revenue, plus the deal sizes are a lot smaller. The SMB product is still a tremendously valuable product for us.

Sramana Mitra: What does your competitive landscape look like?

Chris Cabrera: When we go in, we are most often competing against Excel and Access databases. Beyond that we compete with IBM who bought a company that was in our space. We also compete with Callidus. They have found the religion and have now gone down a cloud computing path. It is difficult for a public company to pivot as quickly, and just because you put cloud in your name does not mean you are a cloud player.

Sramana Mitra: What are some of the key strategic points today? What needs to be done for you to scale to a $500 million company?

Chris Cabrera: We need continued solid execution with growth rates exceeding 30%. We are the only pure-play SaaS compensation player as well as the experts in compensation. We have terabytes of data from our customers, and when we anonymize and aggregate that data, we can find trends and correlations of data which help our customers understand how to incentivize correctly. That is exciting and is the future opportunity for Xactly.

Sramana Mitra: When you are doing compensations, are you calculating the compensations as well?

Chris Cabrera: Yes. We calculate the payments for $6 billion of compensations per year. We know what was sold, when it was sold, what the discounts were, and what the product mixes were. We know the plans that drove the performance as well. It is a true big data opportunity. We have been mining the data for a couple of years now. There are incredible correlations we can provide to our customers. Xactly gives our customers competitive advantages. We make some of that data available to them. The goal is to productize that data, even in a self-help manner, so that they can see what the best practices are in their industries. That data does not exist anywhere else in the world.

Sramana Mitra: There are companies like Salary.com and Payscale that provide salary benchmarking data. How do they draw their conclusions?

Chris Cabrera: Those are great companies, and we like those guys a lot. They collect data through surveys and self-reported data. That is an excellent offering. We are not trying to say our data is better; we say that you should use both their data and our data. Self-reported data has value. We also have empirical data based on actual payouts. Together that gives you the full picture.

Sramana Mitra: How are you going to price that offering?

Chris Cabrera: We have not finalized that yet. There seems to be incredible demand when we talk to customers. The beautiful thing about SaaS is that we are not trying to make our money back on a single customer.

Sramana Mitra: Compensation products that calculate the compensation is a per-seat pricing, whereas only management will look as this data, so that means you have a smaller TAM.

Chris Cabrera: If a company is paying a hundred thousand dollars a year to manage all of the compensation, what is it worth to have all of this data and do it right? It is not a $100,000 solution, but it is more than a $5000 solution. It will pick up margin, but it really provides value in this space. We will give customers insights they cannot buy anywhere else.

The TAM argument is true. Think about the TAM that we have. It is any commission sales team in the world. Our teams are generally 30% of the population. What is happening in the market is that the compensation space is changing. People use it outside of sales. We see reports that say that 84% of companies use variable compensation in non-quota positions. It is applied to the rank and file employees as well.

Sramana Mitra: What kind of penetration do you think you have into your TAM, specifically to sales forces?

Chris Cabrera: I think it is still a pretty nascent market and the number is still low.

Sramana Mitra: Is the TAM basically your revenue and Callidus' revenue?

Chris Cabrera: Oracle has some products in this area, and they do not report exactly how much they do in variable comp. I have heard they do as much as $300 million a year. IBM does not report their numbers, either. Callidus is a public company, and they are still at a $100 million run rate.

Sramana Mitra: Is the TAM around $500 million to $600 million?

Chris Cabrera: That is the amount of revenue in the category right now. I still think the market is untapped. There are roughly 10 million sales people in the United States. If you are getting $40 for each of them, then that is a $4 billion TAM just in the U.S. There is just as big of a market in Europe, Africa and the Middle East.

Sramana Mitra: How many sales people do you touch today?

Chris Cabrera: Probably on the order of 120,000 sales people.

Sramana Mitra: There is still a large number of untapped sales people.

Chris Cabrera: Absolutely. This is a huge opportunity.

Sramana Mitra: There are probably 600,000 sales people being touched, and there are 10 million sales people in the US. The market is definitely untapped.

Chris Cabrera: Absolutely, and that is just the TAM for our sales product. We still have data, insights, and analytics as well as the non-sales people. This is a large market.

Sramana Mitra: I wonder why nobody else has got into this market. Every time I see a trend validated by someone, I see a ton of competitors crop up in the market.

Chris Cabrera: This is an extremely difficult problem to solve. We raised $72 million, which is a lot of money, especially for a SaaS company. Almost $40 million of that went into R&D. This product is not for the faint of heart. Creating a multi-tenant product that can cross over all of these industries is substantial. We are calculating on over a half a billion transactions every month. It is a very intensive product. When young CEOs start to look at this space, they probably think twice once they do their research. It would take years and years for someone to catch up to us. The big guys, Salesforce, SAP, Microsoft and Oracle, have all decided to go to market with us.

Sramana Mitra: It sounds like you should be on the acquisition radar of SAP, Salesforce and others.

Chris Cabrera: The IPO market is very attractive, especially when you see the multiples out there. I am focused on building a big company meant to last for a long time. We actually acquired the only other multi-tenant competitor in our space back in 2009.

Sramana Mitra: Why did you make that acquisition?

Chris Cabrera: It was a combination of things. We were beating our heads against each other, and we ultimately decided to join forces. The one plus one equals three model works sometimes.

Sramana Mitra: How big were they?

Chris Cabrera: They were about half of our size. It was not a merger of equals. We did a stock acquisition.

Sramana Mitra: Are the founders of that company still with you?

Chris Cabrera: They still own stock and are still great believers and followers. The daily operation is predominately the Xactly team that was in place. We still have a lot of their employees. Our top rep for the last number of years came from that acquisition.

Sramana Mitra: Did you keep the customers and move them over to the Xactly platform?

Chris Cabrera: Yes, that is exactly what we did.

Sramana Mitra: This is great. It sounds like you are building a great company that is in an enviable position of not having competition. It has been very nice talking to you, thank you for taking the time.

Software-as-a-Service (SaaS)
Enabled
Business Process Outsourcing (BPO)

Interview with Jonathan Bush, athenahealth

Jonathan Bush has taken the healthcare claims-payment bull by the horns to build an excellent company. But to arrive at the right problem that would support a substantial enterprise was not a direct path. Several suboptimal ideas powered through a market validation phase, until Jonathan found the one that really resonated.

Sramana Mitra: Jonathan, let's start with your background – your personal story.

Jonathan Bush: I grew up in New York City. Medicine was the only career that nobody had done in my family, so I figured that would be a good career for me. I could be the best in my family in my profession, and I wouldn't have to be all that bright to do so!

Actually I've always been interested in healthcare – it's a place where you can do well and do good. But when I got to college, it occurred to me that you had to know a lot of science to be able to go to medical school, and I wasn't that good at it. It just wasn't my natural fit; I'm more of a social creature, an idea person.

In an effort to learn more about medicine, I got a job driving an ambulance in New Orleans. I found that while the doctors I ran into were incredibly competent, they were bored from time to time. They'd learned an enormous amount of information, and now that they knew it their only calling in life was to continue delivering against that same body of information. It seemed that

the connective tissue between patients and the very bright and capable doctors was really poor. It was a disaster.

I figured that no matter how bad I was, I could find a way to do better. That really got me excited about the delivery system over the actual science of medicine. I wanted to be the innovator of a functional delivery system. At first I thought I was going to start an ambulance company, and that the ambulances would do more in the field to reduce unnecessary emergency room admissions, but there was already a company rolling up ambulance companies and I didn't think I could play at the same time. So we decided we'd try to manage practices ourselves. athenahealth actually started as Athena Women's Health, and we acquired an interest in a women's health practice.

Sramana Mitra: Was Athena your first job?

Jonathan Bush: It was my first job out of business school. I had worked for the George Bush campaign in 1988, I drove an ambulance, and I was a combat medic in the Army. Then I was a consultant at Booze Allan Hamilton and worked at my dad's investment firm, but I never did any one of those jobs for more than two years. It was an awkward ramble through those parts of life.

Sramana Mitra: When you were rambling through those possibilities, did you have something of the nature of Athena, no matter how nebulous, in your vision?

Jonathan Bush: Yes. I wanted to do something where I was at the end of the food chain. I wanted to be touching actual patients. I didn't want to be selling tools or capital. That's about the only thing I really knew at the time. I remember doing informational interviews, looking for a job, and I spoke to a McKinsey partner. I asked him if McKinsey had an actual healthcare practice

and he said, "Of course, it's actually quite strong. We work for Johnson & Johnson and other companies like that."

"No," I said, "I mean actual healthcare where there are doctors and patients."

"We have a not-for-profit," he replied. "You can do pro bono work on your spare time for hospitals."

I found it very odd that the formal practice of McKinsey, that you could build your career on, was selling the construction of drugs and devices, but if you wanted to help the delivery it had to be done pro bono. That got me turned around. At one level I thought it was ridiculous, and at another I thought it was wonderful because here was my opportunity.

Sramana Mitra: What year are you talking about?

Jonathan Bush: That was my last year of college, so probably around 1993.

Sramana Mitra: Bring me to the genesis of athenahealth. What year was it, what was going on in the marketplace, and what happened in your head that led you to Athena?

Jonathan Bush: I really wanted to do something entrepreneurial. I didn't want anybody to say that I was given it all because I had a wonderfully sheltered and supported childhood. The idea of starting my own company and having it turn into something seemed like a good way to make a man out of myself, or not.

Sramana Mitra: OK, so you had come to the point at which you were going to do something entrepreneurial, healthcare related, and close to the doctor/patient ecosystem, correct?

Jonathan Bush: Right. The closest I got to that doctor/patient ecosystem was at Booz Allen Hamilton, where they were starting a healthcare strategy practice at the same time I was looking around for a first job, and that sounded like a good fit. I wanted to find some great healthcare leader, and carry his bag and write his or her thank-you notes. Of course I couldn't find it, but Booz Allen gave me a great opportunity to learn about the space, so I spent a couple years there.

I did a ton of work for health plans that wanted to get directly into the delivery of healthcare. They wanted to recruit physicians onto their side, a bit like Kaiser. I thought it was interesting and exciting, but it didn't work.

But I had a buddy at Booz Allen named Todd Park, and I figured we could do it. We started talking about it one night when all the cubicles were empty. We started talking about how it could be done properly, how the insurance companies weren't doing it right. They needed better information technology and a unique service approach. This was also right when Starbucks was exploding, and we loved how Schultz had been a barista and had gotten every single bit of the service right. You never saw anyone do that in healthcare.

So we decided to find a sector of healthcare that had a retail component but was complicated enough that really good information technology would help. We ended up with OB/GYN because there were deliveries, surgeries, but also because women choose their own OB/GYN. You often get handed an oncologist or cardiologist by your primary care doctor, but you choose your OB/GYN. We liked that because a better service experience would lead to more market share.

That's how we started. I left Booz Allen and went to business school. I spent a year and a half writing a business plan for a women's health practice

management company that was going to revolutionize birth. We were going to treat birth as a wonderful, healthy experience during which you sometimes get ill, as opposed to an illness, which is how most American women get treated. We got very excited by it, we built a unique clinical model, we validated it with research, and we found the people doing the research and got them to be our first partners.

It was very exciting until we realized we couldn't make payroll because we had to file those bloody medical claims. Each needed its own unique footprint of various kinds of information, and it changed all the time. All kinds of bureaucratic garbage got in our way. We ended up building a Website internally to try and keep track of what was going on in our own clinics' front desks. That was the actual genesis of athenahealth.

I'll never forget going around trying to raise money for a women's health clinic at a $5 million pre-money valuation. A VC from Texas offered me $11 million for the rights to athenanet, so I figured that meant that either athenanet was worth a lot more than I thought or that my company was worth negative $6 million. That was a wakeup call. Todd and I went through a very painful series of conversations where we realized that some of what we were doing was so far before its time that it wouldn't happen, but that some of what we were doing was just enough before its time that it just might take hold.

Sramana Mitra: What year was that?

Jonathan Bush: That was in 1999.

Sramana Mitra: The Internet was already starting to gain a foothold. What did athenanet do that the VC found so appealing?

Jonathan Bush: I don't know what he saw in it, but it was unique. It was Web native, which meant it would run on a modem connection. In 1999 wide scale broadband was not available. This thing worked leanly and quickly. It kept track of the little details that the hourly workers, who make most of the decisions in medical practice, control – and in very simple terms. It didn't even do billing at the time; it just kept track of what you could bill and what information you needed to eventually bill.

Sramana Mitra: You essentially built a patient information system.

Jonathan Bush: Exactly. We had plans to eventually start billing, and by 1999 we were well on our way down that route. In early 1999 we made the decision to stay in business as a management service, but we were going to narrow our management service for a while so that it would only be claims-related. We also decided to broaden our target market to any doctor.

Sramana Mitra: Is that the thesis on which you raised your venture funding?

Jonathan Bush: Todd went out and looked for doctors while I went out and looked for venture funding. By October of that year we had more VCs than we needed and five customers. The first customer went live on January 3, 2000. On a side note, don't start an Internet company on Y2K day. That was a mistake.

Sramana Mitra: When you signed up your first customers, how were you charging them?

Jonathan Bush: We owned an interest in two medical practices. In a way you could say our first two customers were ourselves, whom I refer to as our alpha

customers. We charged them a percentage of profits. The other three were our beta customers, who we charged a percentage of revenues because we weren't in charge of how many people they hired and what they paid them.

Sramana Mitra: Your value proposition was that you would retrieve their claims?

Jonathan Bush: Correct. We wanted 3% of what we retrieved for them. We would provide them the system, training, and do all the work associated with getting them paid.

Sramana Mitra: Help me understand the way you designed the system through the years. Walk me through the innovation.

Jonathan Bush: The original vision of the company was management infrastructure that makes healthcare work the way it should. When we changed, it became information infrastructure that helps healthcare work the way it should. The idea was to work towards a national utility that could be used to innovate healthcare.

Another key aspect was to build for the public good. We tried to have all our software development work be on projects that benefited everyone on the network. There are a lot of software companies that boxed themselves out of existence by building unique feature upon unique feature for their best customers. Soon their software was unrecognizable.

Sramana Mitra: What are some examples of software development that you did that eventually proliferated to your entire customer base?

Jonathan Bush: Rules development. Every time a claim is denied for any one doctor, it goes through a check. If it looks like a candidate for rules

development, analysts get a hold of that claim and really dig in until they get to a root cause. Once they have the root cause, they work with programmers to build a change into athenanet that prevents anybody from ever getting that denial again.

There are now 40 million different scenarios in which a rule such as the one I just described will correct some hourly medical office worker – sometimes before the patient has even arrived – and get them back on track. It may only be relevant to one insurance company, but it applies to every doctor who sees patients from that insurance company. Little by little those rules accumulate into a very elaborate national knowledge resource.

Sramana Mitra: Your rules enhancement is entirely hand-coded?

Jonathan Bush: That is correct. It involves business trips out to health plan headquarters, statistical analysis, and some automated algorithms that look for similar claims. If we can find a range of similar claims that have all been denied, then perhaps there's something deeper we can explore.

Sramana Mitra: But you still have a master database of rules against which physicians can file their claims, and from the sounds of it you have a database that is very well cleaned.

Jonathan Bush: That is exactly right. Physicians don't actually file their claims; they just do their work. The rules engine is sitting under the surface of every step. It sits inside the scheduling module, so if you make an appointment that requires an authorization and we find that you don't have an authorization in your authorization file, it will alert you right then.

Sramana Mitra: Help me understand the interface between you and the practice management system. Are you the entire practice management system for the physician at this point?

Jonathan Bush: That is correct. We handle registration, scheduling, check-in, and check-out. There are two levels of service: collector and clinical. If you have both, then everything that happens in the exam room and all the orders, results, follow-up with the laboratories, and posting of the results that come back from the laboratories, including those by fax, are covered. We're the only healthcare IT company that deals with the portion of healthcare that is not online. That turns out to be most of healthcare.

A doctor who just spent $50,000 on electronic medical records has not changed the fact that every laboratory he or she uses has not gone and bought their EMR. Thus all the results they receive will come in via fax machine. That puts them in an awkward predicament because now someone on their staff has to sit there and digitize it. We actually forward the practice's fax line to our data center and automate those connections as part of the service in the background. We layer on optical character recognition and queuing theory to approximate the accuracy and speed of an electronic connection. What we have emerging in the background, without anyone paying for it directly, is the first national health information backbone.

Sramana Mitra: What kind of market penetration do you have?

Jonathan Bush: From the physician point of view we have about 2% of the market share. There are 700,000 physicians in the US – 600,000 who we believe practice medicine. We have about 13,000 MDs and 19,000 medical providers. We can send a claim electronically to 85-87% of insurance companies, which is more than anyone else. We can receive remittance electronically from about

75% of insurance companies. And we can receive results from 15% of the nation's labs. The rest we have to go out and handle via a queue of PDF images that come in over the fax line. Little by little those percentages have been going up every year.

Sramana Mitra: You have the beginnings of a very efficient national healthcare system. Now all we need is the political will to make healthcare an efficient system. Let's explore your sales model.

Jonathan Bush: Our sales model is based on direct sales forces. There's one for small practices: 40% of practices are in groups of three doctors or fewer. Then we have a small enterprise group that handles the large hospital chains and national accounts. In all cases, we sign a contract and set up each practice on the network ourselves. In the small practices that can happen largely online, without anybody showing up at a small practice office.

The biggest obstacle to scaling at this point is that nobody has heard of us. That's why I'm so excited to talk with you and go on shows like CNBC, or anyone else who'll get the name of athenahealth in front of people. Most physicians don't know there is such a thing as a software-enabled service that does billing and medical records over the Web for a fraction of what they expect the cost to be. Once we've convinced them we can do what we claim, it's very easy to sell to them.

Sramana Mitra: From an innovation standpoint, what are the other pieces of the dysfunctional healthcare system, besides billing and claims processing, that are on your radar?

Jonathan Bush: The first piece of the supply chain is the lifecycle of the medical claim – we have that well in hand. The next piece is the lifecycle of a

physician's order. A physician can order another physician's time, or a prescription, or a blood test. Those supply chains are out of control. Most doctors have no idea if their patients go and get the things they order, and many times they never get the results back, so they can never follow up with their patients. A recent study found that 35% of the women who had annual exams and had abnormal Pap Smears never found out.

Sramana Mitra: That is scary.

Jonathan Bush: It is. The Institute of Medicine has documented these kinds of error rates for years, and it's devastating because the doctor still gets paid. It's what a doctor would refer to as an unfunded mandate. We think by automating the supply chain we can save the doctor funding and fill the social gap. Over time, that may make the doctor more money because people won't be able to sue as easily.

The third supply chain is the lifecycle of patient interaction. A huge amount of unfunded work for a doctor comes in phone calls from patients asking questions, trying to change their appointments, getting directions to the office, or asking questions because they don't understand their bill. Most patients are frustrated by their inability to communicate with a doctor; most doctors are frustrated with the cost and confusion of being available. By the end of the year we'll roll out a patient-communication service to improve those issues.

Sramana Mitra: Do you plan to implement technologies like knowledge bases, automated Web self services, and other similar systems?

Jonathan Bush: Bingo. The first thing you do in healthcare is solve existing problems. Once you have the solution implemented, then you can start asking how to improve the solution, and you do that on your own time. All doctors

care about is that we'll answer the phone on the first ring and they won't lose as many appointments. After that we'll have to illustrate that many patients would rather just hit a Website to change their appointments or look up lab results themselves.

Sramana Mitra: In many ways the technological innovation we are talking about has been around for a long time.

Jonathan Bush: It definitely has, but it hasn't been packaged in a way that makes the doctor more money.

Sramana Mitra: It has not been applied in the context of the healthcare industry.

Jonathan Bush: That's right. I think the primary reason for that is the packaging. Lots of people put out technology, they even give it away, on the pretense of making things better for society. But they ask doctors to use it at their own expense, which will cost the doctors time without helping them make more money. That's no way to do business.

Doctors are business-savvy. They're good men and women, but at the end of the day they need to make money. They're in business.

We talk about the plutonium sneakers at athenaHealth. The plutonium sneakers are the hospital that says, "We have access to all these plutonium sneakers, and in order to win our physicians' loyalty we're going to give them out to all the doctors in our community." The CEO then sees the doctors and says, "Hey doctor, I noticed you're not wearing your free sneakers we gave out, why?" And the doctor says, "They have plutonium in them!" "Yeah," the CEO says, "but they're free!"

Sramana Mitra: Jonathan, what has been your key to understanding and cracking this market? There have been a lot of failed attempts at it.

Jonathan Bush: The secret today for an entrepreneur is to do work for actual people, and use the Internet to help you. Providing tools or Web apps, and hoping to get licenses, advertising, or page views isn't a very current business model. People have complicated work to do. The Internet won't solve it alone, but if you use the Internet you'll improve the work.

Sramana Mitra: What you are promoting is a technology-enabled service business model instead of technology as a service.

Jonathan Bush: Correct. SaaS is dead, long live SES, or software-enabled service.

Sramana Mitra: How will all of the political drama around healthcare affect the visibility of healthcare IT?

Jonathan Bush: We've been hard at work bringing about the death of the old-fashioned software companies that dominate healthcare IT. Their business models and companies should be dead – they've been doing a great job of falling apart. Now, thanks to the federal government, they'll be given another five years to live, which will slow us down and prevent the evolution of software-enabled service business models. Eventually they're going to die because at a fundamental level they do the wrong thing.

This is a long-term lesson about how important it is for marketplaces to disrupt themselves. It is more important to get into new business models than squeeze the last ounces out of old ones.

But overall it won't hurt us. In fact, it has brought a lot of attention, energy, debate, and focus. That may allow the best model to win yet.

Sramana Mitra: You have a large TAM and the right solution – it is basically just a matter of building in a pure capitalistic way. I like that a lot.

Jonathan Bush: That is certainly what we hope ends up being the ultimate story.

Sramana Mitra: I look forward to following your successes. Good luck.

Note: In 2014, athenaHealth trades on NASDAQ at an over $5 billion market cap. 2013 revenue was close to $600 million.

Commerical Open Source Software-as-a-Service (SaaS)

Interview with Brian Behlendorf, CollabNet

When I think open source, I think about a certain well-known figure from my grad student days at MIT who slept in his office, never showered, and believed that software should be free. Today, I bring you a different sort of open source pioneer: one with business sense, and one who has opened a wide array of possibilities for shoestring innovation within the commercial open-source domain. Brian Behlendorf's venture is decidedly capitalistic.

Sramana Mitra: Brian, let's start with your personal background. Where do you come from?

Brian Behlendorf: I was born in 1973, raised in southern California, and went to one of the top six public schools in California. We were right down the street from Jet Propulsion Labs. All the scientists sent their kids to this school.

Sramana Mitra: Did your father or mother work there?

Brian Behlendorf: No, my parents met at IBM. My father was a Cobol programmer, and my mother sold system 360s and mainframes and such. That life looked about as exciting as accounting to me. I'd go visit my dad at work sometimes and it would be nothing but green and white paper. We had punch cards we kept shopping lists on. I had a TRS80 at home and was learning Basic from first grade on. From junior high onward I didn't touch the computer unless it was to write a term paper. I wasn't a big gamer, but I was into science and math.

At the end of high school I didn't know exactly what I wanted to do and I felt that going to a school with a lot of different options, like Berkeley, would be the right thing. I went to UC Berkeley and originally enrolled in physics. Of all the sciences, I felt physics had the least amount of brute memorization. But after three semesters there on the honors track, I'd lost the plot. The sense of intuitiveness had disappeared for me. However, from the first day I arrived on campus and received an email account, I found myself absorbed with the Web. This was in 1991, so it was email and FTP and that crazy thing called Gopher. I really found myself enjoying the social aspects, like the music-related mailing lists, so I started some electronic mailing lists.

Sramana Mitra: Do you have a background in music?

Brian Behlendorf: Nothing more than being an aficionado. I was the school DJ for three years in high school. Early on at Berkeley I set up a server on a spare system on which I learned Unix. Like most people in this space you teach yourself through man pages, and I used that to set up a Gopher server with music lists and flyers and things of that nature. That progressed into the Web, and that progressed to a friend whom I met through a shared interest in music who said they were starting this new magazine called *Wired*. We were all about digital culture, and we thought that putting our articles online would be a cool experiment, so I started there in 1993 for $10.00 an hour.

From 1993 to the beginning of 1995, I worked at *Wired* and set up the first Wired.com Website, which was one of the first non-academic Websites up. We also launched Hotwired in 1994, which was the first ad-driven Website. I remember sitting and thinking, "How wide should the default banner be?" I did the banner rotations and got involved in patent lawsuits over completely trivial

techniques that people actually went out and got patents on, like banner rotations.

Parallel to that I was launching a company called Organic, which went on to build Websites for Harley Davidson, Levis, and other top brands. Initially it was for record labels and book publishers. I shifted over to Organic in 1995 as the CTO.

Sramana Mitra: How did you get involved with Apache? Was it through Organic?

Brian Behlendorf: Organic was my day job, and I stayed there until 1998. Apache was a side effort that ran in parallel to Organic. Web technologies were brand new at the time and companies were just starting to emerge with commercial Web software. Most of the software used to build the Internet was freely available. We were using the NCSA Web server, which was from the same group that put out Mosaic. We were hacking on that server when their team lost a lot of developers to Netscape.

The users of that community had a moment of self-realization, and it was decided that since the main developers were going to be lost, the software should be maintained on its own. We determined it was easier and more cost effective for us to fix a few bugs and add an occasional feature by working a couple hours a week than it was to spend $5,000 per CPU on commercial Web server software that didn't seem any better. That, in short, was the genesis of the Apache project.

Sramana Mitra: Was the word "open source" coined yet?

Brian Behlendorf: Not yet. The term came about in 1998. I attended the meeting where it was coined. At the time free software had started to take a

political bend, which didn't describe nor illustrate the practical advantages a lot of us saw. The term "free software" made it sound like an anti-capitalist movement, yet the reality is we were hardcore capitalists. We liked a lot of the attributes of that type of software and felt a re-branding effort was needed. That's when the term "open source" was coined.

Apache grew from one mailing list, one CVS tree, and one simple bug database to a couple dozen projects. We established a template to guide groups as they worked together. My own role shifted from being a programmer to being somebody who thought about how the community formed, how it accomplished tasks, how it made decisions, and what tools were needed to support the effort. The main concern was how to develop a consensus-oriented process that wasn't design by committee.

The tools at the time, for example CVS, were equivalent to the classic VW Beetle. They were insufficient for doing real work. They did, however, work at a certain level and when they broke people knew how to fix them. But something new was definitely needed. Likewise, the integration between the older tools such as the mailing lists, bug databases, CVS, and other development software was non-existent. For the Apache project I had to piece these elements together with duct tape, bailing wire, and a whole lot of manual labor. That's when I started thinking there had to be a better way to do this.

Sramana Mitra: Was Apache a non-profit from 1995 to 1998?

Brian Behlendorf: Yes. It's a non-profit, membership-based organization. It has a couple hundred members and a couple thousand contributors. Obviously there are millions more who've used the software.

Apache certainly grew and grew fast. In 1998, in part because of the interest and involvement from major players like IBM, Sun, and Oracle, we realized we needed to form an actual entity. Otherwise, someone could've found a patent issue and come and taken our homes away! We created the Apache Software Foundation – I served as president for three years and was on the board for another four years after that. Today, I've largely handed things off.

Sramana Mitra: Are they corporate members?

Brian Behlendorf: The members are individuals. It's very much like a guild. People are invited to be members based on an established history of contributions to different projects. I believe there are about 50 different projects within the organization right now.

Sramana Mitra: Is there any financial support?

Brian Behlendorf: There is today. Just last year they established a corporate sponsorship program. Some money was spent here and there for some systems, but there's a very independent-minded streak in the organization. There's been no full-time staff. Hardware and bandwidth end up being donated by different groups. For example, at Oregon State University there's a big data center for open-source projects – Apache is one of the big residents there. But there's no full-time staff compared to what a lot of non-profits have.

Sramana Mitra: And this all happened while you were still full-time at Organic?

Brian Behlendorf: Yes, the lines between the two are really blurry. Organic benefited tremendously from the attention Apache got. They were able to make a case to new customers that they could really build interesting projects because

they had people who contributed to the Apache community and were experts at all the various Web technologies.

Sramana Mitra: Was Apache the only open-source project during that timeframe?

Brian Behlendorf: It emerged at the same time as Linux. In 1998 Netscape released the code to Mozilla. I actually joined their foundation as a board member in 2002 and am still on the board there. What was clear was that Apache was the poster child for a lot of the efforts going on. It was perhaps the most public, high-profile open-source project because we had numbers. The site NetCraft did a monthly survey of every Website that was up – part of that survey was to ask the servers what they were running. Because of NetCraft we know Apache powered more than 65% of all servers from 1996 onward. You can still go and look at that chart today. You'll see Microsoft coming up and going down. You'll see Netscape going way down to zero. It provided the numbers that allowed Apache to become a business case, which in turn allowed a lot of credible businesses to use Apache for their servers.

Sramana Mitra: In your eyes what makes open source work so well?

Brian Behlendorf: That's a question I first started to answer almost ten years ago. Back in 1999 I brainstormed quite a bit with Tim O'Reilly about what really made open source work. At the time there were obviously companies like Red Hat emerging as support organizations, but I wanted to do something at one-level meta. I wanted to address the question in a more abstract form. My goal was to distill it down to a science, make it repeatable, and take the answer to the rest of the software industry. After coming up with a couple different open-source business models I realized it was about the tools developers were using to foster a collaborative development. These are tools designed for wide-

area networks and transparency in the development cycle. They're designed for software initiatives in which a core team of developers is surrounded by concentric rings of people, involved at different levels. There are the naïve users, who have questions or want to suggest new features, all the way to people who submit patches.

Ultimately, it was that question that was the genesis for CollabNet. We got our funding from Benchmark Capital in July of 1999, and I hired Bill Portelli, our CEO, in September.

Sramana Mitra: Can you tell us more about CollabNet?

Brian Behlendorf: Sure! We realized that what was needed were robust tools for collaborative development. We started with a baseline consisting of a couple different tools, forming a sort of integration layer. I went out and signed up HP and Sun as our first two customers. That really set an interesting tone. In Sun's case they were launching new open-source communities. Initially it was NetBeans, then it was OpenOffice, then it was Java.net and all these others. We were an easy way for them to access these tools. We ran the infrastructure for them as a managed service.

Sramana Mitra: You were basically software as a service for an open-source community?

Brian Behlendorf: Exactly. In HP's case there was a different kind of use that I never anticipated being as interesting as it has been, which is building open-source communities inside the company, and between the company and its business partners/developers. That model actually accounts for most of our business today.

I had never worked for a big company, so I always assumed the software engineering management had all the development problems sorted out – that it was just us cheapskates in the open-source world who were making do with simple tools. In reality corporations had no tools to enable engineering teams to work across geographic boundaries with insight into other teams' efforts. We found a couple people inside HP who were very visionary – our initial work grew very quickly from a couple dozen users in their Printing and Imaging division until it was the standard tool for Printing and Imaging, their enterprise group, and other groups as well.

Sramana Mitra: CollabNet is a commercial company, which secures traditional business contracts, right? Companies pay CollabNet versus CollabNet being an open-source provider? How does that all work?

Brian Behlendorf: At one level we are software as a service. We charge for access on a per-user, per-month basis. Over the past few years we've developed our processes to the point where we can also run this on a customer's site or network for them, and if needed we can also give a client the rights and permissions to run it independently. Regardless of the model, we still charge the same price based on that per-user, per-month model. We gain operational efficiency being a software-as-a-service provider. Our code stack is a combination of open-source code and proprietary code, which we license commercially.

Sramana Mitra: Yet not everything in your portfolio is proprietary?

Brian Behlendorf: There's an interesting story around the open-source stack. It's not just pre-existing projects like Apache and Linux. There's a tool we developed ourselves, which we've leveraged a huge community around, called Subversion. Originally our goal for Subversion was for it to be a category killer

in the version-control space. We didn't want something that was just a successor to CVS. It was important that it be a tool people migrated to away from available commercial tools – and they have.

Sramana Mitra: What was the rationale for the Subversion project?

Brian Behlendorf: Developing Subversion as an open-source project had strategic and tactical implications. Strategically, we did it because we needed something disruptive. The space definitely needed the tool, yet we didn't have the resources to provide it alone. The Subversion tool is a tool that keeps track of the history of your intellectual property. It's a time machine for your source code.

Our theory around making it open source was that to build up the consumer confidence to the level it would've required to be a successful venture would have cost us tens of millions of dollars in marketing. Putting it out there as open source, and getting Apache to adopt it – which they have – shows that it can scale and keep a rich and high fidelity history.

Sramana Mitra: How widely adopted is it?

Brian Behlendorf: We estimate there are three to five million Subversion users out there. I hear about companies migrating to it all the time.

Sramana Mitra: You explained the strategic reasoning. What was the tactical rationale?

Brian Behlendorf: Tactically, we did it because there was no way we could've built a team large enough to do it ourselves. Tactically, we've had three or four full-time developers on it who've been able to leverage the efforts of a larger community. Our role has been that of the air traffic controller: working on a

core, laying out a roadmap indicating how it should all work, yet ensuring there are plenty of places for others to plug in. This includes other companies as well – who also sell support services based on Subversion.

We wanted this to become the default standard for the entire industry. For us it has become the thin edge of the wedge inside the company. If a company is already using Subversion we can come in and help them support its usage, but, by the way, we also have all these other tools that plug in very cleanly.

Sramana Mitra: Let's talk some more about commercial accounts. In a way Subversion is like your Trojan horse to get into a company!

Brian Behlendorf: That's funny! I prefer to refer to it as the thin edge of the wedge! At least that's not as bad as the term "viral." I hate it when I hear open source referred to as viral. The truth is – yes, it does become a great entry point for us.

Sramana Mitra: In commercial accounts, in particular the larger corporate accounts, what do you see as competition?

Brian Behlendorf: The biggest thing is the "do-it-yourself" mentality. In so many cases developers or system administrators pull together disparate tools and do the same thing we did at Apache. They piece all kinds of tools together with bailing wire and tape.

Our approach is beneficial for those cases. We believe there's a lot of value in integrating discussion tools directly into the development programs. Having that tight link is really a knowledge-management capability. When people send notifications over to a SharePoint or portal the value gets lost.

Often, we come in and our products become a standardizing tool. Groups use disparate tools for different purposes. Throughout enterprises these tools are selected on a team-by-team basis, which leads to different groups selecting different tools, making collaboration much harder. That's difficult for enterprises because in each case they have to get up to speed on how someone else's tools work, open holes in the firewall, and things like that. In our scenario we're standardizing the tools and interaction methods of these teams, and becoming the greatest common denominator of all the tools being used.

Sramana Mitra: People have to remember a lot of tools come from a different era architecturally.

Brian Behlendorf: Exactly. They come from an era when people were sitting in the same room, and when complexity was almost considered a virtue rather than a drawback. They were designed for an era where you had the core developers, then everybody else was a naïve user. One thing that's nice about Subversion in particular, as well as the rest of our tools, is that you can be a business user and get visibility into the top ten projects a developer is working on.

You can mount a Subversion repository as a folder under Windows and start using it to store your PowerPoint presentations, your spreadsheet listing the features the field is asking for, or even give people in the field direct access to your bug database. We're really going for a smooth continuum between "producers" of the software and "consumers" of the software. It's to the point where we have customers opening their collaboration environment to their key end users – both sides want to play a role in developing the environment.

Sramana Mitra: Do you have all of the project management capabilities as well?

Brian Behlendorf: We're definitely a lot more than just a bug database. We also show you the features customers are asking for. We can let your customers vote on potential features. <begin formatting pull quote> When your customer base starts ranking their priorities you gain incredible visibility. <end formatting pull quote> That feature becomes a key part of release planning, and a type of project management tool.

Sramana Mitra: How about your resource management capabilities?

Brian Behlendorf: Resource management is interesting. In terms of personnel management and time management, there are some really great products out there and we're not going into that market.
In terms of management of hardware and server hardware, we have CUBiT. Last year we introduced CUBiT, which is a virtualization environment for building test servers.

Sramana Mitra: You said you have been doing CollabNet for eight years now, and you have 450 customers?

Brian Behlendorf: In terms of new customers, from 2006 to 2007, we had over 200% growth. A lot of that has been due to Subversion bringing in midsized companies, projects that have 20 or 30 users, all of which have the potential to grow.

The enterprise sale cycle is very long, but what we've found is that we're starting to get in without people engaging us directly. Through our site they sign up for a training program or for baseline support, and then all of the sudden there are 100 people at the company using one of our products. The company then looks at what other tools CollabNet has, and after we give them some demonstrations we typically have 1,000+ users at that company.

We really do have a transformative effect inside of companies. Companies realize there's strength in numbers with a system like ours. The amount of efficiency and reuse they can drive, and the standardization benefit they receive is tremendous. Inside an account like American Express we're now the standardized tool.

Sramana Mitra: So the CIO of AmEx has blessed you?

Brian Behlendorf: Philip Steitz. In some accounts, like American Express, who are traditionally extremely conservative in their approach to how they build infrastructure, there are visionaries who do almost top-down revisions. These companies need someone to completely change the way they operate, the way they build software with partners. They recognize the need to adopt some of the principles that open source has pioneered. That mentality is a perfect fit for CollabNet. That's why we've seen a market uptick for us, and why we're becoming more mainstream.

Sramana Mitra: What is the size of a large account, from a dollar point of view?

Brian Behlendorf: Last year we had more than five customers whose annual contract value exceeded $2 million. There were another 10 that were $1 million or more, and the vast majority are $100,000 or more. Only the bottom 30% are under $100,000.

Sramana Mitra: Let's focus a bit on the open-source universe itself. How do you see the movement changing, and what in those changes is significant? Take WordPress – they just raised a ton of money. I run my Website on WordPress, and I don't pay a dime.

Brian Behlendorf: What's interesting is they have a software-as-a-service model. When you're using WordPress free, you don't even have to download it. One trend is that even though software as a service has risen, there's still a reason to do things the open-source way.

The open-source aspect to WordPress has enabled them to have a larger community who run things themselves, but in return have fixed bugs, have helped with scalability, and have added plug-ins which do lots of interesting things. What started as a simple blog tool is now a platform. That kind of growth is something that drives interest back to the central provider of the service. That's why at CollabNet, even though our main business is software as a service, we drove the Subversion open-source project. Lots of people are running Subversion on their own, but at a certain point they'll ask us to just run it for them.

Sramana Mitra: What else do you see in open source?

Brian Behlendorf: There's tremendous growth. Today, for every funded software company, whether it's enterprise software or client-side software, you'll likely find open source somewhere in the strategy. If it's not, it would be as foolish as launching a company without an Internet strategy. Even a brick-and-mortar company must have one today.

Open source is, ironically, this disruptive model that has become a standard part of the software development world. The trend today has been funding companies that go much further up the stack to analytics and ERP software.

Sramana Mitra: What are some of the more interesting projects going on in the open-source space?

Brian Behlendorf: I've been spending a lot of time with non-profits who are using open-source software in very creative ways. One example is the Grameen Foundation, which runs an open-source project developing software to run a microfinance bank. They put it out there and now have 3,000 microfinance institutions in the world as potential users. It meets a certain set of conditions around sovereignty, flexibility, and ease of use that commercial software not only can't do but would not do if they could.

There's another project out there called Sahana, which was developed by some Sri Lankan developers after the Asian Tsunami in 2004. They designed it to be ERP software for disaster relief. There was no pre-existing software at the time. Now there's Sahana and a few other open-source projects in the space.

There are interesting ways that open source is broadening beyond just software. Wikipedia is open source applied to knowledge. And now we're seeing domain-specific Wikis like WikiTravel. The concept of communities getting together and collectively maintaining something, whether it's code or content, is having a massive impact.

Sramana Mitra: The OpenCourseware project is a very big variation of that.

Brian Behlendorf: The academic textbook world is in for a major shock in the next few years. They are so used to a lucrative and un-inundated business that once the educators realize they can get together and create better content, with greater freedom, it will be interesting.

I just heard a presentation by Henry Jenkins, who is a professor of comparative media at MIT. He was talking about how students in the classroom today are realizing that by using online collaborative tools they are made smarter than the

teachers standing in front of them. They can sit in class in real time and correct the teacher. I think we're seeing something much deeper than just a next wave in software; this is an inversion of a lot of power structures in society.

Sramana Mitra: This has been a great story, congratulations on the success!

Brian Behlendorf: Thank you. It has been a fun journey so far.

May 10,000 Cloud Startups Bloom

The cloud services market has fueled a boom of immensely successful startups, most of which have raised millions in venture funding. Take analytics platform company Birst, which started off in the high-end financial sector, raised $64 million in venture capital, and is now growing fast as a regular Silicon Valley-style pre-IPO company. Technology Business Management solutions provider Apptio raised a $7 million series A to get started and within the year got to $6 million in annual recurring revenue. Its customers include 29 of the Fortune 100 companies and has to date raised a whopping $136 million.

Business analytics provider Adaptive Insights raised $84.5 million in funding and has over 2000 customers. Huddle, enterprise collaboration service provider, raised $38.2 million in funding and now has close to 80 percent of the Fortune 500 as clients. Email marketing company iContact bootstrapped for three years to $1 million using services and then raised $53.4 million in three rounds. They eventually got acquired for $169 million. Mobile website maker DudaMobile bootstrapped using a paycheck and then went on to raise $18.6 million. (*Perhaps it gives you a clue as to why I called this book Carnival In The Cloud?!*)

However, not all cloud startups have gone the heavy funding route. There are many under-the-radar cloud/SaaS startups that are also developing as bootstrapped businesses. Analytics company DataSong has bootstrapped all the way—for 11 years—and expects to do $6.5 million in revenue in 2014. Another

such company in our 1M/1M premium program is Happy Grasshopper, which has chosen to bootstrap so far, and is approaching a $3 million run rate in 2014.

Founded in October 2010 by serial and parallel entrepreneur Dan Stewart, Happy Grasshopper is an e-mail marketing company that focuses on providing fun, engaging content to help salespeople and small businesses build and nurture their relationships with leads and past customers. Prior to founding the company, Dan, an Inc. 500/5000 honoree, was the president of a CRM company where he noticed a clear need for effective e-mail marketing campaigns.

Rather than funding, what really propelled Happy Grasshoppers on the path to success was a blog post in a real estate Facebook group called 'What Should I Spend My Money On?' A real estate trainer happened to mention the company on stage at a large event, which gave them their initial few dozen customers. One thing led to another, and they quickly grew to several hundred customers.

After nearly four years, Happy Grasshopper now has more than 10,000 customers across 50 verticals, including real estate, insurance, automobile, and financial sales, but their key focus remains real estate. They have conclusively proved that their conversational approach yields dramatically higher open rates, and creates much stronger engagement with prospects, past customers, and potential recruits. The team of professional writers at Happy Grasshopper create timely, interesting messages designed to prompt a response, making it easier to stay in touch with a network. The secret to their success lies in understanding the reason or need for reaching out to customers.

In the crowded e-mail marketing landscape, Happy Grasshopper is regarded as a less painful, more effective solution than do-it-yourself e-mail service providers such as Constant Contact, Mailchimp, and iContact.

In 2013, Happy Grasshopper began offering its platform as a white label solution and is seeing traction among marketing companies wishing to provide e-mail marketing services, and political action committees wanting to make use of the unique "one through many" messaging their platform enables.

Since October of 2013, the company has grown 400 percent, and much of their growth has come from channel and white label partnerships with organizations like Fidelity National Financial and Curaytor. The 1,900-member sales force of Fidelity National Financial is currently being trained on presenting Happy Grasshopper to real estate and mortgage professionals nationwide. In their first month, with only a small percentage of sales executives trained, this yielded over 900 referrals for free trials.

Of course, it has helped that Dan is a veteran bootstrapper and Happy Grasshopper is his seventh company. Since inception, the new company has been able to rely on cash infusions from his other companies. They continue to invest about 110 percent of Happy Grosshopper's revenues back into the company.

Till date, they have turned away all acquisition inquiries. Dan says, "Like any bootstrapping entrepreneurs, we have our moments of exhaustion, but I'm

doing exactly what I want to do, with exactly whom I want to do it, for the best people in the world. Why would I ever want to give that up?"

There are many such success stories in the cloud computing industry. A recent Forrester report estimates that the public cloud market will reach $191 billion by 2020, from $58 billion in 2013. While this growth is the reason why there are so many heavily venture funded startups in this space, cloud platforms and applications have themselves been big growth and change drivers. They enable easy adoption and scalability without incurring high infrastructure costs. This is what I see as the driving force for the mushrooming of numerous cloud startups that are blooming without any venture funding.

May 10,000 such startups bloom!

Interview with Ryan Allis, CEO, iContact

In 1M/1M, we often advise cloud entrepreneurs to first figure out how to get to $1M and work out the unit economics of customer acquisition, before going out to raise venture capital. The iContact story is a textbook case study of this principle. Today, many venture capitalists ONLY invest incloud startups that have followed this principle.

Sramana Mitra: Ryan, let's start at the beginning of your story. Where do you come from? What is at the root of your aggressive entrepreneurialism?

Ryan Allis: I grew up as the son of an Episcopalian Minister and a social worker from England. I was born in Pittsburg in 1984. I lived in Pennsylvania, Rhode Island, and then Florida. The first entrepreneurial event in my life came about after I received a Macintosh computer from my uncle, Steve. He ran a company called Stratus Computers. I learned everything I could about that computer. In 1995 I started doing computer help for senior citizens for $5 an hour. I lived on an island off of the coast of Florida with my parents. I put up flyers at the laundromat and city hall telling about the tutoring services from a responsible 11-year-old. That was my entry into this world.

Sramana Mitra: Did you get good business?

Ryan Allis: I did. It was slow at first. My first call came two weeks later. I had my own landline, which was a big deal for an 11-year-old. When I picked up the phone, the gentleman asked to speak with my mother. I got her and she talked with him. She came in the room 60 seconds later and told me that it was the postmaster general, who was yelling at her for allowing me to put flyers in

the local mailboxes without the 29-cent stamp. That was my first lesson as an entrepreneur: sometimes you have to act first and ask permission second.

Sramana Mitra: Were you generating business by that point?

Ryan Allis: No, but I finally got a real call three days later. I rode my bike over to his house and helped him with his computer for an hour. He gave me $10. He then went to the bingo hall the following week and started telling his friends. That is when I learned that word-of-mouth marketing is the best type of marketing you can get. I ended up making $400 that summer.

Sramana Mitra: That is great for an 11-year-old. What happened to you after that?

Ryan Allis: I grew up and started doing more and more computer help. One of my clients named Louis was a flight attendant for Northwest Airlines. She started bringing back necklaces and rings from her international flights in China. She would sell them to her friends. I was helping her fix her laptop when she asked me if I could do a website for her.

I set up her website to help her sell pearls in 1998. We had not discovered eBay yet. We sold directly to the end customer. Through that I learned how to set up a shopping cart, how to do website design and several other lessons through trial and error. After about nine months of running that business she got overwhelmed with the amount of fulfillment and customer service responsibilities. Instead of hiring somebody, she decided to shut down the business. This was in early 1999, and she was doing $5,000 a month in sales. If she had kept going she could have built that into a lot more. I learned the importance of scaling yourself at a very young age.

Sramana Mitra: What was going on in your life parallel to your young entrepreneur activities?

Ryan Allis: I was a normal school kid living in Florida. I went to middle school and high school, and I worked when I could on the side. Throughout high school I did 40 or 50 websites and I started a company that did website design and Web marketing. I was reading a book about guerilla marketing, and one of the tips was to write a press release. It got picked up by the [Miami] Herald, and a guy named J.R. Rogers read the article and decided to contact me. He ran Activex America, and he brought me on as a marketing and website design guy.

Working for him for the following year was an influential experience. He was a mentor, and it was a formative experience. I learned how to start and grow a company. I was his first employee and I joined when he was doing $2,000 a month in sales.

Sramana Mitra: What did he sell?

Ryan Allis: He sold an arthritis product for senior citizens. He would sell them it health food stores. I came on to help him sell it over the Internet and directly to end consumers. It did very well and we got AltaVista, DogPile, and other search engine rankings. We created an e-mail marketing program as well as an affiliate program. We got the business to a couple of hundred thousand dollars a month in sales, which was an amazing experience for a 17-year-old.

Sramana Mitra: How long did you stay with him?

Ryan Allis: One year. At the end of my senior year of high school, I decided that I wanted to go to college. I packed everything up and decided to go to the University of North Carolina in August 2002. I live in Durham today.

Sramana Mitra: What did you study?

Ryan Allis: I studied economics and made it through two years before I dropped out.

Sramana Mitra: What was going on in your head when you decided to drop out?

Ryan Allis: I was studying accounting and calculus as well as chemistry and statistics. Accounting was probably relevant to what I wanted to do, but everything else seemed out of place.

Sramana Mitra: Why didn't you study computer science?

Ryan Allis: I was not interested in computer science. I was interested in business, marketing, and economics. I was interested in global economics. I met someone who was studying computer science my second week of school. Aaron later became the co-founder of iContact with me. I was the product and marketing guy. My job was to get customers. He was the guy who wrote the product.

Sramana Mitra: Did you know that you were going to do iContact when you dropped out of Chapel Hill?

Ryan Allis: Yes. We started working on iContact two months into my freshman year. We incorporated in July 2003. Aaron was a senior when we met, so he made it through his last year.

Sramana Mitra: Where did the money come from to get iContact off the ground?

Ryan Allis: We bootstrapped for three years. Initially it was just the two of us, and we did not draw a salary. We were in downtown Chapel Hill. I lived in the office, so I did not have any rent personally. Aaron had started a company beforehand that also did software development and website design. He had a small two-room office that he paid rent on, and he let me work out of there free. We had zero expenses other than $50 a month for hosting.

Sramana Mitra: Were your visions in synch from the beginning?

Ryan Allis: To be honest, I don't think we had much of a long-term vision when we started.

Sramana Mitra: At that time, what did you think you were going to do?

Ryan Allis: Aaron ran a company and had developed a very basic e-mail marketing tool. I saw it and realized that it was Web-based, which was new and pretty cool nine years ago. I suggested that we build a company around it, so we partnered our companies around his list builder product to build our first product which originally was called IntelliContact Pro. We have shortened the name since then.

In the second semester of my freshman year, I sat in on MBA classes at UNC. They told me I couldn't, but I just showed up and sat in the back and listened. I found some good mentors from the venture capital and legal side. I worked with a guy through the MBA school to incorporate the company. We set it up as a Delaware C Corp. because we knew that we would eventually want to raise money.

Sramana Mitra: You originally structured this as a partnership between two companies. How did that fold into the new corporation?

Ryan Allis: We took all of the intellectual property and converted it into iContact Corporation on July 2, 2003. My freshman year ended in May 2003, so I moved into the office then. I would drive to my friend's houses to take showers.

We would sleep until we woke up and then work until we fell asleep. We were not on a 24-hour day; it was probably more like a 28-hour day. We would go to sleep at 4 p.m. and wake up at midnight and then work until 6 p.m. the next day. It was just programming and online marketing initially. We were very efficient and kept costs low. We jumped in a dumpster to get the proof of purchase off the chair box from Staples to get our $50 rebate.

Sramana Mitra: How did you get your first customers?

Ryan Allis: We gave the product away free to local restaurants. The first one was Jimmy Johns Sub Shop in Chapel Hill. They were downstairs, so we gave them the software, a pad of paper for their customers to write their e-mail addresses on, and a fishbowl for other clients to put in business cards. We came once a week to collect the data, and we typed in the data for them. We would then collect a coupon from them and send it out to their 200 to 300 subscribers.

We did that for two or three months to get feedback. We did that just to get case studies, proof points, and customers. By midsummer we had a good enough product that we were able to start selling it for $15 to $20 a month. Our first client ever was a cottage in North Carolina that became a paying client early on. We did $12,000 in sales our first year and had 50 paying customers by the end of our first year.

Sramana Mitra: When did you hire your first employee?

Ryan Allis: We hired our first employee in September 2003, three months into the business. He was an intern for the first month, and then after that we paid him $1,000 a month which was all we could afford. He did customer service and marketing, and he worked for us for eight months.

The next employee was a 56-year-old who had read about us in the paper and wanted to team up with us. He worked for us for six years as our vice president of business development. He gave us a lot of credibility.

The biggest challenge in the first year came in December 2003. We had three services running off one server in the closet. The server hard drive broke, so our entire Web application was down for a week. We had to get a $5,000 loan from a friend in exchange for 1% of the company just to get the server fixed. We got running again six days later and ended up losing 30% of our customers.

At the end of the first year we were wondering why it was not going faster. We were doing $3,000 of sales a month and we had thought we would be doing a million. We still did not pay ourselves any salary, but we both had contract work for clients through our other companies that we were able to live off of.

Sramana Mitra: How long did it take you to reach $1 million in revenue?

Ryan Allis: Three years. We just had slow and steady growth. In 2004 we hired four more people, and we did much better in 2004. We did $300,000 in sales. In 2005 we did $1.3 million dollars in sales. We had figured out how to do online advertising to generate additional customers.

Sramana Mitra: What strategies worked for you?

Ryan Allis: Organic search was important. We also used an affiliate program, which worked well. Other websites about marketing would promote our

product and we would pay a 25% commission. At the time Microsoft was the leader in the URL marketing business. They had a product called Microsoft List Builder. Constant Contact was second at 10,000 customers to Microsoft's 25,000 customers.

We realized that we could write a script to subscribe to all of Microsoft List Builder's newsletters. We did that and waited to receive an e-mail newsletter from their customers. We replied individually and introduced iContact, explaining that it was $10 a month and very easy to use. We doubled our customer base in one month with that technique and soon received a cease-and-desist letter from Microsoft.

Sramana Mitra: Did you create your own affiliate program, or did you get on someone else's?

Ryan Allis: We created our own program. We reached out to potential affiliates ourselves. Aaron coded the software that enabled us to track who came from what website. We cut them checks every month. We were able to recruit several hundred affiliates that way.

By 2005 we had enough capital to experiment with paid search. The biggest moment in our company history that enabled us to reach $40 million in revenue in 2010 was figuring out the customer acquisition cost. Once we knew the customer paid us $50 a month and that they would stick around for four years, then we knew the lifetime revenue was $2,600.

We were able to use that to determine how much we were willing to spend to acquire a customer. Today we are acquiring customers at about $500 per customer, which is 10 months of revenue. Once we realized that, we knew

what the numbers were and we were able to go out and raise capital so that we had enough funds to execute that campaign.

Sramana Mitra: What was your strategy for raising capital?

Ryan Allis: I was 20 at the time. I had lunch with a friend who was a co-founder of PinPoint, which he merged with PowerByHand to form Motricity. He had raised a couple hundred million dollars for Motricity, and they were one of the most sought-after venture-backed companies in North Carolina at that point.

He guided me through our first round of seed financing. We reached out to local firms in the Southeast. We pitched 12 firms and received our first term sheet in February 2006, which we turned down. We did not think that the valuation was right, and we did not like the board structure. At that point we had a run rate of $2 million and they put only a $5 million pre-money; we wanted $10 million. The main reason we turned down the term sheet was because that fund wanted a five-person board on which both of us co-founders would be two members. They would provide two, and then we would agree on a fifth member. We were raising only $500,000.

Effectively, for a 10% investment in the company, they would control the company. As young entrepreneurs, we felt that if anything went wrong they would replace us and we would lose our baby. They also wanted to restart our vesting. We were already three years into that as well, so I have no idea how we would have restarted the vesting.

We turned down that term sheet and two months later we received a good term sheet. We hired a CFO as our 16th employee. He was very experienced in raising venture capital in North Carolina and Atlanta. We ended up raising a

$500,000 convertible debt note from a local fund, Idea Fund Partners. We agreed that we would set the valuation in the future at four times revenue from what we did the following year.

We used the money to invest in online advertising, and we grew our revenues from a 1.5 trail to a four trail in the following twelve months. They agreed to do four times the $4 million that we did, so we ended up raising the $500,000 at a $16 [million] pre-money with a three-person board. Having that CFO who could help us negotiate was very helpful, and he helped us to give up only 3.125% of the company. We closed that deal in May 2006.

Sramana Mitra: What other money did you raise after that?

Ryan Allis: We had such success deploying capital to our marketing mathematical model that a year later we closed a $5.5 million Series A from Updata Partners out of Washington, D.C. We reached out to 40 different firms for that round, and we closed on $5.35 million at a $27 million pre-money valuation. We were able to keep the three-person board, which was important to us. The best thing we ever did was make sure that we kept control of the company.

Sramana Mitra: What was your 2007 run rate?

Ryan Allis: We were probably at about $6 million to $7 million. The valuation was about four times revenue.

Sramana Mitra: How long did your Series A funding last?

Ryan Allis: We ran on that money for three years. Last August, we closed a $40 million round of funding. My philosophy on venture capital is to never raise more than one time your annual revenue.

Sramana Mitra: Is your customer acquisition strategy still working?

Ryan Allis: It is working very well. The numbers are still great. There is a magic number in software-as-a-service. If you can acquire a customer within one year of revenue payback, that is usually a good metric to aim for. We have always been right at that. We invest 12 months of revenue to get a customer, and that is the max we are willing to pay. Today we get $57 a month from a customer, so we will invest between $600 and $700 a month to get a customer.

Sramana Mitra: Your creativity in the early stages of the business allowed you to get to the point of creating this predictable model, which is what everybody in the venture industry is looking for. Experimenting with venture capital money is very expensive. Switching gears a bit, would you talk about how you structured your team?

Ryan Allis: Initially, we hired whomever we could convince to work for us. We could not pay market salaries, so we had no choice. We gave our first employee 7% of the company vesting over four years. He left after eight months. Our second employee we paid $30,000 a year, but he was a $200,000-a-year executive. We gave a more substantial portion of equity to him.

Sramana Mitra: Did you and your co-founder have an equal split?

Ryan Allis: We originally negotiated that Aaron's company would get 25% for contributing the intellectual property. We then took and equal split on the remainder of the company. A critical lesson for any entrepreneur is to make sure you are good at negotiation. We would not have been able to get anywhere without a product. I would have preferred a 50/50 in hindsight, but he did bring in the product.

Our fourth employee, David, is our chief architect. He took over the day-to-day programming, and Aaron became the chairman. He is a tremendous asset to our company. We hired him for $54,000 a year and a little bit of equity. He took our product from what it was to what it is today.

Once we got through our first round of capital, we set up an employee stock option plan. Once we had capital behind us we could be more selective. We could hire a director of HR, use recruiting firms, and get top executives. We began building out our current executive team in 2008. Tim Oakley, our CFO, came through a professor who was also a venture capitalist. We also brought on four other senior leadership team members to run technology, sales, and service.

Sramana Mitra: How do you see the competitive landscape evolving?

Ryan Allis: Microsoft left the market in 2005 and sold their customers to Constant Contact. They came back into business in 2007 and then left in 2008, that time selling their customers to us. Today we are the largest private company doing e-mail marketing. Our largest competitor is Constant Contact. MailChimp in Atlanta is our next largest competitor, followed by VerticalResponse in San Francisco. There are probably 20 other companies that do e-mail marketing, but they are not above $20 million in revenue. We also do mid-market e-mail marketing. In that sense we compete against ExactTarget and companies like that.

Sramana Mitra: How do you view the newer, more integrated solutions such as Infusionsoft?

Ryan Allis: Sometimes if you try to do a lot of different things then you may not be great at any one of them. Infusionsoft is a great company, but they have struggled with e-mail delivery.

Sramana Mitra: Where does your business go from here? You own a good chunk of the company and know how to scale. What is your ambition?

Ryan Allis: We have expanded our mission from making e-mail marketing easy to making online marketing easy. We bought an event marketing company last year, and we do surveying as well. We are doing down the path of adding a social media marketing company. We see a single platform for businesses to manage their marketing. Today we have 700,000 users and 70,000 paying customers generating a $50 million run rate. We have 300 employees today. Sometime in 2012 or 2013 we will look to go public.

Sramana Mitra: You represent the profile of the kind of entrepreneur that America needs very badly. What are you doing in terms of entrepreneurship development?

Ryan Allis: I invest in companies in North America and East Africa as an angel investor. In 2008 I wrote a book, "Zero to One Million," that shares what I had learned about bootstrapping a company. I have been hosting events at my house for three years called Social Entrepreneur Meet-Ups. We get 60 to 80 entrepreneurs come over and have four present. We try to get two commercial startups and two nonprofits to present and then we just talk about what they are doing.

I stopped doing them about six months ago because of time, but I did at least 35 of them. I am very excited that the research triangle area of North Carolina

is taking off well. I am passionate about using entrepreneurship as a tool around the world. We became a B corp, which is a third-party certified non-profit which is certified as socially and environmentally profitable. There are very few of them that are venture capital backed. We are one of the first. I am passionate about socially responsible businesses and the social good entrepreneurship can be used for.

Every six months I go to Kenya, Rwanda, and East Africa to learn about what the emerging technologies are in that part of the world. I see tremendous business opportunity in East Africa. Mobile phone usage is high. Broadband Internet access is just coming. We are now seeing lower cost access to fast Internet. We are seeing BPO firms starting up in Nairobi. We are seeing software development shops for Samsung and tertiary handsets. It is an amazing opportunity for mobile, Internet, and solar companies.

Sramana Mitra: This is a fantastic story. I look forward to following your success.

Note: In February 2012, iContact was acquired by Vocus (NASDAQ: VOCS) for $169 million.

Interview with John Wallace, CEO of DataSong

We maintain that one of the best ways to identify complex problems worth solving inside enterprises is by offering services to them, thereby gaining exposure to the domain. Datasong is yet another case in point. The company is 100% bootstrapped, with no outside capital.

Sramana Mitra: Let's start at the beginning. Where are you from? What kind of a backstory leads up to the entrepreneurial story?

John Wallace: I grew up in the South from a pretty modest background.

Sramana Mitra: Whereabouts?

John Wallace: Virginia. My mother was a teacher and my father was a carpenter. If there were a caste in the US, I'd be from the teacher caste because my mother, aunts, uncles, cousins, and sisters are teachers. I thought about teaching for a while and quickly decided not to.

Sramana Mitra: Where did you do college?

John Wallace: I got a scholarship to Virginia Wesleyan College. It's a small school at Virginia Beach. I studied Liberal Arts. I realized the major didn't matter all that much. I finished with a French major. Then, I worked for a couple of years and put food on the table. I was in technology sales.

Sramana Mitra: Still in Virginia?

John Wallace: In Virginia, yes. I realize that for my potential to be taken seriously, I'd have to go back to school. So I went and did an MBA at George

Washington University. I got lucky that the program there allowed concentrations within the program. Some are very general. Everyone gets the same coursework. In this one, you specialize and I discovered that Data Mining and Data Science were interesting to me. It turns out my mom teaches Statistics. I wanted nothing to do with it when I was a teenager. The apple doesn't fall far from the tree.

Sramana Mitra: That's great. What year did you graduate from your MBA program?

John Wallace: 2000.

Sramana Mitra: The Internet bubble has crashed.

John Wallace: People hadn't figured it out. When my class was graduating, you could trip over your shoelaces and get a job offer. I flew out to San Francisco, and I remember, in February, someone made me an offer. I said, "Great!" They said, "There's just one catch. You need to start next week." I said, "I haven't graduated." They said, "That's not a condition of the offer. The condition is you have to be here. Maybe you can work it out with your professors." I didn't take the offer. It turns out that company didn't make it that much longer, but I met the founder earlier this year and got to tell that story to him. I did go back and finish.

Sramana Mitra: Summer of 2000?

John Wallace: Right. I showed up here post-bubble and the job was with a dot-com and I realized, two weeks in, that it's going to be a train wreck. I gave it another month and thought I needed to get out. I went and worked for SAS, which is a big, stable, privately-held software company in North Carolina. That

was actually great. The opportunity to learn was there. I took them up on all the training that I could get.

Sramana Mitra: What happened after SAS? Did you stay at SAS for a while?

John Wallace: About three years. It's pretty common at software companies that the services side is looked at as a drag on the numbers. I was an analytical consultant. It was a really great group. I was the analytic lightweight. It was mostly Ph.D.'s in Statistics, Math, and Engineering in this group. They wanted me because I had actually used the software in my graduate program which yielded a license set for them.

Sramana Mitra: You were kind of an applications engineer?

John Wallace: It was a great opportunity.

Sramana Mitra: That brings us to 2003?

John Wallace: Yes, 2003. I started a firm doing analytic consulting. I thought that I would be more impartial to what actual software we use to solve the problem and be more focused on the problem than selling a particular license. I think that the growth that we have as a service firm is tied to that era of computing where in order to practice our trade, we needed to follow and work with very large corporations with major investments in data warehousing, technology licenses, and servers.

Sramana Mitra: Your clients were all major enterprises. How big did the firm get?

John Wallace: It's still around. It's the same firm.

Sramana Mitra: That's the firm that leads up to DataSong. So it's a bootstrapping using services story?

John Wallace: Yes. You've heard it before?

Sramana Mitra: Many, many, many times.

John Wallace: I always say that good services people are always looking for a way to also practice. We bootstrapped. When I started the firm, I was a one-person company. I said, "I have no ambition to do that for long. I'll give myself one year." One of the three things I thought would happen was I would grow tired of it and go back to the corporate ladder. Number two and three would be probably somehow merge into another consulting firm, or grow it. It turned out to be the third one.

Sramana Mitra: So talk a bit more about growing that services business. What kind of customers were you going after? Was there a vertical focus?

John Wallace: At the beginning, the strategy was to be as diverse as possible with some boundaries.

Sramana Mitra: Why would that be the strategy? That is the farthest from the strategy that we teach our entrepreneurs to follow.

John Wallace: The strategy was very conservative taking into account the possibility that one of these verticals would suffer.

Sramana Mitra: The dotcom industry in 2001.

John Wallace: Yes, the dotcom industry didn't make it. You had automotive and finance in 2008. I'm not saying it was a perfect strategy but that was the strategy. There was a second dimension to that strategy, which was the

intellectual curiosity – being able to take the teams and expose them to a big variety of problems was something that I thought was going to pay-off. One day, you're looking at a subscription TV business like DirecTV. The next day, you're looking at a major retailer like GAP. It was a way to keep us stimulated.

Sramana Mitra: It is very stimulating but it's a very non-scalable strategy.

John Wallace: So that strategy has been retired. You learn in the field, right?

Sramana Mitra: How much did you do in terms of revenues in the first couple of years?

John Wallace: It probably took us four years to get to a million dollars.

Sramana Mitra: How many people were involved?

John Wallace: There were about four people. My original hypothesis was that there would be a lot of short-term contracts and that people need specialty skills and once they've seen it in action, they would try to copy it and do it themselves. That's not at all what happened. I worked in the field of analytics that I would describe as building a model. It turns out that the under-served portion of our field is leaving behind a whole living, breathing system. If I were competing on modeling, on that front I guess I'm competing with the best professors at Stanford. It's not really what customers are buying. You have to put the model in action.

Sramana Mitra: And keep it in that shape.

John Wallace: Keep it in that shape, yes. It turns out we need a ratio of 7:1 – seven engineers to keep up with one. That ended up building these very long-term relationships. All of our original customers are still customers.

Sramana Mitra: What happened in terms of vertical shake out? Where did you eventually end up?

John Wallace: We're in what we call multi and omni-channel retail.

Sramana Mitra: Very good area for analytics.

John Wallace: It's a healthy list of customers, some of the largest. Williams-Sonoma was one of our customers. They were instrumental for us to transition from services to a software model. They saw our work and realized it's going to be bigger than what they could run. At the same time, we were putting all of our work over to a big data platform Hadoop.

Sramana Mitra: Talk about where in your history this happens?

John Wallace: 2011.

Sramana Mitra: It's a while later.

John Wallace: Even Hadoop wasn't around then.

Sramana Mitra: Exactly. So you did services until about 2011. What revenue level did you reach in that time frame?

John Wallace: In 2010, we were probably at about $4 million.

Sramana Mitra: How many people?

John Wallace: About 30 people.

Sramana Mitra: So you really had core expertise in the company and you had good revenue. Had you made the switch to omni-channel retail along the way?

John Wallace: We had picked up more retail clients – Macy's, Sephora.

Sramana Mitra: So it was gradually moving over to the omni-channel retail model.

John Wallace: We worked on one really difficult problem. When we saw the reactions of the executives to the work, we realized that we saw something significant. Everyone else that was in our current retail clientele wanted that as well.

Sramana Mitra: Can you talk about that?

John Wallace: The problem now has a name. It's not an ideal name but it has a name. It's called marketing attribution. It's looking at the effectiveness of marketing spend. The field closest to that would be approaches of this in Statistics in the past 20 years – by week, how much we've spent and see if we can sort out changes in our revenue based on changes in spend. We chartered a model like that. They just couldn't fall in love with it. We asked them why. They said, "It doesn't take into account which consumers have been exposed." They had this catalog modeling background where they're used to looking at households and whether or not to spend money or not on campaigns. That was a problem we decided to address.

Sramana Mitra: What year was that?

John Wallace: That was between 2010 and 2011.

Sramana Mitra: That's when you found the problem that helped you move from services to product.

John Wallace: Correct. Then we took a computing approach that would have been a little bit crazy to follow earlier. I like to say that we would have needed

to deal with the NSA to run the kind of analysis we were doing for them without being on this current generation of big data.

Sramana Mitra: So Hadoop made a difference in terms of infrastructure?

John Wallace: As an enabling technology, yes.

Sramana Mitra: Is there any other newborn technology that you use from the current stack of stuff that's available out there?

John Wallace: We're experimenting with a platform called H2O. You had Hadoop. People talk a lot now about Spark out of Berkeley as a replacement. Then in the analytics field, there's a package called H2O.

Sramana Mitra: This is what has got you these key customers from the retail world?

John Wallace: It's that intersection of software and services to be able to onboard and rationalize a wide variety of data. We are intentionally going after the hardest problems to solve. The more we look at it, the bigger the problem gets and the harder it gets.

Sramana Mitra: The other thing that's really great with the way you're doing it is you have a lot of domain knowledge that you are building into your approach. This is a hardcore omni-channel retail solution. That has its own applicability.

John Wallace: Being bootstrapped, we've been able to make experiments that make sense to us. We didn't have to have buy-in from someone.

Sramana Mitra: Except for customers. That's the only thing that matters. Our philosophy in 1M/1M is entrepreneurship equals customers, revenue, and profits. Everything else is optional including investors.

John Wallace: We've taken up consulting so we have people with a background in Statistics or even retail on our team and we give them roles as account managers. When you're in our target market, we send someone out who already has the domain expertise to fill that role as opposed to someone who's more about the process and organization. These people are just deep on the problem. It has an interesting payoff from the customers.

Sramana Mitra: Who do you see in deals in terms of competitors?

John Wallace: There were three teams that worked on this problem – visual IQ out of Boston and Adometry out of Austin.

Sramana Mitra: What were the backgrounds of these other two companies? Were they using a vertical approach?

John Wallace: No, they're horizontal. I think what they have in common is that they have simplified the problem by collecting data off of Excel. They try to get themselves on the website. It makes the day of living hell more uniform. We've taken a different approach to on-board people's data because a lot of people that we want to analyze, we can't pick up off of Excel anyway. We might have to onboard data a little deeper. We just said, "Let's go ahead and be a completely open system."

Sramana Mitra: And your customers like that?

John Wallace: They do.

Sramana Mitra: So how has revenue progressed from the pivot to product?

John Wallace: Now, we're about one-third product and two-thirds services.

Sramana Mitra: You were $4 million in 2011.

John Wallace: So, we'll do about $6.5 million this year (2014).

Sramana Mitra: You're continuing in the bootstrap mode. You're not interested in taking money?

John Wallace: We've done it for 11 years. We have an optimization problem. We have no lack of capital. So we continue to keep putting the dollars where they have the most meaning. It's something we're comfortable with. I considered it a couple of years ago. Should I step on the gas and raise capital? Two things don't fit that model. We don't look like the cookie-cutter fundable company from a VC viewpoint. One, we've been around a while and profitable and coming from a services background.

Sramana Mitra: No, that's not a problem. As far as VCs are concerned, if you look at the Big Data space, it's broader than your space. AgilOne is very similar to your story and they were about $15 million in revenue mostly in services. People raise money in that model all the time.

If you look at my *Boostrapping Using Services* book, you'll find lots of case studies. Companies that have come from that bootstrapping using services background are mature companies and then they go out and raise money at fantastic valuations. The other question that you have to address is the TAM question. By going very granular and very focused

on this retail problem, it is a smaller TAM as a result of that. That's more an issue unless you broaden and go outside of your current market.

John Wallace: I agree with you. Given the capital we have to deploy, the market's enormous. Because we have limited capital, we need to have the discipline to be very specific.

Sramana Mitra: That's great. That discipline is what actually lets you win in the market. What is your current TAM?

John Wallace: We did that a couple of years ago with a top-down kind of model. We looked at the omni-channel retail space that we're going after. We looked at the marketing spend.

Sramana Mitra: We're not quite interested in top-down. Top-down doesn't really get you the numbers that investors work off. It's more of the bottom-up. Very simply, very back of the envelope, how many companies can you sell your solution to at a certain average deal size?

John Wallace: Our deals are tied to marketing spend. That's the metrics that we're after. We saw the dollars on the table being spent on marketing and what we charge as a fraction and what percent of the market we thought we could capture. We thought of this as a billion dollar market.

Sramana Mitra: Then this is a perfectly fundable company should you choose to get funded. How do you price your business?

John Wallace: We currently tie it to marketing spend. We look at everything that's been on media – not the marketing department. We look at the email, direct mail program, digital spend on digital ads, search spend, television, newspaper, and TV. Any of that is what we add up and then we cut that to four

charges where the people who are spending less will be able to afford our product by charging less. Then, the people who are extracting the most value out of it will pay more.

Sramana Mitra: If you could be more granular, how do you account for that? What data can you work off of and how do you tie that to how you charge?

John Wallace: I thought you were going in the direction of how I know what they spend. So you mean how do we measure TV?

Sramana Mitra: Yes.

John Wallace: We measure all channels simultaneously. The technique that we use comes from the field of medical research. In a study, you can't infect people on purpose to see the spread of the disease and you can't withhold life-saving drugs if there's no discovery. But you still have people trying to understand how this disease affects the population. That's the closest analogy I can give you. In our case, the treatment though is not a drug. It's emails and banner ads. And instead of dying, what we're calculating the impact on is buying. That's how we categorize it.

As for the TV data itself, it's a little unfortunate how that data is collected. It hasn't changed much in the past 50 years. It's primarily off proprietary panels run by AC Nielsen. It's still useable data though. What we'll see in that kind of data is what we call gross rating points by week. We'll see variability across geographies and time. We bring that data in and we model that at the same time as we're modeling all of the consumer-level data. It's held accountable, if you will. At the same time, I'm also clicking on emails and I'm watching TV

and I'm seeing a portion of all those rating points as that fluctuates up and down. Does it have an impact that's measurable?

Sramana Mitra: Very interesting. Do you want to discuss a use case of any of your clients that you feel particularly strong about?

John Wallace: I'll probably talk about them collectively. It's a pretty known problem if your measurement is actually done by the vendors that are giving you data. It's already potentially suspect. We know intuitively that it's very likely that a particular consumer was probably interacting with more than one channel. It could be email program and search engine.

Sramana Mitra: Absolutely, duplication of channel.

John Wallace: There's already awareness that the marketing department's definition of revenue is often quite different from the finance department's definition of revenue. That is, across all of the customers, seeing two things happen. The revenue now tied to finance is something big to check off. The other is having comfort that what we're looking at is an incremental effect of marketing. That's the part that's missing. If you look at things independently, you won't really be able to see what was incremental.

Sramana Mitra: You are able to tackle duplication?

John Wallace: Yes. So what happens is you have another level of confidence that comes into the client organization. A level of confidence and excitement that there's clarity now of what's working and what's not working. This is what organizations have in common – they're all trying to squeeze a penny out of a marketing dollar. They are willing to experiment. They're going to work with social media and see what happens there. They're going to try anything new but they're always trying to hold it accountable. When we've given that next level of

confidence, I've watched a series of experiments kicked off from that. Then we watched the dollars move from the lower-yielding areas and continue to go to the highest.

Sramana Mitra: So your system recommends where to move the dollars to?

John Wallace: Correct.

Sramana Mitra: How do you sell this solution? What part of the client organization is buying and how is the sales cycle?

John Wallace: I smiled because I think there are different types of CEOs. Some are operationally focused. In my case, I would call myself a selling CEO. Having a quota between undergraduate and graduate school was probably part of that but I love being in front of clients and have them open up. What happens over the years is that the dialog keeps getting higher and higher in the organization. Our dialog is a CMO level dialog.

Sramana Mitra: Where do you start the sales cycle?

John Wallace: It's typically one of two places. It could be one of the channel managers who has a budget to spend on. Then in a second or third meeting, it usually kicks off the process. We end up collaborating quite a bit with the analytics teams in these companies. We come in making a lot of claims. Someone there has to hold us accountable.

Sramana Mitra: They all have analytics teams?

John Wallace: No, somebody that does customer insights or data analysis. We design the process as a pilot. It's not like inking your life away with us.

Sramana Mitra: So the analytics team buys?

John Wallace: They don't fund it. It's funded by the line of business. The analytics is along for the ride pretty much because our work is very transparent. We're showing what we're doing and they're learning from what we're doing. The collaboration has been a key to our success. It comes from the services background to say, "Here's what we're doing. We'll show you weekly what the progress is." If that analytics team has been there on average of five years and there're five of them, that's 25 years of experience we need on our camp.

Sramana Mitra: That team is also going to help you go beyond the pilot to a much broader deployment.

John Wallace: That's part of the dialog, we need them for sure as champions. At that point, we always meet the head of marketing. When we finish that kind of work, it's about three months of effort looking at a year of media. This might be $300 to $400 million of marketing spend. That's usually a pretty interesting data point that makes its way up the chain.

Sramana Mitra: That's where you get the bigger deal?

John Wallace: Yes.

Sramana Mitra: Excellent. What else is interesting in your story?

John Wallace: I have one thing that I think we set aside earlier that I want to pick up on. I don't think this is unique to us but I'd say we have a pretty high rate of learning. There are things that seemed to take forever to figure out that we now take for granted. We are now constantly moving to the next portion of the problem. The problem just does seem to get bigger.

Sramana Mitra: It also productizes as you go along. The best practices get productized and the learnings from the different organizations turn into features. It was great talking to you. Thank you.

Interview with Itai Sadan, CEO, DudaMobile

In our bag of tricks of how to get a cloud venture off the ground, bootstrapping using a paycheck is certainly one. You already saw Sinclair Schuller bootstrap Apprenda with a paycheck. So did Itai Sadan.

Sramana Mitra: Itai, let's start with the beginning of your personal journey. What is the story that paved the way for your entrepreneurial journey?

Itai Sadan: I was born and raised in Tel Aviv, Israel. I did have a six-year stint in South Africa, where our family lived for a while. I went to high school in Tel Aviv and met the person who is the co-founder and CTO of DudaMobile during my high school years. After high school I went to the army and served in the anti-terrorist school. After I completed my three-year army service, I traveled the world a little bit.

When I returned, I attended Ben Gurion thanks to a scholarship I received to study computer science. My co-founder, Amir, also received a scholarship to the same university. We did not plan to attend the same university, but it was a great coincidence. We got a lot closer during our university years and we started working on projects together. We eventually became roommates.

Sramana Mitra: What years did you attend college?

Itai Sadan: I was there from 1998 to 2001.

Sramana Mitra: The Internet was in full swing, and right as you left school the market was thrown into a tizzy.

Itai Sadan: Definitely. During my last year of school I worked part-time for a startup company as a software engineer. That was my first real-world job. I remember releasing a product and the next day we had an actual person giving away free Ben and Jerry's, and we had alcohol everywhere. Two weeks later, half of the company was let go. I saw the ups and downs of that period of time in tech, and it was very interesting to live through that.

A lot of people I went to school with did not work during their third year. They were at a disadvantage when we finished that year because tech was in a slump. It was really hard for them to find a job, and I already had a full year of experience.

After that startup I got a job at a bigger company called Amdocs. They are a software billing provider and have a couple of thousand employees. It was nice to see how a bigger company operates. I worked at Amdocs for several years before getting recruited into SAP. That is where I worked with very large companies such as IBM and Fujitsu. I got to understand how large companies buy software and the processes they used. I learned how to sell into big companies.

Sramana Mitra: How long did you work for SAP?

Itai Sadan: I worked for them for six years. During that time I was relocated to Palo Alto, where I spent most of my time. Even within a large company like SAP, I found a way to build my own little startup environment. I have always felt entrepreneurial and have had a million different ideas for things that I would want to do to improve the world with software.

During my time at SAP, I was able to get senior management to buy into an idea I had for a new product. I was able to put a team together and develop the concept into a product that was sold to 3,000 different customers.

Sramana Mitra: What was that product?

Itai Sadan: It was the SAP Discovery System. I noticed that a lot of our biggest customers were wasting time on hardware sourcing and SAP implementation. They spent very little time proving the ROI. I came out with the idea of doing SAP in a box. The idea was to have an SAP environment where you could just plug it in and it worked. I was able to get a lot of different teams at SAP to contribute their product into the server we built.

Our solution consisted of both hardware and software. We implemented a lot of different SAP products into this one server and had everything pre-installed. Customer just loved this product because everything was pre-configured.

Sramana Mitra: Did you do that project as an intrapreneurship project?

Itai Sadan: Yes. I did that from 2004 to 2010 within SAP.

Sramana Mitra: What happened in 2010?

Itai Sadan: I have always had an itch to do something of my own. I had a lot of different business ideas during the years, but I was always able to shoot them down myself. One day in 2008, I stumbled upon an Apple store and picked up an iPhone for the first time in my life. I was amazed. It then dawned on me that the entire Internet was moving to this smaller-sized device. I realized that Amazon and other sites created dedicated websites to capture mobile users. Those sites were a lot different from desktop sites.

I went out and tried to browse to local small business websites, and I found that their sites looked awful. That problem still exists today. A lot of local businesses do not have the time, budget, or skill sets to build sites optimized for mobile users. However, users are going mobile all the time. Businesses that we cater to are getting 20% or 30% of their website traffic via mobile devices. I think Facebook sees 50% of their revenue from mobile devices.

In 2008 my goal was to find a way to help small businesses connect and engage with their customers via mobile sites. That was the genesis of DudaMobile.

Sramana Mitra: You had the vision for DudaMobile in 2008 but left SAP in 2010. What happened during the in-between years?

Itai Sadan: After I had been relocated to Palo Alto to work in the SAP headquarters, I brought Amir into SAP to work on my team. We were both working in Palo Alto for SAP when I had had the idea. I brought it up to Amir, and we began talking about it. We got all excited about the idea and contemplated leaving SAP, but we kept joking around about different reasons we should stay at SAP. Our bonuses were due in 2009 so we waited for the bonuses.

That really shows how long it takes to develop software. We were working on the project during the evenings and on weekends for that two-year period. It takes a while to write good software, and we did not want to leave the company until we were able to sustain ourselves.

Sramana Mitra: In our program, we often encourage people to keep their paychecks and work on their businesses on evenings and weekends. You should get validation before you leave your job. When you leave your job,

you want to be in a more advanced stage so that you can get to revenues and pay bills. We call that method bootstrapping with a paycheck.

Itai Sadan: That is what I tell every entrepreneur I meet. The number one reason your idea will fail is that you will give up. You will run out of money, and you will have pressure from family or other financial obligations. You need to do yourself a favor and work on your idea as much as you can during your off hours. When you hit the point that it becomes impossible to work both jobs at the same time, then it is probably the right time to leave and dedicate your time to your company.

Sramana Mitra: Tell me a bit about the techniques you used to validate your idea.

Itai Sadan: We built the technology to be a mobile site builder. We wanted a DIY mobile site builder where small businesses could come in, push a button, and see their desktop site be transformed into a mobile site. Initially we looked for small businesses that would allow us to provide this as a service. We would use the technology that we developed to build their mobile sites.

We reached out to mobile businesses in our community. We walked the streets, bought advertising on Google, and did anything we could to get the word out. The Google advertising turned out to be the most effective method of getting our first small business customers. We were operating in the early days as an agency, and we used Google as a method to generate leads. We knew that ultimately we would not operate the company as an agency, but this was something that we wanted to do to test the product.

Our agency model of operating the business worked, but scaling the business proved to be very difficult. In early 2010 we got a phone call from David

Krantz at AT&T Interactive. He had heard about our technology and he needed it. We never thought that big companies that catered to small businesses would be a business model for us, but it was interesting and compelling. Three months later both Amir and I left SAP, completed building the product, and went live with AT&T.

Sramana Mitra: What kind of deal did you structure with AT&T?

Itai Sadan: It was a reseller deal. They were using our technology internally and we trained their staff to use our product. That was an amazing QA exercise of our product because we suddenly had 40 AT&T web designers working with our product giving us feedback. We had to quickly integrate that feedback into product enhancements. That really helped us get the product out the door with a higher quality, sooner.

AT&T then sold the product to small businesses. They had hundreds of the thousands of small businesses that advertised on YP.com and those were the first customers getting our product as a white label.

Sramana Mitra: Was AT&T selling your product as a service or as a product?

Itai Sadan: AT&T sold it as a service.

Sramana Mitra: So AT&T's 40 web designers used your product to mobilize the websites of small business users. What did they charge for that service?

Itai Sadan: Back then they charged around $40 to $60 for a mobile site and they paid us a quarter of that.

Sramana Mitra: You effectively established a very solid channel opportunity very early on. How many customers did you get out of that?

Itai Sadan: They are still a customer three and a half years later and they have signed up thousands of small business websites.

Sramana Mitra: AT&T has turned out to be a major reseller partner for you.

Itai Sadan: Definitely. The brand name was also a huge benefit for us. Everybody knows AT&T and they are a very strong brand. That really helped us get the next business development deals.

Sramana Mitra: After you closed the deal with AT&T what were your next steps? Did you raise money or continue to bootstrap?

Itai Sadan: We raised money at that point. We tried to raise money earlier but it was very difficult. Once we had AT&T as a customer it really helped our fundraising. We closed our Series A shortly after closing that first deal with AT&T.

Sramana Mitra: Whom did you raise your seed round from and how much did you raise?

Itai Sadan: The first round was syndicated by Oren Zeev and we raised $800,000. Oren brought in some great investors into that round.

Sramana Mitra: In 2010 you had $800,000 in financing and a deal with AT&T that is starting to monetize. What happens next?

Itai Sadan: We liked the type of deal that we struck with AT&T and we looked at ways to replicate that deal. We started targeting companies that targeted

small businesses and struck our next deal with Webs.com. They are a website builder who did not have mobile capabilities. They were happy to integrate with our product and deliver mobile sites to their customers through us.

Sramana Mitra: Was it the same type of deal that you had with AT&T?

Itai Sadan: It was different in that it was an OEM deal. Our platform was embedded inside of the Webs.com website builder. Their end users were able to build mobile sites by themselves.

Sramana Mitra: What was the business structure of that deal?

Itai Sadan: They were selling it for $5 a month and we had a very fair revenue sharing model between us.

Sramana Mitra: What was your next deal after Webs.com?

Itai Sadan: Our next deal was with Yahoo small businesses as well as with an Intuit company. We have since done deals with companies like Google.

Sramana Mitra: What was your deal with Google?

Itai Sadan: In 2012 Google had a marketing initiative to get small businesses to go mobile. We co-branded our editor with Google, and we gave all Google customers their mobile sites free for one year. At the end of that first year, everyone that we were able to retain remained a DudaMobile customer. That was a very good deal that brought us huge branding and a large amount of customers. Seeing our brand next to Google's brand was very powerful. Google essentially let all of their AdSense, AdWords and Analytics customers know about this initiative.

Sramana Mitra: You were primarily focused on OEM or white-label partnerships to this point. Did you have any other revenue models that you engaged in during that time?

Itai Sadan: At a certain point we looked at all of our partnerships, and we realized that our brand was known well enough that we could begin to employ a direct sales model. We just needed to put our platform on the web directly and begin to acquire our own customers. We started doing that in August of 2011.

During the first three months we saw mild growth, and at the end of the third month, it suddenly skyrocketed. It actually grew faster than all of our partnerships combined. We did not expect that, and it was quite phenomenal. It was clear to us that this was going to be the future of the company. We essentially went full circle because the initial concept behind DudaMobile was to be able to go direct to the SMB. The initial deal with AT&T lured us into OEM and white label deals, but when we returned to the direct sales model, we were able to own the customer relationship without a revenue share. We essentially owned our own destiny at that point. We did not stop doing business development deals. We simply evolved to operating with a two-pronged sales approach.

Sramana Mitra: How did you generate leads for your direct website customer acquisition? Did you use Google PPC?

Itai Sadan: It was driven by paid channels as well as organic growth. Our brand reputation really helped us with our organic growth. Once we did start advertising, we also focused on our SEO rankings. Once we focused on our SEO approach, we were able to get our SEO listings elevated rather quickly.

Paid channels are important as are organic channels. We use PR, social media, PPC, and affiliate models in our paid acquisition channels.

Sramana Mitra: What do you charge for your direct sites?

Itai Sadan: We have a freemium model. You can build a site for free and we will place our own advertisements on the site. Those ads are generally promoting DudaMobile although we do have some advertising networks. Our freemium model does not support our premium features. For users who do not want advertising and would like access to our premium features, then we charge $9 a month.

Sramana Mitra: What do your premium functions offer?

Itai Sadan: Our premium features help you drive more traffic to your site and grow your business. We have a widget that is called "click to call" that lets users visiting the mobile website click a button and call the business. We have another widget called "click to maps" that helps people navigate to the business establishment. These are the things that small businesses care about. They don't understand page views and unique visitors. They understand what it means when their phone rings and more people walk in their store. That is what we help them do for $9 a month.

Sramana Mitra: What is your business model for the affiliate relationships?

Itai Sadan: What we have developed is a long-tail reseller channel. There are a lot of groups that cater to small businesses that think that DudaMobile is a great tool for their tool set. These are companies who are web designers and digital marketers. They run agencies. We have a special group today inside of DudaMobile that caters to those partners. We have thousands of those partner

relationships today. The great news is that once you establish a relationship like that, you have essentially created a virtual sales force. They evangelize mobile sites and sell multiple sites.

We also make a lot of changes in our product based on what that group of users needs. We have special materials to help them sell and market the mobile sites. Whenever we release a new product or feature, they are the first ones to know and they give us feedback about those features.

Sramana Mitra: Let's talk more about the financial engineering that went into building this company. You took on $800,000 in 2010. What has been the financing since then?

Itai Sadan: A year later we raised $1.5 million from the same group of angel investors. The year after that, in 2012, we raised our first institutional round from Pitango Venture Capital, which is an Israeli firm. We raised $6 million from them. Earlier this year we raised another round led by Pitango for $10 million dollars. We have raised $18.6 million of total financing.

Sramana Mitra: Is your growth matching your investments?

Itai Sadan: We have grown this year by 300%.

Sramana Mitra: How many websites are powered by DudaMobile today?

Itai Sadan: There are over 5 million mobile sites today.

Sramana Mitra: There have been a lot of attempts to crack this problem and there are typically issues scaling the solution. Obviously you have been able to scale your solution.

Itai Sadan: In the SMB space it is not just about technology. You have to crack the market fragmentation. It is hard to scale to a large size when your primary customer base is SMBs because the market has so many verticals. You can't hire a sales team to go after small businesses. The economics of that won't work.

Sramana Mitra: At $9 a month you can't afford a sales force.

Itai Sadan: Exactly. We have to rely on marketing. There are a not a lot of companies in our space that have managed to build a brand and become a large company that caters to the SMB space. Google and Intuit are good examples of companies that have been able to make that work.

Sramana Mitra: What does the competitive landscape look like in your market?

Itai Sadan: We have always been considered the de facto leader in our space. Most companies copy what we do and try to close the game with DudaMobile. They look at our features and will copy them in their releases. As we grow and move into new spaces, we are now starting to enter into spaces that already have established competitors. In those new spaces we are not the de facto leaders, and in fact we are looking at the leaders in those markets much like our competition looked to us in our core market.

Sramana Mitra: What are the new spaces you are entering?

Itai Sadan: Early on we identified that small businesses would find it challenging to go into mobile. What changes today is that the diversification of screens tends to be an even bigger problem. The devices around us are very diverse, ranging from phones and tablets to 70" Internet-connected TVs. Our

vehicle GPS systems are connecting to the Internet, and we have smart watches coming out.

Websites look different on all of those screens, and that is a very big problem for small businesses. Small businesses should expect vendors to solve those problems for them. That is where we are looking to move and evolve. We expect to solve that problem for small businesses.

Sramana Mitra: Do you have offerings for tablets today?

Itai Sadan: We are in the process of releasing a product that caters to different screens. This new product caters to tablets, desktops, and mobile devices. We will release that product very soon.

Sramana Mitra: You and Amir started the company while holding full-time jobs. What have you done with your team since then?

Itai Sadan: Amir moved back to Israel very early on. Since he is the CTO, we decided to base the R&D of DudaMobile in Israel. That turned out to be an amazing decision. We hired a terrific group of engineers in Israel, which we would have had a hard time doing here in the Valley. Our initial team expansion was focused entirely on our R&D team, and I was alone in the U.S. for a while.

Eventually I grew the team in the U.S. as well. Today we have 75 people inside of DudaMobile, with about 30 located in Tel Aviv. In Palo Alto we have sales, marketing, support, business development and G&A. Our headquarters are in Palo Alto as well. We have an eight-person sales team in Atlanta and a three-person team in Tokyo.

Sramana Mitra: What kind of sales are being done in Atlanta?

Itai Sadan: There is a higher end service that we are selling to select customers. Some of our customers want more traffic driven to their sites. That team sells lead generation and traffic to our own customer base. We are like an agency in that sense. We purchase traffic for those customers and send it to their mobile sites.

Sramana Mitra: Thank you for taking the time to share your story. You have used some interesting strategies, and I wish you the best of luck as you move forward.

Interview with Alex Fuller, Co-Founder and CTO, CloudSense

The Force.com platform has been a great bootstrapping device for entrepreneurs. Read how Alex Fuller and Richard Britton bootstrapped CloudSense to a sizable product company using the platform. In fact, there are many PaaS products out there right now that can make bootstrapping a cloud venture substantially easier and cheaper. If you have domain expertise in an area, and want to get a cloud venture off the ground rapidly, this path is highly recommended.

Sramana Mitra: Alex, let's start with your personal journey. Where were you born and raised? What are the roots of your entrepreneurial story?

Alex Fuller: I was born in Wimbledon in the UK where the tennis championship is held. My educational background was not focused on technology. I studied classics at Oxford University, which focused on Latin, Greek, and Linguistics. Before that, I had already acquired an interest in technology. I got into computing as a child when I was 12 years old. I had a keen interest in computing throughout my school years.

When I left university, the Internet had already started growing. Its value proposition to everyday people and businesses was increasing. The Internet was changing traditional fields and moving them forward.

Around that time, I also started my own business doing website builds for film and TV companies. We had some good successes there, which included building sites for Channel 4 Television and 20th Century Fox. Before then, I had done some work with some telecommunications firms, which is where I

met my future co-founder. The firm was a subsidiary of Sky Television and they were getting ready to embark on a transformation project to re-platform their business. They had a legacy of many different systems, data siloes, and disjointed business processes as a result of organic growth and organic business acquisitions.

When we started that project, it looked like a really difficult multi-year transformation effort. Yet through selecting cloud technologies such as Salesforce, which were new capabilities on the market, we discovered that we were able to do the entire project within 18 months at significantly less cost than we had anticipated. The value proposition that we saw really excited us. That is what inspired us to form CloudSense.

Sramana Mitra: What year was this?

Alex Fuller: This was around 2007 and 2008. We founded CloudSense in 2009.

Sramana Mitra: What was the premise of CloudSense. What were you trying to do?

Alex Fuller: We wanted to take our experience and combine it with this new value proposition. We wanted to leverage a rapid and agile approach to developing powerful business systems without the encumbrances of traditional solutions. We wanted to offer a new product in this cloud environment to enable businesses to reduce their cost and improve their ability to transform, adapt, and innovate in the marketplace. We saw a need for a new generation of order management tools, and that is what we set out to build. We wanted to allow companies to improve the quality of their order capture by putting rules

around that process to get the orders right the first time and reduce the cost of errors in the system.

Sramana Mitra: If you were to position this in the context of 2009, when you founded the company, what would the competitive landscape look like? Who was your closest competitor?

Alex Fuller: That's a good question. We were offering this system to a number of companies but the telecom sector was a key focus for us early on. We were getting our software, which was on Salesforce's Force.com platform, on the roadmap of large enterprises who were otherwise looking at systems from Oracle, Siebel, and so on.

It's a testament to the way that the cloud works that we were not required to acquire or manage the devices in the cloud ourselves, so we were able to focus on adding value. We were able to put intelligence into the software and create a layer of functionality and value that we were able to offer our customers.

As a result, within months of introducing the product into the market, we started significant-sized pilots with very large companies. I don't think that would have been possible without the cloud advantage.

Sramana Mitra: Did you deliver your initial product on the Force.com platform?

Alex Fuller: Yes, we built on top of the Force.com platform from the very beginning.

Sramana Mitra: That is interesting. You built your order management product on the Force.com platform, which I presume allowed you to go

to market very quickly and generate leads from the platform. Was that indeed the case?

Alex Fuller: Yes, you have hit the nail on the head. While it was great to have the ability to build our product very rapidly, we also benefited tremendously from the greater Salesforce ecosystem and partnership. They run a very proactive platform and it is a benefit to be on that platform. There are tremendous benefits to leveraging that when you are trying to get a business to take off.

Sramana Mitra: How long did it take you to build an initial version of your product to release on the platform?

Alex Fuller: We took a modular approach to our application as well as an agile approach to our development lifecycles. This enabled us to get functionality out quickly and iterate. It is really difficult to measure the man-years that went into this, but within the first nine months, we had software that was available and good to go.

Sramana Mitra: During the nine months of software development, who was involved in the company and how did you sustain yourself financially?

Alex Fuller: Initially, there were the four of us who had founded the company. We were headquartered in the UK, so very early on we set out to build a team in Croatia. The reason behind that is because one of my co-founders is Croatian. We saw that as a significant step for us and it allowed us to tap into a tremendously energetic talent base and build a team in an area that was both cost-effective and operationally effective. The time zone difference was only one hour and it was also a very short flight.

Sramana Mitra: How did you go about building your team in Croatia?

Alex Fuller: We flew out there and did some relatively simple job advertising. We set up an assessment center where we invited people to come and spend a couple of days with us. We put them through a training course because the Force.com platform was a new technology. It was not a well-known platform at the time, so we knew that we would not find experts in Force.com development. Our strategy was to acquire talent with the right technical skills, experience, and understanding. Once we knew they had the skill set we needed, then it was just a matter of training them to understand the Force.com platform.

People came to our assessment center and did a two-day course. We gave them the benefit of getting introduced to the new platform and it also gave us a chance to assess how they responded to that. We got to watch how they worked and see how they liked to communicate. We finished the process with a formal job interview and made our selections after that. Overall, this process was very successful and that is how we found our first hires.

Sramana Mitra: How many developers did you have involved in the nine-month period leading up to the product launch?

Alex Fuller: Initially, we approached the market as a hybrid of product and services work. We used the market as part of our bootstrapping mechanism. We hired these developers and used them in consulting work. That helped fund our product development.

Sramana Mitra: ***Bootstrapping using services*** **is a very common strategy. We have a book on this process. When you were doing services, was it in the same domain as your product?**

Alex Fuller: We were not building solutions for customers that we would replace with the product. We did work in the same domain as far as the work was in cloud-based technologies. We would help companies with CRM implementations and custom functionality around that. We also did strategic advisory around that. In 2009, in the UK, that was still the forefront of technology.

Sramana Mitra: So your consulting work was not necessarily in the order management area?

Alex Fuller: The order management software that we have is a natural extension of the CRM and sales process. We were in the same areas in some companies and we proposed our product to them when it was available, but we generally started higher up in the domain.

Sramana Mitra: It sounds like there was leverage from the services work into the product business.

Alex Fuller: Yes, there certainly was. We operate an R&D team now, but back then, the consulting division was key to funding our R&D.

Sramana Mitra: During the nine-month bootstrapping phase, how many people were focused on the services business and how many people were focused on product development? I'm also curious about how your business breaks down between Croatia and London.

Alex Fuller: The business breaks down 50/50 between London and Croatia. We also bring consultants from Croatia onsite with UK customers because the distance is not prohibitive. During the first year, we had 25 people. Most of them were focused on projects with clients. We had about eight people doing R&D development during that time.

Sramana Mitra: What costs did you have to cover during those nine months with the services revenue?

Alex Fuller: The principal cost was people.

Sramana Mitra: Providing salaries for eight people is not insignificant.

Alex Fuller: That is definitely true. There were four of us who were founders and we put a lot in ourselves. We obviously did not take money out of the company, and we worked hard to keep cost as low as possible. We considered whether or not we should solicit funds early on, and we decided to bootstrap so that we would not give away equity in the business before we had value. That has proven to be beneficial for us.

Sramana Mitra: Once you had the product ready and listed it on the exchange, how did you find your first customers?

Alex Fuller: We went after our customers. One of the things that we did do was talk to people at Salesforce, especially with the UK Salesforce team, to socialize what we had and what we were doing. That was very useful to us. That gave us an awareness of what we were doing. They knew of customer needs, plus when they heard of new requirements from customers, they were able to remember us.

We did our own direct selling as well. Everyone who goes through this process knows that there is a lot of time and hard work that goes into that. There is a lot of investment in sales and marketing.

Sramana Mitra: How much of a role did the Salesforce AppExchange play in the early phase of your business?

Alex Fuller: AppExchange itself was not the vehicle we were using. We really focused on relationships. We worked hard to make sure we were in front of the minds of account executives and sales engineers. That is partly a reflection on what we were producing. AppExchange has a wide variety of apps and it is particularly strong for apps that have definitive purpose and can be installed with a few clicks.

We are much more enterprise-oriented. You can't get away from the fact that at some point you have to have some conversations about how the customer wants to use the software. They will want to analyze their own business to get the most out of the capabilities of the system. We have left the one-click installer approach and have those conversations with our customers.

Sramana Mitra: Did the AppExchange or Salesforce teams generate leads for you even if you had to do the selling?

Alex Fuller: We definitely had some leads coming off of the AppExchange. Our own direct selling efforts accounted for the vast majority of our leads and closed deals. I include the legwork of staying in front of the Salesforce sales teams in the region into that bucket. We kept meeting with them and explaining product capabilities so when they ran into a customer who had requirements that could be met by our product, they would be willing to refer them our way.

Sramana Mitra: Did you focus on selling in the UK or throughout Europe?

Alex Fuller: Our territory was Europe although we did have a primary focus on the UK. Our territory is now global. That is one of the great things about

the AppExchange and Salesforce in general, it is very easy to expand operations. Initially, we felt that it would make sense to have a European focus.

In 2011, I spent some time in Barcelona doing workshops with some customers. There were plenty of opportunities to do regional engagements around Europe. We took those opportunities strategically but primarily for financial reasons we limited ourselves to the UK in our early years.

Sramana Mitra: To summarize, your lead efforts were a result of your own direct selling efforts and a result of the time you spent with the UK Salesforce field reps. Is that correct?

Alex Fuller: Yes, those were the main sources.

Sramana Mitra: Was there a vertical or domain that you were targeting?

Alex Fuller: Absolutely. Telecommunications and Media have historically been strong for us. We capitalize on the success that we have had in those industries by producing customized features for those verticals. Verticalization of the product has been a key aspect to our growth.

Sramana Mitra: When you talk about telecom, are you talking about very large telecom?

Alex Fuller: Absolutely. We have large telecoms such as Telefonica, Vodafone, and Tata Communications.

Sramana Mitra: What size of deals can you get from these larger players? What is your business model?

Alex Fuller: We have been successful in larger enterprise accounts. Our deals are fewer and larger rather than numerous smaller deals. We have a high

number of seat licenses and the deals tend to be in the hundreds of thousands of dollars.

Sramana Mitra: It sounds like you have a business model that supports direct sales teams.

Alex Fuller: Absolutely. We have a direct sales team established and we generate our own leads via our direct sales team. We are actively hunting down our deals.

Sramana Mitra: What is the geographical scope of your business today?

Alex Fuller: We are headquartered in London and we have an office in New York as well. We also have an office in Croatia, which is more of a delivery center covering R&D, technical, and business consultancy. We also have a team in India.

Sramana Mitra: What is your geographical scope in terms of the markets served?

Alex Fuller: In terms of product software license sales, our focus is led partly by our regional presence. The US, UK, and Europe are our primary areas. We are also engaged in Australia. Additionally, we have system integrators who have partnered with us all over the world.

Sramana Mitra: How has CloudSense ramped in terms of revenue?

Alex Fuller: We hit the million dollar mark quite early. I believe it was during our first year. We have had fast growth since. We had about $5 million in revenues at the two-year point. We are now approaching our five-year mark and have crossed $15 million dollars in revenue.

Sramana Mitra: What about financing? Is the company still self-financed?

Alex Fuller: We closed an investment round last year and will continue to look at options going forward. We are planning on aggressive growth and invest in the business heavily. Our three-year plan is based around that.

Sramana Mitra: How much revenue did you achieve before you raised your first round of institutional financing?

Alex Fuller: We were approaching $5 million in revenue by that point.

Sramana Mitra: Are you working with London investors?

Alex Fuller: One of our investors is based in the UK. However, Salesforce is also an investor.

Sramana Mitra: One of our philosophies is to tell entrepreneurs to bootstrap early and raise funds later as the terms will be more equitable. To the extent that you can, can you relate your experiences in this aspect?

Alex Fuller: I could not agree more with that strategy. One of the things to consider is how to build value in the business. One of the key things for us is that we sell SaaS, which is a recurring revenue business model. That is very beneficial in dealing with company valuations. The product side of the house made valuations interesting. A consulting company is not going to attract the same kind of valuation, if any at all.

Sramana Mitra: Between that first round of financing and now, there has been a substantial revenue growth. What are the strategic levers that

have been moved? What are the marketing strategies that CloudSense has put in place that has helped with this strong growth?

Alex Fuller: We have consistently grown our revenue year by year because of the quality of our product and what our customers have been able to achieve as a result of our product. Prior to external investment, the growth of the business was built on reinvesting profits both into R&D, to keep the product ahead of the competition, and into Sales & Marketing. As a business, CloudSense had customers using our software in 26 countries and we had built up a good number of well-known brands as customers, especially in Telecom and Media. However, we also knew that the size of the market was such that there was much more room to grow and that now is the time to maximize the opportunity.

External investment has allowed us to increase our Sales & Marketing investment to reach more companies. Our R&D investment has allowed us to create more vertical specific features that further differentiate us from the competition. We have also established a US presence with people on the ground in a number of locations, although we're headquartered in New York. We have a very good win rate versus the competition and as such our communication strategy is to raise awareness to a wider audience with relevant messaging for their industry segment. For example, it could be a hosting provider or a magazine publisher. We then ensure their journey to become a customer is expedited by dealing with people that not only know CloudSense but also their industry and can help provide leadership in achieving their goals. We have a vertical sales team with specific geographic coverage and marketing campaigns that addresses those companies that we know need our help and we can help today.

Sramana Mitra: It sounds like you really focused on verticalized selling and product differentiation with the funds that you raised.

Alex Fuller: It really was about developing our ability to sell. We wanted to create sales of product licenses. The services will follow the product license sales. We also have strategic partnerships that we did not have before. This allows us to cover geographies that our services can't reach and develop license sales in those geographies.

We have increased headcount in our R&D offices in Croatia. We have also built a marketing team in the UK and really built that team out so that we could do brand marketing. We were never able to present ourselves like that in the past. Our structure around marketing events and the way we present ourselves has dramatically changed.

Sramana Mitra: Where do you see the company going from here?

Alex Fuller: We are continuing to focus on our vertical product propositions. That is a very strategic element for us. We will be offering product solutions into other verticals as we move forward. The other aspect that is worth looking at is what we have done around the mobile space. We have the ability to deploy the intelligent rule sets and data we need into mobile devices. That allows you to run the same capabilities such as auto capture, validation, and pricing wherever you are. You can take the phone offline, talk to a customer, and then come back to the cloud later. That is a key point. The expansion into mobile functionality allows you to operate your business from mobile devices anywhere, even when not connected.

Sramana Mitra: Do you have a lot of mobile innovation on your product roadmap?

Alex Fuller: We have a group of core products but everything we do should be available on the mobile device as well.

Sramana Mitra: Thank you for your time and for sharing your story. Congratulations on your success to-date.

Interview with David Barrett, CEO, Expensify

VCs in Silicon Valley want financial levers that allow you to grow with a hockey-stick curve. Expensify doesn't have that. In my opinion, however, they have built an excellent, profitable, steady growth subscription business that has an attractive viral characteristic. The business, at some point, may accelerate naturally, but as David notes, the levers are not financial.

Sramana Mitra: Let's start with your personal background. Where were you born and raised? Tell us a little bit about your childhood.

David Barrett: I've been a programmer my whole life. I started when I was six.

Sramana Mitra: Where were you born?

David Barrett: I was born in Michigan. I grew up in a combination of Michigan, outside of Chicago and Milwaukee, circling the great lakes, if you will. I started off with videogames as most kids do. I went to the University of Michigan. I worked in the virtual reality web. After that, I went into the game industry in Texas. Basically, I've always been doing 3D graphics.

Around 2000, I had an epiphany. I discovered that in order to become a better programmer, I had to focus on the non-programming aspects for a while. C++ was a great programming language, but English is even better. I decided to set aside computers for a bit, and went into more technical writing. Technical writing is interesting because it's typically not done by someone with a technology background. It's writing user manuals.

Right now, we talk a lot about user experience and how important it is. That term didn't really exist in 2000. I realized that writing engineering specifications

is actually doing the bookends around the entire company. You're defining not just what the product is going to do, but because you have a deep understanding of how to build it, you define the product in a way that can only really be built in one particular way. Then, you write the engineering specifications to reinforce that. I found the technical writing role to be an incredibly powerful role.

Sramana Mitra: You were doing this at a company?

David Barrett: Yes, I came out to Silicon Valley and worked in a couple of startups. I joined a startup out here in Cupertino as a technical writer. I did that for a while, then I went into project and product management for a bit. I got back to programming after a while and did peer-to-peer software.

I started off a push-to-talk, video conferencing, screen sharing, and file sharing application. Right then, Skype just came out of nowhere and obliterated me. The reason that Skype came out of nowhere was because it was invented by the founders of Kazaa, the file-sharing network. Then one day, they installed Skype on 200 million desktops. It's very hard to compete with that. While I was licking my wounds from that experience, I was approached by Travis Kalanick who was running a startup called Red Swoosh. He hired me and I hired the rest of the team. We built a bunch of technology. Then we were acquired by Akamai in April of 2007.

Sramana Mitra: What did that company do?

David Barrett: It was a peer-to-peer content distribution network. It's similar to Bit Torrent, but for legitimate content. You're not dealing with pirates, so there're fewer users. It's also more profitable because you're not sued into oblivion either. Basically we had very large files that needed to be transferred

inexpensively and reliably. It's a perfect match for Akamai because that's basically what they do.

Sramana Mitra: What year did that exit happen?

David Barrett: That was in April of 2007.

Sramana Mitra: When did the company start?

David Barrett: Every overnight success is five or seven years in the making. Red Swoosh was an old company about seven years old. Travis, as you might imagine, is a pretty interesting guy. He was coming out of a startup called Scour, which has the great distinction of being sued for a quarter trillion dollars by the government. Scour went out of business.

His plan there was, "I'm going to turn everyone suing Scour into a customer." He used the same pirate technology, but built it for legitimate customers. Then the economy collapsed, and 9/11 happened. When I joined in 2005, it was five years old. At that time, it was just him. We had a lot of old technology, so we cleaned up that technology, expanded it, rewrote a lot of it, added some new customers, then we were acquired by Akamai.

Sramana Mitra: You joined that company in what capacity?

David Barrett: Titles in startups are pretty meaningless, but I was the technology guy. I guess you could call me Head of Engineering or CTO. Travis wasn't the programmer. I started off doing everything, and then I hired a team under me to help me out.

Sramana Mitra: In 2009, when Akamai acquired Red Swoosh, did you have to go to work for Akamai for several years?

David Barrett: It was 2007 when they acquired us. I stayed there for about one year after acquisition. I had already been working on the side on my new startup, which became Expensify. During the day, I was working at Akamai. I was actually fired from Akamai. I was fired in very dramatic circumstances. I was interested in the whole copyright space, and I had participated in some online discussion. I managed to get quoted in a magazine as the lead peer-to-peer engineer for Akamai. However, it came out criticizing Warner Music's new plan.

Sramana Mitra: Warner Music is a big customer of Akamai. I know that because I've talked to Warner Music and Akamai.

David Barrett: First, I had no idea that Warner Music was a customer. Second, I didn't even know that they were considering this particular plan. Rather, there was this other guy who was advocating this particular plan and I was highly critical of him. Basically, I was his lead opponent online.

The big scoop on the article was that Warner Music had just hired him to implement this plan. I was his critic and it was reported as if Akamai was criticizing Warner Music. The whole thing was a big mess. One thing led to another and I got fired. All this happened one week before my one-year cliff. I was freaking out. I was going to get fired 24 hours before I got this giant check. Thankfully, I was able to drag it hour by hour till the vesting date. Then, they fired me.

Sramana Mitra: How long did it take you to get all of this done?

David Barrett: There was no paper work involved. You just walk out.

Sramana Mitra: You said you were already working on Expensify while you were still at Akamai. What had you got done by then at Expensify?

David Barrett: I would say the first year of being an entrepreneur is really horrible. No one really talks about it. I think we're all guilty of the narrative fallacy where we look at the successful people and we trace backwards in their life. It seems like there're very clear paths that they took. The path probably isn't anywhere near as clear as it seems. My first year was very complicated.

Furthermore, for every one person who succeeds, there're a hundred people who fail using a path that was no better or worse. Things just didn't really line up for them. When you start, you really don't know what you're trying to do. You have some vague ideas. The odd thing about Expensify is that, initially, I had no interest in expense reports whatsoever.

Sramana Mitra: What were you tinkering with while you were working on Expensify while you were with Akamai?

David Barrett: Acquisitions are always bittersweet. On the one hand, we just made money and on the other hand, we worked for this other party now. I would say the frustrating thing about being acquired is that the incentives shift instantly. Whereas on Tuesday, I'm strongly incentivized to work as hard as I can to maximize the exit, on Wednesday, I am incentivized to work the least I can in order to not get fired because my compensation is fixed. I would say it's a huge radical change of going from a pre-acquisition to post-acquisition company. Even worse is that when you're working at a newly acquired company, you're still a startup. You want to go and do great things. Employees of the acquiring company don't have that sentiment. I'd say being acquired is always frustrating. I'm an engineer and can't help but optimize my scenario. I'm going to work hard because that's the person I am, but I feel bad about working hard because I recognize it's a complete waste of my time. Instead, I'm going to work reasonably hard and then after that, I'm going to do my real job.

I'm going to start a new company. I worked 40 hours a week on this new company basically.

When you first start, it's some vague idea. I concluded that I wanted to do something that solved a real problem that I personally experienced. I worked in a lot of startups where the product I built and was trying to sell was something I would never or couldn't ever use. The product made sense for only 10 companies in the world. Only 10 people actually move as much content that they really need a product. I wasn't one of them. I'm sick of selling a product that I don't actually understand and I wouldn't use.

Secondly, I wanted something that could be sold directly to individuals rather than through the enterprise sales model, which distorts priorities inside the company.

Third had something to do with money. The best way to make money is to find a way to sell money. The idea I started getting excited about was basically the prepaid debit cards space. My idea was a prepaid debit card that maintains a zero balance at all times. You could give out these cards to all your friends, families, or co-workers and put constraints on it. Every purchase they would make on your card will be billed back to your actual credit card.

I researched a lot on the technology behind it. There're some really interesting technological challenges there – extreme security requirements that required talking to the banks. I reached out to these banks and they thought it could work but it was strange and risky. 2007 was not a good year for the banking sector. I needed to sound low-risk in order to get by this compliance. I went back to the banks and said, "I'm going to do expense report reimbursements and I'm going to do this prepaid card on the side." I used the expense reporting business as a Trojan horse to launch with these banking partners who

would have never approved my primary concept. It sounds safe and boring. That's how I stumbled upon expense reports. I thought what would be the most boring thing that would make me very safe.

Since they thought they were approving something else, they went along with it. In the first year of getting through that barrier, there were many false starts. It was a very depressing and difficult time. The most important piece of advice I would give anybody while going through this difficult time where you're trying to come up with ideas is don't tell anybody. The only person who knew what I was doing was my wife. No one in my circle knew anything about the prepaid debit card space, banks, or any of the stuff that I was working on. How could they be helpful? When you ask people who don't have the ability to help to give it their best shot, they do a bad job. Most times, despite their best intentions, they just come off demoralizing. I've concluded that people can't be helpful if they don't have the capability to.

I learned this several years ago. I had this group of friends I always hung out with. I was always pitching ideas. They would say, "That's an interesting idea, David. Here're some problems you might encounter. Let me save you some time. I'm going to help you understand why you shouldn't even try."

Sramana Mitra: One thing that we absolutely strictly follow in our program is not to validate your idea with random people. The only people that matter in a validation process are the potential customers. Others are completely irrelevant including potential investors.

David Barrett: I completely agree with you. I would say it's actually more than validation. I would say there's enormous risk. You start talking about your ideas too early. When they say, "That idea is not too good", they're probably right because most ideas aren't that good, but you have to grind through that. The

grind is so depressing and tiring. If you start telling everybody else your ideas, it just makes it so much harder. If you say, "The idea that I've shared last week, I've concluded I'm not going to do it", they're like, "Told you." This is a lesson that I came to and I'm glad you're teaching it to the world. That is the most important thing in this phase. Just figure it out because if everyone had advice, they'd be doing it. If they're not doing it, their advice is no good anyway.

Sramana Mitra: Let's go back to my original question.

David Barrett: While I was at Akamai, I primarily did research relationship building. I did some very general technology building. In order to do what we do, we have this internal technology that we call Bedrock. It takes an incredibly reliable and secure database for processing financial transactions. I did a lot of high-level stuff but I didn't really work on Expensify and I didn't really want to until I'd had already left, for intellectual property reasons.

Sramana Mitra: I got the sense that you were working on Expensify while at Akamai but it doesn't sound like it. Let's get to the point where you were fired from Akamai. You're free to do whatever you want to do. You now start working on Expensify. What did you do?

David Barrett: That's when I started building it. That's one nice thing about being a technical founder. You don't really need everybody else's help. You just start on it. I worked solo until I approached TechCrunch50. I applied and I got accepted to demo at TechCrunch50 in September 2008. That's when I basically decided to tell the very first person about what I was doing. That person was who I wanted to be my co-founder and who eventually said yes.

I needed to convince at least one person to be with me because it's just too hard to do it alone. I wanted to make sure that I had something very

compelling before I asked him. I knew that I had the banking relationships in place and that I had the product design. I even had a prototype working. Furthermore, I had the ability to launch it. This is something that I learned over a long period of time. Product development is so much easier when you have a customer acquisition strategy. I wanted to be able to prove that I had some way to acquire customers before I actually even launched. I was well prepared before I had this conversation with my co-founder to convince him to join.

Sramana Mitra: Who was your co-founder? How did you know him? Why him?

David Barrett: His name is Witold Stankiewicz. He was my first hire at Red Swoosh. After I got fired, within a couple of weeks, everyone else quit. I was what was really holding that team at Akamai. They brought in some other manager and everyone else left.

Sramana Mitra: What did you tell him about Expensify? Did you tell him the whole complexity around prepaid cards, expense reporting, and banking relationships?

David Barrett: Of course, because we needed to be 100% on the same page. He would be a lousy co-founder if he wasn't interested in the details or didn't have the ability to understand them. It's absolutely important to have complete transparency.

Sramana Mitra: From a user point of view, whom were you going after at this point? You said you thought it through and planned it, so what was the plan?

David Barrett: This is where the story gets a little weird. The point of our expense reporting was a Trojan horse. We really had no intention of doing

expense reports. The plan was to launch an expense reporting system at TechCrunch50 to get a whole bunch of interest. Step one was being able to launch it all. That was what I pitched. I had the ability to actually have a good launch. What happens after that is to be determined.

I don't think we had a clear sense of the product we were trying to build, but we had a clear sense that the technology was really interesting. We were convinced that if we could just get it out there and get it in the hands of real people, then we can figure out exactly what they wanted to do with it. We launched this prototype at TechCrunch. What was interesting is we built a product that was designed to inspire the imagination. It didn't actually need to work because we intended to throw it all away. Basically, what we pitched at TechCrunch in 2008 is, "Expensify, the corporate card for the masses."

The idea is we do a special corporate card that pulls them into our expense reporting system. You can take pictures of receipts with your phone, which was a super radical notion at that time. In 2008, iPhone was still pretty new. Feature phones were actually a big deal. We were paying a lot of attention to MMS. We launched this vision of, "Now with Expensify, you can use the special card. It will import directly into your expense reporting system, and you take pictures of receipts with your phone." Funny thing about that is, for the receipt technology at least, it didn't work at all. All the phones back then were so horrible that you couldn't read any image you took of a receipt. It didn't matter because we were demonstrating a vision.

Over time, we became known primarily for our receipt scanning. It only became possible because one baby iPhone got an autofocus camera. Suddenly, this vision that we've been championing became real in a way that we couldn't have predicted. We launched this proof of concept. Everyone was amazed by

our expense reports. They say, "If I could just import my real credit card into your expense reporting system, it would be amazing." We on the other hand were trying to push our cards. The very next day, MasterCard shut us down.

We learned something incredibly powerful from that. People loved the expense reporting concept unreasonably, more than we could have possibly imagined. Had we asked anybody if we should go into the expense reporting space, everyone would have told us no. What people didn't realize is that employees actually despise their expense reports. You cannot believe how much they hate their expense reporting systems. This created an enormous opportunity that has been overlooked for a very long time. We stumbled into it through this path. We happened to have our cards cancelled. We had really no choice but to really take a hard look at it for the first time. I'd say launching at TechCrunch50 and having MasterCard cancel our cards was the best thing that could have happened to us.

Sramana Mitra: What you're describing is a journey that happens to a lot of people. They start one way and end up completely differently.

David Barrett: It's an incredibly common story, actually.

Sramana Mitra: What kind of customers did you gain traction with?

David Barrett: We did a couple of things. Most of the important things we did were, frankly, just by accident. I would say that the genius of Expensify is not that we have some great insight into the market, rather we knew we didn't know anything. It's fine to not know anything, so long as you know that because then, you're in listening mode. The challenge is when you think you know something and you don't. That's a problem.

When we entered the space, we didn't have any idea about what we're doing. I don't know anything about accounting. The most important thing that we did was have this email feature. When you sign-up for Expensify, roughly 30 minutes after the first email, you get a second email from me. It's a pure text email with no links in it. When you get these emails from me, it doesn't really look like a marketing email because it just says, "Thanks for signing up for Expensify. I'd love to hear more about you, what you do, and what you're hoping to find in Expensify." It's totally open-ended.

This was the best thing possible that we could have done, because it turns out that it arrives just after your first experience with Expensify. You're not going to reach out and share that experience, but if we reach out to you right at that exact moment with a message that's not really a marketing message, but is asking for advice, it might work because people love giving advice. We get a 12% response rate to this email. It wasn't just response but pages and pages of, "It looks like you just wrote me, but I doubt it. In the off-chance that you're going to read this, here's what I hope I would find."

All of our ideas, for years, came out of this initial email. It's what built the entire company. I think the fact that we were so willing to listen to our users and do whatever they needed, was really critical. Being open to new ideas as you go was very critical to the way that we went about it.

Sramana Mitra: After you launched at TechCrunch and after working through this market feedback, what did you learn about the competition in that market?

David Barrett: I learned the competition doesn't matter. A different way of putting it is the competition is email and Excel. It's a huge market. Everyone does expense report. Every business has expenses. It's an incredibly universal

problem. It's a huge problem and the competition has such a tiny fraction of it. I would say our major incumbent is Concur. They're like the 'Microsoft in expense reports'. They own a large fraction of Fortune 500 but as they move down market, they're really not a player. In the SMB, there's no one right now. We're focusing on the bottom of the market starting with small companies. We weren't really competing with anyone. It was competing with email and Excel and finding a way to turn this inspired vision of what's possible into a reality.

Sramana Mitra: The competition matters. There was competition in the enterprise market. From what you're describing, there wasn't competition in the low-end of the market, which is where you entered the market.

David Barrett: It didn't matter to us. Even today, we go head to head with Concur all the time as we bid against them. Most of our deals are not competitive against Concur. I'm not trying to steal Concur's customers. Concur is not trying to steal ours. We're trying to get to the rest of the world.

Sramana Mitra: To fill up the story on the side of financing, how did you finance the company? Did you use some of the money you made with the Akamai acquisition?

David Barrett: The first two years were self-funded. We just paid for ourselves. I started working on Expensify for real in April 2008. We launched in September 2008. Then we re-launched in April of 2009. This is the real Expensify, based around credit card imports. We raised a million dollars in May 2009, which is interesting because May 2009 was the absolute bottom of the depression. It was a terrible time for most companies, but it was an amazing time for us, because it was at the absolute bottom.

Things were starting to look up. VCs have to invest. Their job is to move money. There's this huge backlog of investment that just needed to move. Everyone was so demoralized by the social networks space. For us, it was a fantastic time to raise money.

Sramana Mitra: When you went into that round of financing in May 2009, what did you have in terms of milestones that you had already achieved?

David Barrett: We got a lot of great press out of TechCrunch. Then we launched credit card import. We had a product that worked and it was good. It worked for a very small company. It didn't work for big ones. The first two rounds fell onto our laps because someone came to us. Each round came because someone else was trying to preempt us. It's very helpful to enter a market when you already have a term sheet.

Sramana Mitra: From whom did you close your first round and for how much?

David Barrett: The first round was from Bobby Lent. He's the founder of Ariba. It was a million dollar round.

Sramana Mitra: That was an angel round?

David Barrett: He is a super-rich guy. It was a super angel, perhaps.

Sramana Mitra: At that point, you said you were charging subscriptions. Was anyone paying for subscription?

David Barrett: That's interesting as well. At that time, we weren't charging. In fact, we didn't intend to charge for a long time. We raised our million dollars, did our pivot and were doing expense reports. This business was going to be so easy. We raise a lot of money and spend it on ads. Those ads were going to

power a marketing theme that gets leads to the sales team. However, we soon learned that it just didn't work that way. We did a whole lot of things, but we just couldn't get customers. This is when the second really important thing happened.

Because of the receipt-scanning vision, which suddenly became plausible when the iPhone got an autofocus camera and with Apple pushing the app store at the same time, we were on the top of the receipts category in the App Store. This led to a huge range of employees installing the Expensify app without the permission of their employers. They sign up wanting to use us so badly that they force their companies to investigate us.

It became the business model that we have today. It's what we call the bottom-up adoption model where we focus on the employees first. Then the act of submitting expense report is inherently viral. Every time you submit an expense report, you submit it to someone more important than you. We basically took this zero marginal cost, massive lead generation channel through the mobile app stores. Then, we made it into this viral upsell into the company. It worked fantastically. It works so much better than all of the paid channels. We've had so many users signing up through the app stores. Now, we don't do any advertising. We have zero dollar ad budget. We don't really do marketing. We stumbled onto this highly unusual model.

Sramana Mitra: For the lead generation process, what did it entail to convert them into sales? Did you have to have a telesales person calling these people?

David Barrett: No, not even now. Initially, we didn't charge at all because we just raised a whole lot of money. It was just me and Witold. I actually hired two more people. So there were four of us. There's years of runway in the bank.

That's not really the time to be optimizing your business model. The reason we started charging was also the number one complaint we were hearing, which is that we're free. They couldn't promote this product to this company. They had concerns such as, are they going to be around? We're giving them the user name and password to our bank account, are they going to steal our money?

We had to charge in order to overcome our top objection to becoming a user of Expensify. Our business model was odd at that time. We just changed it two months ago. The first model we launched with was free for up to two submitters a month. That's because at that time, we were going after 10-person companies. We know that in a typical company, about 25% of the company will submit expense reports. By giving the two submitters for free, it ensured that the product was exactly as free as before, but we had this larger companies paying for us.

As we launched this model, all these larger companies started buying. We had no salespeople because the sales model doesn't need salespeople. The only reason that you would reach out to Expensify is because you want to buy. We never actually get into a situation where we're trying to convince someone to pay. We only deal with inbound.

Sramana Mitra: What's the pricing?

David Barrett: It's $5 per active user per month. You only charge for people who use this service for a particular month. It's very simple.

Sramana Mitra: How long after you raised that million dollar of financing did you arrive at this?

David Barrett: We started charging six months later. We just shifted around our pricing a couple of months ago.

Sramana Mitra: In 2009, sounds like you have your million dollars. By the end of the year, you also had your pricing model validated and now you are in revenue. What happens in 2010?

David Barrett: 2010 is when we raised our second round. It was a $5.6 million round. It came out of the blue. The consumerization of IT became this popular thing. The notion of using a mobile app to acquire employees inside of companies and using those employees to sell into the decision makers is so radical. Even today, there are very few companies that use our model. Our model is actually highly attuned for the expense reporting market. I don't know if it's transferable, but it really works well for us. We were approached as a poster child for the consumerization of IT. There's Dropbox and Expensify. We always get lumped into that crowd. We raised around then and then we had even more money in the bank. We hired a bit more. That was led by Redpoint Ventures.

Sramana Mitra: You had $5.6 million in the bank in 2010. What's the next major milestone?

David Barrett: I would say the constraint of Expensify is that there has never really been any, because we don't pay for our growth. As in most companies, their growth depends upon how much they can spend on buying leads. We have a lead filtering problem. We have so many incoming leads that our job is to handle the incoming volume efficiently.

Sramana Mitra: Why do you need to filter the needs? From what you described, it sounds like the system is pretty self-correcting or self-converting?

David Barrett: It is. Most of our time is spent minimizing the number of times that you will need to reach out to us. For example, it's possible that we can spend several hours dealing with a QuickBooks connection for some customer that will never pay us because this is just an individual person using QuickBooks. We want to make sure that we avoid getting trapped into spending a tremendous amount of time on people that will never pay us. We do all sorts of things like prioritize incoming messages that gives fast responses to people who are the biggest opportunities. It's pretty self-optimizing. That's why engineers are such a critical part of our model. Pretty much everything we do comes down to someone from engineering.

Sramana Mitra: How many engineers do you have?

David Barrett: We have about 15.

Sramana Mitra: What is the size of the company?

David Barrett: There're two ways of answering that. One is about 120. That would be because one of the secrets behind our receipt scanning technology is that OCR just doesn't work very well. We'll go as far as the technology goes, but then we have an army of transcription workers that will just type it in. We have about 35 people here in San Francisco, about half of them are engineers. We have another 40 people in the Upper Peninsula in Michigan. We have about 40 people in the Philippines, and we've nine in Honduras. When people think about how big the company is, they're probably referring to how many full-time employees they have in San Francisco. That's about 35 for us.

Sramana Mitra: What about revenue ramp in terms of this model of viral propagation? How does that scale?

David Barrett: It has scaled nicely. One downside with our revenue model is that it produces a very different scalability curve than most. Especially, most enterprise startups have years with no revenue and then they will spend massively on growth. They'll see this big vertical spike of revenue and even greater loss. Eventually the loss will taper off as they get the model working. This massive revenue growth, which everyone sees, is great. But they ignore that it's coming off of an even more massive loss. They get a lot of dollars but for every dollar they get, they spent $2 to get it.

Our model was incredibly efficient form day one. We always had incredibly thick margins. It produces a smooth exponential growth, which at the start is actually very slow like 10% month-on-month growth. 10% on $100 revenue seems depressingly low, but 10% on a $100,000 revenue is quite good. Then, 10% month-on-month growth is actually amazing especially if you're maintaining strong margins the entire time. For a long time, we were showing steady growth except it was never the vertical growth that people are accustomed to seeing for enterprise startups, because our model was so different.

Sramana Mitra: The question that follows from that is, in my mind, is there any lever to accelerate growth or is this just the nature of the business?

David Barrett: That's a good question. I would say that what lever there is, I think it's probably more on the brand marketing side. We're already the number one with keywords. I think that you could do this general awareness campaign that can be cost effective, but it can never be quantifiable. It's taken purely on faith.

Sramana Mitra: Beyond that $5.6 million, have you raised any other money?

David Barrett: We raised $5.6 million in 2010. We didn't raise anything again until this year (2014). It's a small round which is hard to do. It's hard for a mid-stage company like us to raise a small amount of money.

Sramana Mitra: Based on your business model, you could easily have gotten Silicon Valley Bank to write you $1 million debt.

David Barrett: We did that last year. We did that once, and we wanted $1 million more.

Sramana Mitra: Which Silicon Valley bank isn't willing to give you?

David Barrett: We had just taken debt from Silicon Valley bank under great terms. Venture debt is great if you can pay your bills. I would say we tapped out our line of credit with Silicon Valley Bank. One thing led to another and we ended up with $3.5 million because they're like, "I can't do a million but can you take two." Then, it goes to three and then, three and a half.

Sramana Mitra: Who came in?

David Barrett: Two investors. One here in San Francisco who is another super angel, if you will. He heads this firm called Coyote Ridge. They partnered up with a firm on the East Coast.

Sramana Mitra: What kind of level are you at in terms of number of users and revenues?

David Barrett: We have about 6,000 customers. What's unusual is we have everything from individuals to public companies. We have $5 a month

customers and we have $10,000 a month customers. We have a huge range of customers from different industries. We have about a million users. We have hundreds of thousands of companies that basically have users who have installed it and are promoting us internally. That's why our sales model is weird. We focus on people who are actively trying to get their companies to buy. All we need to do is convert them. All of our focus is on converting all of this interest coming in. I don't need new companies to ever sign up for Expensify. I just need to convert the ones who have signed up.

Sramana Mitra: Very interesting. Congratulations! I really like what you're doing. I tend to like companies that are focused on profits rather than pure growth. Thank you very much.

How To Navigate The World of 'Fat Startups'

These days, we focus a lot more on lean startups than startups that require capital to get going. However, fat startups still play an important role in developing large-scale success stories with significant defensible competitive advantage.

The bulk of the industry has moved away from the 'fat startup' category. Investors expect that you will have your product launched, customer acquisition model fleshed out fully, and a team in place before Series A.

However, infrastructure software, hardware, networking, chips – they need capital. Even in cloud software, to build complex technology like personalization and analytics requires some serious investment.

While in the 1M/1M program, we steer people mostly along lean startup paths, I have pondered and investigated the question: How do people fund 'fat startups' these days?

I am seeing a few trends:

One, you need track record to get VCs to write big checks right away, so, often, it is the serial entrepreneurs who get these opportunities.

Two, some VCs incubate such companies with their Entrepreneurs In Residences, who are typically serial entrepreneurs.

Palo Alto Networks is a leader in cloud security. Founded by serial entrepreneur Nir Zuk, the company managed to pull off a concept financing round of $9.4 million to get itself going.

Prior to Palo Alto Networks, Nir was the CTO at NetScreen Technologies, which was acquired by Juniper Networks in 2004. Prior to NetScreen, Nir was co-founder and CTO at OneSecure. Nir also served as a principal engineer at Check Point Software Technologies, where he was a lead developer of inspection technology.

Juniper acquired Netscreen in February 2004 for $4 billion. Nir had strong feelings about what was happening at Juniper once he got there, and recommended that the company built a new Firewall product.

"Pretty much the entire world was using technology that we invented at Check Point in 1994. It just did not make sense to keep using ten-year-old technology. Hackers did not sleep for ten straight years, although anti-virus vendors did. It got to the point that firewalls were not really doing anything, and everybody knew that firewalls were not doing anything. Despite that, 80% of the network security budget was spent on firewalls and 20% of the budget was spent on anti-virus products that stay behind the firewall.

As an entrepreneur, I recognized that there was an opportunity. I wanted to build something that would cover 100% of the market. I asked Juniper for $10 million and 25 people to build a new firewall based on the Juniper operating system. I did not even hear an answer back, so I left. I raised $9.4 million from Greylock and Sequoia. We hired 20 people, some of whom were people that I wanted to work with on the project at Juniper."

It was pretty much concept-financing, he says. "I had five PowerPoint slides, and the next day we had a term sheet. Of course I had connections and background, and I was dealing with top-tier VCs."

Palo Alto Networks started selling the product in August 2007. Bookings shot up to $100 million in 2010. The company spent $49 million to get to cash flow positive, and went public in July 2012 at a valuation of $2.8 billion. In 2014, its market cap is over $6 billion.

Obviously, the path this company followed to arrive at these impressive numbers was not a lean startup methodology. Nir hired 20 top notch engineers right here in Silicon Valley – a very expensive proposition – to get the company off the ground. With deep domain knowledge, they achieved product-market fit early on, and revenues skyrocketed.

Nir made those choices because he could. VCs were willing to write a $9.4 million check to bet on his domain knowledge and track record as a serial entrepreneur in that domain.

For first time entrepreneurs, the options are more limited.

The most viable option is to bootstrap using services. The Datasong case study elaborates on the subject. I have also published a book on that topic.

Deep domain knowledge in a certain field may also give you access to capital.

A coherent, high-powered team that is willing to work for equity and build a prototype, along with a clear vision of product, customer need, customer acquisition model may, sometimes, work as well.

A few examples:

Ash Ashutosh is a serial entrepreneur who worked as an EIR at Greylock, a top venture firm, and once he scoped out the market need, Greylock gave him the money to build the product. In effect, Actifio, Ash's fat startup, was incubated inside Greylock, the venture firm.

Andres Rodriguez, founder of fat startup Nasuni, has deep domain knowledge in storage and he is a serial entrepreneur with track record. Raising money was based on those two core factors.

Alon Maor, CEO of fat startup Qwilt, demonstrates an interesting use of bridge financing with Series A (typically, the first institutional round of financing) already negotiated. The product was released 20 months AFTER Series A, which means, the Series A financing happened without much other than a clear vision of what the product was going to be and feedback from customers that they wanted the product.

Alon says, "In our case, since we are approaching the carrier space which is a large software-based capital intensive project, the incubation we did was through 15 worldwide carrier references. We had endorsements from those carriers who said they were behind the idea and recognized our approach as the future of the market."

Alon did something very nifty. He went to Silicon Valley VCs and sold the concept, got an idea that they would be willing to fund his Series A based on the proven customer interest. He also put together a high-powered team of 10 people with deep technical expertise ready to join upon funding.

Then, and, here the story gets really interesting, he went to a set of angel investors who knew him from prior companies, and raised a seed round as a bridge into the Series A.

Complex? Yes. Smart? Yes. I would say, very smart.

In this case, funding happened because of a combination of factors: domain knowledge, customer interest, VC interest, and evidence of a strong team ready to come on board post financing.

Austrian entrepreneur Alexander Zache has deep domain knowledge in Art Auctions. He is a first-time Internet entrepreneur from a family steeped in the arts business. He managed to raise series A financing from VCs in Berlin on a slide-deck that explained the core concepts, including a phenomenally lucrative business model: Auctionata takes 20% commission from Buyers and 20% from Sellers, competing head-on with Christie's and Sotheby's.

Alex says: "Yes, and we have a very credible strategy for bringing that business online. When I look back at that presentation today, I can see that we have executed exactly what we said we would. We have also hit the revenues exactly as we said we would."

Please note, there are certain VCs who are particularly good at these kinds of investments, especially Asheem Chandna and Vinod Khosla come to mind in the IT infrastructure space. Asheem Chandna's investment in Delphix is a good example of funding a fat startup based on a concept. Delphix was founded in 2008 by entrepreneur Jedidiah Yueh who had earlier founded and sold data de-duplication company Avamar to EMC for $165 million. Vinod Khosla is one of the very few VCs who have not abandoned his interest in Cleantech, a capital-intensive industry where the lean-startup model has limited applicability.

While the industry is obsessed with lean startups these days, I believe there is tremendous value in understanding how to continue to build fat startups as well, alongside the lean ones.

Interview with Nir Zuk, Palo Alto Networks

Nir Zuk has built what has come to be referenced as a Unicorn company – a company that succeeds in creating a billion dollar exit valuation or market cap post IPO. The company was built as a fat startup, with concept financing of $9.5 million. It is an infrastructure company that powers cyber security and has come to dominate the market.

Sramana Mitra: Let's start by reviewing your background. Where are you from?

Nir Zuk: I was born and raised in Rehovot, Israel. The Weizmann Institute of Science is there; it is one of the top research institutions in the world. As a result, Rehovot is a very scientific town. I was exposed to science throughout my life.

Sramana Mitra: Were your parents affiliated with Weizmann at all?

Nir Zuk: No, my mother was a school teacher and principal and my father was an engineer.

Sramana Mitra: What did you do as you were growing up? What was the path that led you to where you are today?

Nir Zuk: I always liked technical themes. When I was in fifth grade, I received my first computer. I taught myself how to write code and I started to develop software. When I was fifteen I received my first PC and continued programming. Like everyone in Israel, I had to go into the military. I did that service from 1990 to 1994.

Sramana Mitra: What happened after you came out of the military?

Nir Zuk: In the army I had computer jobs in Israeli intelligence. In parallel, I was studying mathematics. A bunch of guys from my unit started a small company called Check Point Software. A few years later when I left the military they recruited me to go work there, so I was one of the first employees at Check Point. Today it is a $1 billion–plus company. In 1997, I came to Silicon Valley when Check Point started an engineering group here. Eventually the company became too big for me, so I left in March 1999.

Sramana Mitra: When you left Check Point, did you know what you were going to do?

Nir Zuk: I knew I wanted to start a company. I was looking for a good idea and ended up starting a company in early 2000. It was called OneSecure and it built the first intrusion prevention system in the world. That is a device which complements the firewall.

Sramana Mitra: How did you start OneSecure?

Nir Zuk: A friend introduced me to Rakesh Loonkar, who was also looking to start a company. He had a term sheet for $25 million to start a company, and he was looking for a technical person to help him start it. It was very easy to get $25 million back then. You really did not have to do anything.

Sramana Mitra: No kidding! What was the concept behind the company?

Nir Zuk: The idea was to build a security device and offer it as a managed service. We built a service and found it challenging to get customers. We did have a few customers, but they were mainly service providers.

Sramana Mitra: Why was it so difficult to get customers at OneSecure?

Nir Zuk: A few months after we started the company, the [tech] bubble burst. Companies suddenly started watching their money. I also believe there was another key factor. At the end of the day, our managed service would replace the work that was done by individuals within the company. If someone else manages your security, it saves a lot of time and money, which sounds great, but we did not take into account that by doing that we were eliminating the jobs of the individuals who would recommend our service to their employers.

Sramana Mitra: Within the enterprise, whom were you selling to?

Nir Zuk: We would sell to the security group or the networking group. Our service had the potential to eliminate jobs in that group.

Sramana Mitra: There should have been a boss of those groups whose job would not have been eliminated.

Nir Zuk: Yes and no. The thing about security is that they like to build and manage empires. They are not interested in giving their empires away.

Sramana Mitra: What did you do when you realized that the premise of your company would not fly?

Nir Zuk: We burnt money. It was easy to burn $25 million.

Sramana Mitra: You burned $25 million and then figured out the business would not fly?

Nir Zuk: Yes. We then raised more money. Some of our existing investors re-invested and we found some new investors as well. It was the 2000s, after all!

Sramana Mitra: Did you decide you were going to do something else at that point?

Nir Zuk: Yes. We decided we were going to stop selling it as a service and start selling it as a product. First, we reduced the size of the company. We did not need the service people and we did not need as large of a sales force. We focused on productizing the technology. It took us from July 2001 until the end of 2001 to make the switch from a service-based company to a product-based company.

Sramana Mitra: Did you validate your new proposition before making the strategic shift?

Nir Zuk: Not really. We did validate with a few customers. I think the process of validating before going to market is great and you can do it, but if you look at a lot of great companies their path was different. Their technology was so disruptive and unique that it could not go to customers first.

Sramana Mitra: Who were the customers that you did validate the product concept with?

Nir Zuk: Some of our existing customers. Usually in our space, you focus on large financials. If you win them, you win the market. We did not go out and do a big market validation.

Sramana Mitra: There are always product visionaries when it comes to high tech, and if you know who they are you can have validation without doing a massive validation operation.

Nir Zuk: Certainly. We did a validation, but there are various types of validations. We did not do the type of validation that you see product managers trying to do. We did not go out to customers, showing them the complete feature list. We did know that customers had a pain point with our previous service model, so we had a basis for our evolution. We already had validation

of the pain point, and some validation that our method to ease the pain would work.

Sramana Mitra: When you did your validation, did you find any other pain points?

Nir Zuk: The major pain point was that companies were spending a lot of time and money on network security and monitoring security events on their network. They did not have the capability to stop security events. Companies would learn about a security breach well after it had happened. They then had to work to remedy the incident. That would often require a significant amount of work because they had to go to every single machine that had been hacked and fix it. If companies are able to prevent attacks, they eliminate a lot of the need to monitor things.

Sramana Mitra: Nobody had an intrusion prevention system before that?

Nir Zuk: There were intrusion detection systems but not intrusion prevention systems. The detection systems only had to worry about monitoring, whereas when you build a device that prevents attacks it must be built to sit inline with the stream of traffic. It is a much more robust device.

We started selling our system in the beginning of 2001. We sold it for two quarters. The first quarter we did $400,000 in revenue and the second quarter we did $750,000 in revenue. By the end of the third quarter we had been acquired by NetScreen.

Sramana Mitra: How much money did you end up raising for OneSecure?

Nir Zuk: We ended up raising $50 million, and we sold the company for about $50 million. We sold the company in such a way that the investors received some of the proceeds. The employees received a much larger portion of the proceeds. We had earnouts, and back then the stock of NetScreen was depressed. We sold the company for about 5% of NetScreen. The people that stayed with the company received another big chunk of stock, so in total it came to about 8% of NetScreen. Three years later NetScreen sold to Juniper for $4 billion.

Sramana Mitra: How long did you stay at NetScreen?

Nir Zuk: I stayed through until it was acquired by Juniper. I was able to stay at Juniper for only eleven months, which was actually longer than the other executives lasted. I was the chief technology officer at NetScreen.

Sramana Mitra: While you were the CTO of NetScreen, did your IPS vision become a big part of the revenue stream?

Nir Zuk: It did become a big part of NetScreen's revenues as well as its message. However at some point NetScreen stopped paying attention to that solution because we had several more urgent issues, particularly with network management. My company had a lot of people with experience in management systems, so we took those people and built a network management system.

As a result, the intrusion prevention product did not get as much attention as it should have, and that continued into Juniper. Right now Juniper's IPS is considered one of the worst in the industry because it has not changed in five years. It went down from being one of the top three solutions to being the bottom solution on the market.

Sramana Mitra: How did it make you feel to watch your IPS drop to last in the marketplace when you were at Juniper?

Nir Zuk: I did not like Juniper at all. The first day after they acquired NetScreen they came and explained to us that we did not know what we were doing and that they needed to teach us how to do sales, marketing, and engineering. Juniper is a great company, but they really screwed up that acquisition.

They acquired NetScreen in 2004, and I left in February 2005. Before I left I tried to get them to start a project to develop a new type of security device. Juniper was in the process of taking NetScreen technology and converting it into Juniper products under the Juniper operating system. I tried to make that case that if they were going to do such a large engineering effort, they should build a new firewall because it did not make sense trying to do the same thing that had been done for the past ten years. For various reasons they chose not to pursue a new firewall.

Sramana Mitra: Did you make that recommendation because you saw a new opportunity?

Nir Zuk: Pretty much the entire world was using technology that we invented at Check Point in 1994. It just did not make sense to keep using ten-year-old technology. Hackers did not sleep for ten straight years, although anti-virus vendors did. It got to the point that firewalls were not really doing anything, and everybody knew that firewalls were not doing anything. Despite that, 80% of the network security budget was spent on firewalls and 20% of the budget was spent on anti-virus products that stay behind the firewall.

As an entrepreneur, I recognized that there was an opportunity. I wanted to build something that would cover 100% of the market. I asked Juniper for $10 million and 25 people to build a new firewall based on the Juniper operating system. I did not even hear an answer back, so I left. I raised $9.4 million from Greylock and Sequoia. We hired 20 people, some of whom were people that I wanted to work on the project at Juniper.

Sramana Mitra: When you went to raise money, was it purely concept financing?

Nir Zuk: More or less. I had five PowerPoint slides, and the next day we had a term sheet. Of course I had connections and background, and I was dealing with top-tier VCs. When I look at VCs, I prefer to work with ones who have been entrepreneurs. Those MBA types do not always understand reality.

Sramana Mitra: How long did it take you to get the product out?

Nir Zuk: We started working in January 2006. It took us one year and three months to get our beta version out. We knew we wanted to build a new type of firewall, but we were still missing the go to market strategy. We did not know how to go to companies that had invested tons of money in firewalls and convince them that this little startup from Silicon Valley had a product that was significantly better. That was a huge barrier.

We then devised a go to market strategy which was to build a device that sits behind the firewall that customers would find compelling enough to purchase, and later on we would go ahead and consume the firewall. Some customers bought it as a firewall, but most did not.

Sramana Mitra: What did your new product do if it did not replace the firewall?

Nir Zuk: The fact is firewalls could not see the traffic. They looked for IP addresses and port numbers. A lot of applications were built in such a way that they would bypass the firewall by going through port 80 or 443. The firewall was not able to differentiate.

Sramana Mitra: Who were your first customers? Were they in the financial industry?

Nir Zuk: No, the finance industry is hard to get into. Our first customers were high-tech companies here in Silicon Valley. One of our first customers was SanDisk, a cutting-edge company. We also had Constellation Energy, a Fortune 500 company on the East Coast. We found that new customers came on quickly because companies started to recognize that their existing solutions were not solving the problems they were facing.

Sramana Mitra: What changed?

Nir Zuk: We became pretty good at convincing customers to evaluate our product. We would get them to commit to having our product on their network for one week, in a completely unobtrusive way. Once they had our appliance on the network, they were able to really see what was going on. We had compelling marketing and great customer references. Once you have that, it is like a snowball.

Sramana Mitra: What happened after you gained your first few customers?

Nir Zuk: We spent most of 2006 working and started selling the product in August 2007.

Sramana Mitra: How have your sales ramped up?

Nir Zuk: Today our bookings run-rate is north of $100 million. Our plan is to more than double revenue in 2011.

Sramana Mitra: What is an average deal size?

Nir Zuk: We have many six figure and even some seven figure deals happening every quarter now. In the early days we sold directly even though we are a company that conducts 100% of sales through channel partners. My people had to do the hard work in the early days to build momentum for our channel partners. Today, most deals come from partners.

Sramana Mitra: How long did it take for you to build up your channels?

Nir Zuk: Our channel partners were interested even before we had a product ready to sell. We were completely stealth about what we were doing, so the only people who knew what was going on were people whom we had worked with in the past. They were people who had sold for us at Juniper and Check Point.

Sramana Mitra: However, your product was behind the firewall, so you were not going against Juniper and Check Point, correct?

Nir Zuk: In the early days we were sitting behind their products. We did not want to wake those companies up or provoke them. We sold our product as a complementary item. Our channel partners were having problems making sales with Juniper because Juniper was taking a lot of sales directly. Check Point kept squeezing their channel parnters as well. That led to us getting a good number of hungry channel partners.

Sramana Mitra: What is the next big milestone or inflection point in the history of Palo Alto Networks?

Nir Zuk: Until the beginning of 2008, we were running the company with an interim CEO. At that point we realized we needed a professional CEO. I have seen the process of bringing on a CEO work in some companies and fail in others. We, as founders, had to recognize that we were not necessarily the best people to actually run the company.

Dave Stevens was brought in by Sequoia. We wanted to have a business partner and we spent a good deal of time in our search. We did not just meet with potential CEOs; we tried to sit down and work with them. Our business plan was not complete at the time, so we would have them work on that with us. I did believe the company had some key values and I wanted to make sure the CEO shared those values.

Sramana Mitra: What were those values?

Nir Zuk: One value which was hard to find someone to support was that we, as a company, would be 100% U.S.-based. It was very important for me that we did not offshore or outsource. We do all our development and manufacturing here. That was important to be for several reasons. I am a U.S. citizen, even though I did not grow up here. I want to support the United States, not India and China.

I believe that it is a social responsibility of entrepreneurs who were educated in the United States, or learned how to be entrepreneurs in the United States, to give back to the United States. They should not take their skills to China or India. The second side of that is that I just do not believe in offshoring. In the early days of a company, everybody needs to be in the same building. It is easy to find a partner who says they will share that philosophy. It was hard to find a partner who would make that fight with investors.

Sramana Mitra: Was it a lot more expensive to do it all in the U.S.?

Nir Zuk: I think it is cheaper to do it here rather than to offshore it. The perception is otherwise, and it is hard to convince investors. We built a product with 25 engineers that is much more feature rich than anything our competitors have.

Sramana Mitra: Cost of development is also attributed to quality design. Perhaps you gained significant savings because of that?

Nir Zuk: We saved money because we were able to hire extremely high quality engineers in the United States. You can't hire the same quality of engineers in China or India. You can find them in Israel, and you can find them in parts of Europe.

Sramana Mitra: There are plenty of successful Indian companies that have done extremely complex software engineering tasks. Zoho has a thousand engineers and has replicated the entire office suite.

Nir Zuk: You don't need a thousand engineers to do that. I heard the exact same story when I started this company. Check Point has 600, Juniper 1,000, and Cisco 3,000 engineers working on their security products. I have 60 engineers today, and they are all in the United States. We are competing very successfully against all of those companies with a fraction of the number of engineers.

Sramana Mitra: I definitely agree that you do not need an excessive number of engineers.

Nir Zuk: Yet that is what ends up happening when companies go to India. Companies hire thousands of engineers because they can afford it.

Sramana Mitra: Yes, they do hire more engineers there because they are more affordable. However, if you wanted to find 25 high-quality engineers in India or China you could do it. I cover that space extensively and can give you thousands of successful examples. You are right that companies starting out of India and China struggle and that is because they do not have the product marketing skills and go-to-market strategies. They are too far removed from the customer base.

Nir Zuk: It will be extremely hard for you to retain them in India. I know only the space that I compete in, and every company that has used that model has failed. There is not a single successful company in that space. Juniper failed in that model. When they acquired NetScreen their engineering was almost 100% U.S.-based. Today, they are almost 100% based in India and they can't compete anymore. Startups in our space have failed using the same model. My philosophy is that you need to be where the market is. I believe very strongly that in the early days of a company it all needs to be in one space. That is another key aspect of my philosophy.

Sramana Mitra: I don't think the entire company needs to be in one spot. The design team needs to be close to the market. Management of your development is a skill set. If you do product architecture, product management, and product positioning close to the customer, then you can do development offshore if you are good at management. I think what is important out of this is that you found investors who shared your values and strategy.

Nir Zuk: Yes, it was very important to me. Another value I had was to only hire extremely good engineers. That means spending money and equity on

engineers. I had arguments with my investors on it. I don't do business by giving engineers 0.1% of equity.

I met a bunch of potential CEOs who came from large companies. They immediately started talking about building a team, and we did not even have a product yet. I needed a CEO who was willing to get his or her hands dirty. We needed an early-stage CEO who understood that they would later be replaced once the company became successful. That happened in 2008.

Sramana Mitra: How did that transition go?

Nir Zuk: It went OK, but our early-stage CEO left before we had a new CEO in place. As a result, our VP of marketing stepped in as CEO and left the company as well once our permanent CEO was hired so that he could go be a CEO at another company. We had a few issues with lead generation. Few companies fail to recognize that lead generation is the most important aspect of marketing, and our new VP of marketing is extremely good at lead generation.

Sramana Mitra: Today, does Palo Alto Networks still sell just one product?

Nir Zuk: Yes, although we have added a lot of features to it. We have mid-range and low-end platforms.

Sramana Mitra: How much money have you had to raise to get this company running?

Nir Zuk: We have burned a total of $49 million to get to a cash-flow positive position. That is unheard of for a systems company, and we are doing it all in the United States. We raised more money than we needed. Our first round was $9.4 million, which got us through our prototype and to shipping of the first

product. We then raised $18.6 million, which was easier to do because we had good customer feedback by then. The second round took us through our second year, followed by a third round in which we raised $26 million. When we closed that round the market started going south. The round was oversubscribed, so our investors told us to take an additional $10 million on that round just in case. In total, we raised $65 million and have used only $50 million of it.

Sramana Mitra: Now that your company is generating cash, how do you view your available market?

Nir Zuk: I think we will reach the point where we are doing $1 billion in sales. Right now, we have 2 percent of the firewall market. About 70 percent of our business is replacing firewalls and the other 30 percent of our business is replacing other devices in the network that supplemented firewalls and are no longer needed. Typically, our customers save 60–80 percent of their network security budget over three years. We offer customers not only innovation, but cost savings. You can't build a company on cost savings alone in our market.

Sramana Mitra: What are your plans for the future? I don't know that you can get to a billion dollars in sales off one product.

Nir Zuk: Not one product, but we can get there in one market. My goal is to get there in less than five years. Our plan is to go public, but we have to do it at the right time. The right time to go public will involve many factors. There is a board to consider. The market needs to be ready. I don't want to go to public too early and become an acquisition target.

Sramana Mitra: You are fortunate because your company has not been around a long time. You can take another three or four years because your investors are not itching yet.

Nir Zuk: That is true. The way companies are being valued in public markets depends on revenue. Doubling sales does not always double the value of the company because of other factors. A company with a billion dollars in revenue will be treated differently. Going public is a milestone, not a target for me. The main reason to go public is to have currency to grow via acquisition and other means.

Sramana Mitra: What percentage of the company do you still own?

Nir Zuk: Between 5 and 10 percent. I think that is the right level. It was very important to me that our early employees and engineers get compensated well which meant I needed to give up equity. I am fine with that. I believe that when you spread the wealth it pays back.

One thing we do not allow at Palo Alto Networks is egos. There are companies that hired the best engineers in the Valley and later found out they have egos the size of the moon. At Palo Alto Networks, everybody does everything. When I hear somebody say "this is not my job" I will take them at their work. We need people who do everything. We don't hire people because of their political skills.

Sramana Mitra: Human beings are inherently political and social.

Nir Zuk: There is no way to avoid it, but there is a way to delay it and mitigate it. I see my role as a founder of the company to delay it as much as possible. I don't allow people to play politics. Small teams help, but they are not always

possible. There have been a few politicians who had to leave the company. Right now, it is manageable.

Sramana Mitra: Good luck, this is an excellent story!

Note: Palo Alto Networks started selling the product in August 2007. Bookings shot up to $100 million in 2010. The company spent $49 million to get to cash flow positive, and went public in July 2012 at a valuation of $2.8 billion. In 2014, its market cap is over $6 billion.

Interview with Sunny Gupta, CEO, Apptio

One more look at what it takes to build a fat startup. Sunny Gupta discusses Apptio. The company raised a $7 million Series A to get started, and then went on to raise over $130 million thus far.

Sramana Mitra: Sunny, let's start at the very beginning. Tell us a bit about yourself. Where were you born and raised? What kind of circumstances? Give us the backstory of the Apptio story.

Sunny Gupta: I was born in India in a town north of New Delhi. I went to school there and lived in New Delhi till I was 19. My father was in the government services. This is in the late '80s and I didn't feel, from a career perspective, that there were that many career options. My mom's family had some history of entrepreneurship. My dad's family was in the government or in administrative jobs. We grew up in a very modest family – three brothers and I was the youngest one. We were very close. We inherited our mom's side of the genes on wanting to be entrepreneurs. We always talked about that while growing up. We also had a big culture of debate in our family. My father always encouraged the culture of debate and just asking the next question and the next question.

When I was 19, I wanted to do something different. I didn't feel that there were any great entrepreneurship opportunities for me in India. I ended up immigrating and coming to study Computer Science at the University of South Carolina back in 1989. The reason I went there is because they gave me a scholarship. My father really couldn't afford my education that much. My father gave me $2,000 and a plane ticket and said, "That's pretty much all that I

can afford." There was an American family who my father knew so I could go stay with them for the first six months and save on my boarding. I had enough money to buy my books and barely enough to pay for my food and stuff in the 1st semester.

I finished my Bachelors in three years and did a minor in Mathematics. I worked very hard -50 to 60 hours in a week. I was a resident assistant. I was cleaning dishes, working in cafeterias, and moving houses. I also became an intern to the President of the university. Through scholarships and working hard, I graduated with a 3.9 GPA. Those were probably some of the most incredible experiences that I had. Just being out here on your own and not having any funds at your disposal, that fuelled the fire of succeeding and being an entrepreneur while still at college.

From there, I worked at IBM. That was my first job. I worked as a software engineer for two years in Florida. That was an amazing experience. When I graduated out of college, I had a job offer from Microsoft and one from IBM. IBM was offering me a software developer job and Microsoft was offering me a testing job. I felt like I wanted to be a software engineer. I always regretted that decision in hindsight. I felt that sitting in a cubicle every single minute and not interacting with people was not what I wanted to do for the rest of my life. I also felt that my career was developing at a much slower pace. IBM had layers and layers of bureaucracy.

So I joined another software company in Boston. They were called Easel. They were a 300-person software company. That was a great experience. I transitioned my career into software consulting. I wanted to have customer interaction and met with 50 to 60 customers. That really excited me. I was there for two years. Again, I realized that the company was having some problems. I

also felt that my career was going to move at a snail's pace. I was looking for dramatic ways to grow myself and if I'm in the corporate side of the world, it'll just take me forever.

Back in 1996 was the first time I stepped out and started my own company called Bigger Technology with a couple other co-founders. I was based in Atlanta at that time. In less than a couple of years, we were acquired by a company called Rational Software. It was literally 18 months into the life of the company. We had no venture capital. That was an amazing experience. I ended up moving to Seattle in 1998 and worked at Rational for seven years. I transitioned my career into more of business development. I was leading a big part of business development. I was involved in selling Rational to IBM at that time and worked on some really interesting elements. I felt that I grew up there from a career perspective.

I left IBM and joined a local Seattle-based venture called Performant as a business guy. I stayed there for 18 months and sold that business to Mercury Interactive. Once I went to Mercury, I transitioned into a product role. That was incredible because a lot of my learnings around being close to the customer started applying there. I stayed there for 18 months. At that time I really felt that I didn't know much in the first startup I'd done in 1996.

When I was in Mercury, I felt I had learned a lot and was ready to be a CEO and an entrepreneur again. I started my own business in the data center automation space called iConclude in 2005 and raised capital. We got 25 customers including Goldman Sachs. Mark Andreessen and Ben Horowitz came knocking on our door and said, "This is pretty disruptive technology." They bought our business in less than two years of the company life for over $70 million. It felt like there was unfinished business because I felt it could

have been a really big company. It was in the data orchestration space. We had nailed the product market fit right but didn't have the sales scale experience. It was a life-changing event for me personally. I decided to sell the business.

I went then and ran products for Opsware and then we sold that business to HP six months later. I had no desire to go to HP. I was talking to many customers. The office of the CIO at Goldman Sachs asked me what I was going to do next. I was thinking of going into the venture business but I really had an unfulfilled desire to build a company of substantial scale. I was 37 at that time. I asked the customer what they were struggling with and they started describing the concept of what Apptio is today. I came home and validated the concept. Then in the fall of 2007, we started what is Apptio now. Long story, but I just wanted to bring you up to speed on the Apptio front.

Sramana Mitra: Tell me more about the concept of Apptio that you were going to start with.

Sunny Gupta: When I was sitting at the office of these CIOs at Goldman Sachs, they said something pretty interesting to me. They said, "Look, IT is becoming more strategic." They also saw the cloud coming. This is now in 2007 where the cloud isn't at the same level where it is today. They said, "The role of the CIO is changing. We've been too focused on running the technology itself. We've also been putting business systems in place for all other functions in the enterprise. We put the sales CRM for VP of Sales. We put finance systems for the CFO. We are starting to put marketing systems for the CMO."

Interestingly enough, the IT leader has no equivalent business management and analytic system to run the business of technology. IT is at a scale of complexity that a lot of customers are managing $10 billion in technology expenses.

Smaller customers are managing $10 million or $100 million. The CIO basically said, "We don't run our personal finances in spreadsheets. We use personal financial management software. Interestingly enough, we have these really large strategic IT shops and the growth of technology is mind-blowing but there's no business management system or analytic system for the office of the CIO while the CIO has been putting a business system in place for everybody else. It's the cobbler's children having no shoes.

That was really the genesis of Apptio. I asked them, "What do you mean by a business management system? What problems are you trying to solve which you are not able to solve today?" They said, "We are becoming a service provider to the business. We are delivering services, computer, storage, and applications. We are delivering end-user computing, mobility, desktops, and telecoms. We need to be able to understand the fully loaded cost structure to deliver these services. What part of that cost structure is fixed versus variable, direct versus indirect? How does a CIO deliver a bill of IT to the businesses?"

The business goes and buys something from Amazon they get a bill from Amazon. But IT is not able to deliver a similar type of bill for what they're consuming. The IT shops are not able to benchmark themselves relative to other people in the industry. They're not able to make business decisions like what workload to move to the cloud and other business decisions impacting technology. That's really the problem statement which was described to me in that meeting with Goldman Sachs.

Sramana Mitra: This was in 2007?

Sunny Gupta: In 2007, yes. By the way, the economy hasn't gone south yet. The Wall Street crisis didn't really hit until 2008. We were validating a business

in 2007 where people were starting to feel the pressure of the economy a little bit.

Sramana Mitra: You got this input from the CIO of Goldman Sachs. Did you go talk to other CIOs in the financial sector or other CIOs in general?

Sunny Gupta: Yes. I came home back to Seattle. On a long flight back, I thought, "This is the most ridiculous idea I've heard because it's too easy. Why hasn't it been done?" Having sold to a lot of large customers, I felt that building a company just based upon one customer's data point is a disaster. That's where a lot of entrepreneurs go wrong. I believe in deep customer validations and whatever I did next had to be a big category idea. To do that, I wanted to go talk to at least 40 IT leaders.

For the next three months, I and my co-founders talked to at least 40 companies. I had good relationships with financial services, so I spoke to three or four financial services. I also wanted to make sure that I spoke to a lot of small companies in different verticals – healthcare, technology, airlines, financial services, and government. I also wanted to talk to customers in different geographies – Seattle, San Francisco, and New York – because you get a very different perspective from customers in New York and San Francisco. I wanted to talk to customers in Chicago, St. Louis, and Texas just to get a broad spectrum. I didn't want to build a company based on one customer.

Sramana Mitra: In what you said, everything made sense to me. It's all great strategy to get this triangulation across different types of customers. The only thing that caught my attention is that you said you

wanted to talk to small companies. Small companies would not have the same scale of problems for this particular issue.

Sunny Gupta: The reason is at some stage, if you only focus on the big companies, over time the market limits your growth. I knew that big companies would help me get to a $100 million to $200 million run rate. I wanted to make sure that this was a problem which was felt by companies whose IT budgets were $10 million to $50 million – not only companies whose IT budgets were a billion dollars.

By small companies, I didn't necessarily mean a two-person shop or a five-person shop. I wanted to talk to companies that were half a billion in revenue who felt like they have the same challenges. I felt like I could have a product that could be sold to thousands of companies as opposed to a 100 or 200 companies.

Sramana Mitra: Given what you just presented, I assume you have a pricing structure. You came up with a pricing structure that could then play not only in the very large enterprise customers but also in the mid-market?

Sunny Gupta: Yes. To be honest with you, pricing is something that I had some initial theories on. I've reverted to our original pricing model. Our pricing model is based on spend under management. We have multiple modules and applications and each application is priced by spend under management. It's really a factor or a vector of complexity more than anything else. A $10 million IT shop can get started for smaller than what a larger IT shop would get started for.

In the first 18 months of the company, I experimented with two to three different pricing models of the business based on the complexity of the infrastructure, how many assets they have, how many IT employees they have, and how many data volumes we were taking from the customer. We realized that it was too complex for a customer to understand the value and correlate the value. I remember sitting in front of 10 customers at one of our customer advisory board meetings. I asked them about the pricing strategy. They basically said, "Come up with something that is easy to understand and correlates to the value. It's not different from how a personal financial manager charges you." Even companies that sell into HR charge based on the number of employees. Just come up with a vector of what you're really managing in the system and that's a very easy vector to scale up and down. In that way, the smaller company is not paying the same and the bigger company can pay you more.

Sramana Mitra: My next question is, you had this input from Goldman's CIO and then you went and triangulated that from various CIOs with different perspectives. By the time that you got a sense that this is a real problem, what did you do next? Did you raise money? How did you get the company off the ground? What was the thought process behind those decisions?

Sunny Gupta: Having done my previous startup, I knew these startups are all consuming and once you get into it, it's a very long term commitment. I wanted it to be big. The most important thing I did was to validate the product and market idea. The second was creating product mock-ups. We created a level of mock-ups where they could touch and feel the analytics, product, and the cost modeling.

The third thing I did was I asked 8 to 10 out of the 40 people I've talked to if they would be willing to pay money for the product. I've found in my past experience that advice is free. A lot of people are willing to give you free advice but I wanted to test the conviction whether they're willing to write a check from their companies. We even made three customers sign an LOI. That gave me very strong conviction that this was a need and that they were not doing it as a favor to me.

Then came the assembling of the team and fund-raising. Those were the two most important things. Assembling the team was very easy because I had a lot of the people I've worked with in the past. I think a lot of startups get formed that way. Our Chief Technology founder was a guy I worked with at Mercury Interactive. My CFO Kurt was my CFO at iConclude. Then I had two other co-founders whom I had worked with.

The key for me around assembling the team was that we have spent a lot of time together. We all had the same vision. I wanted to make sure these guys were committed for a long time. We also had very complementary skills but the first focus was on building the product. I wanted to make sure there was a lot of horsepower on building the product and getting the right product. The three people were technical people. One was a business guy. That was the most important thing.

Then came the fund raising. Greylock and Madrona were my prime investors. I started talking to them as I was validating the idea in the summer of 2007. I think their perspective was, "We have a lot of faith in you. Great teams can take a bad idea and make it into a great market and execution. Bad teams can take a great idea and screw that up." They had a lot of conviction and faith in me but also had enough conviction in the idea. When it was time for fund

raising, I ended up going back to these people and went through a partnering agenda. I could have funded the company on my own at that stage, but I decided to raise more money than less. We closed the first round Series A in a matter of weeks. That was a $7 million round. It was co-led by Greylock and Madrona. Mark Andreessen and Ben Horowitz were angel investors.

Sramana Mitra: $7 million in funding and you have about six people in a kind of co-founding team?

Sunny Gupta: Yes.

Sramana Mitra: What were some of the accomplishments with that Series A financing?

Sunny Gupta: If you raise a lot of money, you're going to spend it. I was very paranoid about that. One of my learnings in my life as an entrepreneur has been that it's all about the product-market fit. We had validated the market and the product idea, but we didn't have a product that worked yet. We didn't have paying customers who were getting value from the product. I believe, personally, that a lot of the mistakes in technology companies get made by not getting the product-market fit right. People veer too far off. There are a hundred features you want to put into this product and you don't have time and resources.

The most important part which I've focused the team on was the V.1 service. We were thinking about a hybrid, either SaaS or running on-premise. He said, "You have to make a commitment to SaaS. The world is moving to SaaS and if you do it hybrid, you're never going to get it right. Just pick a model and do it that way." That was the first decision we made.

The second decision is we focused on a product market idea. I told the team that I want us, as a team, to spend less than a million bucks and get the first SaaS to market with five paying customers. We had started this in November 1st. I wanted the first version out and customers using and paying for it by June. It didn't need to be full-featured but I wanted to eliminate the product market risk. That's what we did. We created this prospect advisory board. We flew out everybody into Seattle because I think we were getting random feedbacks from different customers of what they wanted us to do. I wanted to get nine or ten of them altogether in one room so we could get a consolidated set of feedback from these people.

We started developing the V.1 product. We did a lot of feature prioritization. We took the three customers who we had LOI's with and we started working with them proactively almost on a weekly basis – showing early iterations of the product and starting to deploy the alpha version of the service back in March. Till date, I'm very proud of what we did. With less than a million of spend and a team of 15 people at that time, we delivered the V.1 to the market place and we had five paying customers by June of 2008. The financial crisis was in full flow when we were launching Apptio.

Regarding continued focus on the team, I wanted to make sure we beefed up the engineering organization. That's where the early hires went. We also added a product manager to make sure somebody was thinking about the product and how we would go to market. Once we came closer to the June timeframe, we added two sales teams. The advice I've gotten in the past was that a lot of companies will just start with just one sales person. I've learned that if you hire only one sales person, you're only captive to one salesperson's perspective of the market. You're better off having two to three teams in three different

geographies because you're starting to get different feedback of what it takes to sell this thing to address feature deficiencies. I don't have the exact headcount but I think we were close to 20 people by summer when we were going into the market with five customers.

Sramana Mitra: Your point is well taken, but you have to be able to afford it. You're starting with a $7 million Series A. Not all entrepreneurs have the luxury of starting with a $7 million Series A.

Sunny Gupta: I understand. I have myself been there when I started, which was literally two years prior to that. I was running on angel money, but my fundraising experience was different. I had angels who had written me $200,000 checks. In fact, I had five people in the company. None of the founders took any money and we had only three people we were paying the money to. We gave them equity deals – I had two sales people whom I hired on equity. To be honest with you, I started one business in 2005 with less than $500,000 in capital and the next one with $7 million. My philosophy on the V.1 service and the capital constraints didn't really change my perspective in terms of how we went to market.

Sramana Mitra: The market today is such that people have to show some level of validation and traction to raise angel money. Yes, your point is well taken but people are often working on not even half a million worth of capital. They're really bootstrapping their way into a stage where they can raise a seed round.

Sunny Gupta: I think that's a very fair assumption. I didn't have to go through that with Apptio.

Sramana Mitra: That's a very interesting position to be in. We have this distinction between fat and lean startups. We've talked to quite a few entrepreneurs who have done fat startups. I'm actually quite interested in the fat startup phenomenon which is more the classic Silicon Valley style. The lean startups came later. But I think people who have the luxury of being able to do market validation in a systematic way and writing code after doing that validation are in a much better position.

In our program, by the way, we ask people not to write any code without doing the same kind of customer immersion process that you have put yourself through. But that is not necessarily the methodology that a lot of entrepreneurs these days follow. The first instinct they have is go around and write a bunch of code. I'm like, "What code are you writing? Why are you writing this code?"

Sunny Gupta: I agree with you. You raise a very good point around a fat startup versus a lean startup. That's a really good analogy. I never really thought about it from that perspective. The key principle I would say is, I know a lot of other companies who raised $7 million of capital but one of the principles we had was our entire operating plan from the first year through 2008 was built on no more than a million of capital burn. The cost of capital by the way, even to a fat startup, becomes pretty high. I could have done $100,000 in branding.

My promise to Greylock and Madrona was I'm going to run it very lean. Even lean is relative. I'm saying lean is a million bucks. In your definition, lean may be nothing. We were very capital-efficient. In fact, I didn't pay myself. My co-founders didn't get paid for the first six months of the business. We pretty much ran very lean because I wanted to make sure the fact that my bank balance had $7 million – I didn't get swayed by that. I was focused truly on the

customer and getting the product to market with the least amount of capital spend as possible.

Sramana Mitra: What you did was a much more disciplined approach to spending. Part of the problem when people raise a lot of money is they go and spend it. A lot of people end up in a situation where they raise whatever amount of money in Series A and they haven't achieved enough milestones to raise Series B because they've burned through that cash. That's the real issue.

Sunny Gupta: You are absolutely right. By the way, the cost of capital in the follow-on round, as you know, becomes high. You can take a beating anytime if you're not executing. If you can have an idea turned into a product, which customers are willing to pay money for with five to ten customers to start with, then that starts to eliminate risks. That's what we were trying to optimize for.

Sramana Mitra: With $1 million, you achieved that kind of validation. What did you learn from the market about the deal sizes that you can extract the most out of?

Sunny Gupta: My validation was a very large global Fortune 50 company. I did a lot of large and small companies. Our first five customers were smaller IT shops with $10 million to $20 million in technology expense. Enterprises were intrigued by the idea but when it really came down to a V.1 service, which was not validated yet, we didn't have them as customers. The first customer deal I did was a $1,000 monthly contract. They do not exist anymore. They filed for bankruptcy two years later. I had five small customers – couple of them in New York, Silicon Valley, and a couple in Seattle.

Sramana Mitra: You didn't go after the Goldman kind of customers from where you picked up the idea. You actually went after the smaller customers to get a feel of the product.

Sunny Gupta: I wanted to get the product and security model validated. I was talking to the Goldmans of the world all along, but I was trying to get the first five customers who were willing to pay me a check. The buying process of large companies tends to be longer, as you know. The validation cycle tends to be longer. They need a richer feature set.

What's interesting is I'm getting five of these logos and I've got another five or seven in the pipeline. This seems like it is going to be a transactional solution. One of my first customers in Seattle was Starbucks but it wasn't all of corporate Starbucks. It was a small department managing desktops at Starbucks. I'm thinking it's a departmental enterprise sale or a small company IT sell. That's where we were starting to optimize our feature function. Even though the first customer was $1,000, our price points are really trending towards $50,000 annually for the seven customers. It's an annual subscription paid up front.

Then what happens is I'm talking to the big customers. Three things happened to my business over the next year. One is, Merrill Lynch became a pilot customer for small dollars as a proof of value for us. That was very intriguing because they started to throw a lot more complexities at us. Two is, J.P. Morgan Chase became a customer. They really saw the vision and they were struggling with this.

The third thing that happened is Cisco became a customer – Cisco IT shop. I'm talking to them much more deeply now and they're telling me how pervasive this problem is. With the combination of these three customers, our

price points start to push up drastically into millions of dollars. That's the transformation I would say we went through in the later part of 2008 and early 2009. Remember the industry is going through utter chaos at that time.

Sramana Mitra: It's amazing that you were able to close customers like Merrill Lynch against that backdrop.

Sunny Gupta: I used to go to these financial Wall Street customers – not the ones I'm naming – where I was supposed to meet with an executive and the executive didn't show up because he was let go that morning. If you remember that time, even as individuals, we were thinking the world is about to end.

Sramana Mitra: Absolute panic.

Sunny Gupta: We were panicking. It also taught us that the more pressure on the IT budget, the more optimization they had to do and the more decisions they had to drive to shift dollars from running IT to innovations. We started learning the principles of optimization related to the platform that we had built. We had built a really killer next generation, in-memory business intelligence activity costing engine for IT. We had made some incredible technology but deeply rooted in the platform was a decision-making engine which could allow a lot of our customers to take operations and financial data, and make a lot of what-if decisions on top of it. We started to learn the strategic importance of the enterprise playbook at that time.

We got to the first $6 million pretty easily on an annual recurring basis by 2008. Once we got the three to four big customers, we invested heavily in customer success. I told my team, "It's not about making money. It's about delivering customer value because these three to five customers are going to help us get

to the next hundred customers." I look back and think, "This is more of an enterprise play."

Everybody in the SaaS world was telling me, "You cannot build a SaaS business from the top-down perspective. You have to start like how Salesforce started." All the venture capitalists are telling me that. The model we followed was closer to the Workday model because we felt that what we were selling was very strategic. We are selling to the CIOs of Fortune 500 companies and this is transformational. That's when I started pressing on the gas in terms of building a real enterprise sales force.

Sramana Mitra: How much runway did you have? You said you only spent about a million in the first year. Going into the financial crisis, you had a good chunk of cash left and you had started generating revenues, is that where we are at the end of 2008?

Sunny Gupta: Let me just think about the timing. You can call me a fat startup but we did not have any dirth for capital raise at that stage because the minute I delivered the first V.1 of the product with five to six paying customers, venture capitalists were knocking on my door even in the summer of 2008. I believe I ended up raising another $14 million at that time.

Sramana Mitra: Before the financial crisis hit, you already raised another $14 million?

Sunny Gupta: Yes. We were bickering over $10 million of valuation here and there. In 2009, we raised another round. People were standing on our doors. To date, we've raised $136 million of capital and we're sitting on a big part of that capital still in our banks. We've always been capital-efficient, I would say. Balance sheet is super strong. Every time I raised money, I never really needed

to raise money, if you will. That was the other learning – raise money when you really don't need to raise it. By the way, there's no substitute for customer validation. I had paying customers. I had customers willing to speak on my behalf.

Sramana Mitra: As long as you are delivering and executing on what you said you were going to deliver on, there is no shortage of capital. In your case, you have delivered a product. You've had customers. Your pricing model is validated. Your business model is validated. You are ramping up well. These kinds of deals generally do not face any shortage of capital.

Sunny Gupta: From my perspective, you're absolutely right. Over-delivering based on what I've told them I'm going to deliver has opened up more opportunities. At some stage, we did move more into a hyper-aggressive growth mode. We've been very capital-efficient but there was capital at our disposal. Whether it's ramping our sales capacity, investing in more product capabilities, or marketing capabilities, we've been fortunate from that perspective to ramp ahead of the curve.

What I've learned through the years is that the technology businesses change at such a rapid pace and innovation is happening at such a fast pace that I believe – in my humble opinion, I'm not suggesting that you start a business that way – for you to become a breakout and be one of those billion dollar companies, you have to think big and play big. The only way you can do that is by executing. In the first round, you can say that I got lucky because I had investors who trusted in me. I would say that every other round thereafter, I've earned it. I've earned it by execution. By the way, we've always had a very big vision. We feel that our addressable market is massive.

Sramana Mitra: What you said is absolutely correct. The vast majority of companies that we deal with are first time entrepreneurs or, at least, entrepreneurs who don't have huge amounts of success behind them such that they can walk into VCs who have made money off them before and are willing to fund them again. The fat startup model actually only works if you have a track record and somebody is willing to fund you and your credibility. Outside of that, by and large, the fat startup strategy doesn't work. There are some exceptions. Especially in infrastructure, it happens a little bit more.

Today's market is very difficult to navigate for first time entrepreneurs to do a fat startup. In your case, you're absolutely right. In the first round, you raised on your credibility. It sounds like you also delivered a powerful market validation in the first round itself. It's not like you were only going into the fundraising with your credibility. You went in with real market data.

Sunny Gupta: Exactly. I would say after the first round, I would not be treated any differently.

Sramana Mitra: If your business is not performing, you would not be treated any differently. You would have difficulty raising money whether you have track record or not.

Sunny Gupta: Correct.

Sramana Mitra: Anything else that you want to discuss?

Sunny Gupta: There are two things I wanted to mention at a high level. One is when we started the business, and it's still true now, it was as important to me to build an incredible culture. I always said, "When the story book is written on

Apptio, we want this to be as much about the category and changing the way IT runs itself as well as the culture that we are building in the company and the values." I felt like I'm raising my children. I want my people to live a certain way. I want a certain class of individual who can make Apptio an exception. That's an area where we've invested heavily in. We documented our values. We pride ourselves in building the company that way.

The last thing I would say is about the morphing of the business in 2008 to 2009. It started to become clear to me in the last two years. Let me discuss the three phases of Apptio. The first phase was establishing a market and selling a product or service which customers are paying money for. Is it a market category called Technology Business Management? Can I get hundreds of customers to buy into that and get value? We feel like we've done that. We are past that phase in Apptio. The second phase is where I'm at, which is all about what I'm doing for a few hundred customers. How do I do that more pervasively across thousands of customers from different geographies and different verticals.

Sramana Mitra: Where are you in terms of revenues?

Sunny Gupta: In the first phase, we had a run rate of $100 million. The second phase, I think, is half a billion to three quarters of a billion.

Sramana Mitra: You're in the beginnings of the second phase right now?

Sunny Gupta: Yes. We are taking the company to the next level. How do we get to do different geographies and different sizes?

The third phase is something we've learned about as well. We are continuously validating with the customer even today where customers are starting to say, "Whatever I'm doing with Apptio in the IT space, I want to also extend Apptio

to use in other functions in the enterprise." The same issues that exist in IT, exists in other parts of the organization.

The reason I'm just mentioning that to you is from my perspective, the innovation and entrepreneurship does not stop at the first stage of the company. When I wake up every single day, I feel like it's the first day of Apptio. The best growth story is ahead of us. We can become one of the most important companies of the modern enterprise era. That's how we are innovating the business through the next core phases. With each phase, there comes a lot of change within the organization and around the people.

Sramana Mitra: Excellent. Great execution and good luck with the next phase.

Interview with Andres Rodriguez, CEO, Nasuni

Andres Rodriguez is a rare Latin American entrepreneur in hardcore tech. In this era of 'lean startups', Andres has built a couple of 'fat ones' and in this interview, we discuss what he has learnt, and what he advises other entrepreneurs wrestling with the need to raise money to fund 'fat startup concepts'.

Sramana Mitra: Andres, where are you from? Where were you born and raised? What circumstances did you grow up in?

Andres Rodriguez: I was born in Venezuela, South America. I graduated from high school there and I came to the States to attend an engineering school.

Sramana Mitra: Where did you do your engineering?

Andres Rodriguez: At Boston University. I also completed my graduate degree in Physics from there.

Sramana Mitra: What time frame are we talking about? When were you in graduate school at Boston?

Andres Rodriguez: I arrived in 1984 at the university and then I graduated from graduate school in 1991. In the early '90s, I was in graduate school at the Condensed Matter Physics Department at Boston University. That was a very exciting place to be because, at that time, they needed computer skills. I wasn't a terrific physicist, but I was a pretty good programmer back then. One of my responsibilities was building computer systems for very large simulations. That was my passion originally and still is to this day, specifically, building

distributed systems. That was a great place to be at the beginning of the Internet era in public service. Being involved in Physics and in very large computer problems was a great vantage point to look at the potential of the Internet.

Sramana Mitra: I was in graduate school at MIT '93 to '95. I was actually in Massachusetts since 1989 as well.

Andres Rodriguez: Oh, wonderful. I used to go down to the Magnet Lab for some of our experiments back then before you moved the Magnet Lab to Florida.

Sramana Mitra: What did you do in '91 when you finished school with that background?

Andres Rodriguez: I did the classic thing that graduate students believe they can do. I took my algorithm and I left believing that in order to be a successful entrepreneur, you would need to have a better algorithm than anyone else on network optimization. I discovered very quickly that it took a lot more than that to build a company. I stumbled for about a year and then an investor from a small investment firm took a look at me and said, "You know you have very good technical skills, but you really need to surround yourself with people who know more about investment, business plans, and marketing." He connected me with a group from MIT. That's where I met my co-founder for my first company, Andy Sack.

Together, we started a company called Abuzz. The essential premise for Abuzz was that it had to be a large problem. At that time, the Internet was taking off and we had Yahoo, the first search engine, coming into the scene. There was no Google at that time. The original premise for the company was based on

two things that were happening on the Internet, e-commerce and search engines. What if we could connect people to people? What if we could create networks of people? This is way before the social networks were defined. That seemed to me, a very promising thing to do. It definitely seemed like a very large problem to tackle and so we started Abbuz. It was one of the first social media companies out there.

A few years later, The New York Times bought us as they were gearing up. The Internet just got hotter and hotter, and traditional media companies were desperately looking for good ideas, good technical talent, and people who knew what was going on in the world of the Internet. They saw Abuzz as a very technical crew that had figured out a model for connecting people with people.

Sramana Mitra: What years were Abuzz in business and when did you get acquired by New York Times?

Andres Rodriguez: I think we started in 1994. I learned a lot about fund raising and building small teams of sales, marketing, and engineering people when we were doing Abuzz. We sold it to the Times in 1999 and I worked with them until about 2001. When I was at The Times, they immediately put me in the position of running the technology group as they were trying to figure out what to do with the Internet. That's when I really learned what software could mean in the context of the enterprise and what it can do when you're trying to solve large organizations' problems.

My boss in the The New York Times used to tell me, "This will give you a point of view on the industry that will carry you through your career." At that time, I was young and arrogant enough not to believe him, but he was absolutely right. It changed my perspective on what I thought was possible. I thought of software as a lab tool or a researcher's weapon but I never thought

that it could be something that could really run whole industries until I was part of a large organization.

Sramana Mitra: What were the mechanics of Abuzz? Was it a venture-funded company?

Andres Rodriguez: Yes, it was a classic Series A venture funded company. It was funded by SoftBank, Brad Feld, Solstice Capital, and Flatiron Ventures, which is no longer around. I was very lucky to have good guys. They were especially good with young entrepreneurs. They knew how to work with teams that did not have a lot of experience. They coached young entrepreneurs through the process of building companies very early on.

It was also a great time to build a company. I think we are in a very similar time today where young people's ideas can get a lot of support and a lot of money behind them to make those ideas happen.

Sramana Mitra: How much money did you raise? It sounds like Abuzz was a three-year process?

Andres Rodriguez: Yes. Abuzz was unique because, at that time, the venture model particularly for young people with no experience, was around the Internet companies. For the first year, we bootstrapped the company because even then, we were not incredible enough. Even though me and my partner were from Sloan and I had a great technical reputation, we were not seen as experienced enough to justify the multi-million dollar investment.

It was very slow. We had a contract with Sony and other large organizations that wanted to create communities around their offerings. It took a year of professional services and technical work until the investors took a look and said, "These guys have some core assets in technology and some great

references. We should really see if we could productize the system that they're building." Then we got a $5.5 million Series A investment from them.

Sramana Mitra: With the venture-funded model, what was the product that you were selling?

Andres Rodriguez: The company name was Abuzz and the product name was Beehive. The whole thing was a play on the collaborative quality of bees. How could you get people to be organized in the same way? It was a system that allowed people to share their interests in say, reading or buying. Then, the system would find other people who were like you and allow them to connect themselves to you, what today is called 'friending' or 'liking' someone on Facebook. You could vote on whether you like the things other people like.

Sramana Mitra: You were doing a private label social network product for enterprises to build their own social network and it was very early.

Andres Rodriguez: Yes. This is a great lesson for entrepreneurs. At that time, it was called knowledge management and was being sold to big enterprises. As soon as we got the investment, we went from being very daring and on the bleeding edge of the Internet to becoming a traditional company for the enterprise. When The New York Times came knocking on our door and said, "We want your system but we don't want to deploy for 20,000 users. We want to deploy for 2,000,000 users. Can you do that?" My response at that time was, "We cannot. That's not what we built. Building that would require us to completely focus all of our resources on doing just that. The only way I'm going to risk doing that is if you buy our company." Much to my surprise, they showed at our doorstep 48 hours later to buy the company.

It was really an incredible ride because we had no idea. One of my advisors said to me and I agree with him, "As an entrepreneur, you don't sell your company. Your company gets bought. Your entire focus as an entrepreneur should be on adding value. You should be ready to talk to anyone that may want to buy your company, but you have to concentrate on adding value to the company. If the offer starts at a reasonable point, then you can have a conversation. If it doesn't, you should go back to work and keep adding value as fast as possible."

Sramana Mitra: How much did The New York Times offer you?

Andres Rodriguez: They offered us $33 million.

Sramana Mitra: You had only raised one round of financing – the $5.5 million?

Andres Rodriguez: That's correct. Yes

Sramana Mitra: So that's your first venture. Good exit. It actually was a very interesting opportunity to become a technical lead at a very exciting place, The New York Times in the late '90s. It was an exciting place trying to understand the Internet, right?

Andres Rodriguez: The most exciting place. It was one of the largest media companies in the world and at a time when that industry was about to undergo a huge transition. When I was put in charge, one of the things that I looked out for was at ways to make our infrastructure scale. We're talking about scale at huge dimensions. We were one of the first organizations to partner with Akamai for the distribution of our website. At that time, it wasn't clear whether the software systems we had built would scale to the size of the Internet.

Sramana Mitra: A lot of it didn't, a lot of it was breaking.

Andres Rodriguez: Exactly. We built these web servers. We put a load balancer in front of them and then built multiple ones. But some events around the world would make our entire site go down because we couldn't keep up with the load. There was this constant wave and no matter how high we build the barrier, the wave kept coming over the barrier.

When Akamai came to us, they were still an early stage company, but we saw them as an opportunity to outsource the web content distribution. It was solely focused on having a very broad global infrastructure for solving our problem. To transition the whole system out to a service-based system was one of the best decisions we made.

As soon as I did that, we had a huge project inside for digitizing everything. Everything was becoming digital. This is the benefit of having a great vantage point to see what's happening in the market. I would always say, "It was better to get that job than it was to make the money we made when we sold the company." It mattered more to my career and future to be in that position in the market than the actual money that came from the transaction.

The next wave that you could see coming from that point of view was the media explosion. Pictures, videos, music, and writing were all going digital. All media organizations were going to need ways to move all that media into giant storage systems. My storage vendors were the classic traditional storage vendors and it would have been too ambitious to hope to outsource entire storage systems as a service because it's such a big system to outsource. Traditional storage systems were very focused around high performance and reliability, but not scale and durability.

Keeping data around for 30 years and making sure that it's intact with no backups and tons of scale – that is where I got the idea for my next company. I

started a company called Archivas when I left the Times. The premise of that company was basically, "Let's build cluster storage systems that are designed – again distributed systems – to scale massively. " With that premise, we started Archivas, which was my next company.

Sramana Mitra: What year did you start Archivas?

Andres Rodriguez: Towards the end of 2001 and the beginning of 2002.

Sramana Mitra: Was it the same team that you had in Abuzz?

Andres Rodriguez: Some of the engineering team was the same, but a key ingredient was missing. This happens often when you shift industries. With Archivas, I was moving from the application layer of the stack down to the infrastructure layer of the stack. My team was exceptionally good at doing rapid amplification of distributed system layer. Now, we were going down to the storage layer, which requires a great deal of attention to quality and quality assurance.

People believe a lot in fancy PowerPoint and things like that. I sat down in a library for two weeks and basically drew out the system design and the business plan for Archivas. Then, I met the head of North Bridge Venture Partners. I showed him my notes and talked to him about the problem that I saw was going to happen. He immediately offered me to sit there in an office until I could finish the business plan. Three months later, he gave me $6 million.

That's a great partnership between entrepreneurs and venture capitalists. When you have experience with the problem of the customers that you're going to be selling, it opens the doors of the best investors. Any good investor knows that those are the two key ingredients, a proven entrepreneur that comes from a real customer experience problem.

Sramana Mitra: In the industry today, only serial entrepreneurs have the privilege of being able to get concepts financed. This has been true for a long time except in the dotcom bubble days. What you're saying is roughly true. There are little bits and pieces of exceptions here and there but generally, investors fund proven entrepreneurs who have insights into problem domains.

Andres Rodriguez: That is correct. The old venture model in the '80s was actually by the engineer entrepreneurs who were living in the research lab, especially from places like Lucent and IBM, where they started downsizing. A lot of people in these companies could see what was ahead and were ready to take the next leap. Back then, investors usually asked the question, "Is this an entrepreneur or is this a big company person who is never going to be able to survive?"

Today, it's the other way around. You get a lot of people who are very bright and have engineering backgrounds, but they haven't spent any time in the industry working on problems. I think investors are looking for the opposite. Investors are looking for real customer side company experience that has exposed you to the next big set of problems.

Sramana Mitra: Tell me more about what happened with the company then. You got $6 million in financing and you had a team. You had to bring in some more people to complement the team. How did the company evolve?

Andres Rodriguez: I was very lucky. I found out that we had a problem within the first year. We didn't have a true technical leader for the team who understood how to build quality into the product because the product could never fail. These were systems that were going to go into NASA, NSA, and

very large organizations that were going to depend on this system for storage. There's nothing more critical to an organization than its storage systems, and our system just didn't have the quality to do that. We had a lot of good design ideas. We had a lot of good engineers on the floor trying to get it to work, but every time we fixed something, something else would break. I took a chance and looked outside the group of people that I knew. I was lucky enough to have met my current co-founder for Nasuni, Rob Mason. He was one of the lead engineers at EMC, the premier storage company in the world. The challenge there for any entrepreneur is how do you make yourself attractive.

Sramana Mitra: The challenge is how you would convince someone really capable and credible to join your team.

Andres Rodriguez: Yes, someone who's incredible to take this leap. There are some people in big companies you're never going to be able to convince but I happened to meet him when he was trying to do a spinout out of EMC. I knew he had entrepreneurial chops in him but he has since then gone back to EMC. I went back to Rob and asked him to join our company. I could tell he was tired that management was in the way of things, like all big companies are. Big companies become their own worst enemies because there're so many layers and processes to do anything. I said, "If you come, the one thing I guarantee you is not enormous wealth. The one thing I promise you is complete autonomy. I will allow you to build a system the way you want it built. I will go out and sell it. When I'm selling this system, I will know you stand behind it and that's all I need to know to sell it."

I brought him in and he changed our company. Over the next six months, we went from having a system that was essentially unusable to having the best-in-class object storage system out there. We sold a lot into the federal government

and we also started selling to very large commercial accounts. Eventually, Hitachi bought the company. With three rounds of funding, we raised a total of $26 million and we sold it for about $130 million to Hitachi Data Systems (HDS), one of EMC's biggest competitors.

Sramana Mitra: What year did you finish this?

Andres Rodriguez: That was 2007.

Sramana Mitra: What happened next in your history?

Andres Rodriguez: After we sold Archivas, we had all the top venture capitalist wanting to fund the next project.

Sramana Mitra: I'm sure. What's good with being a successful serial entrepreneur is that capital follows you.

Andres Rodriguez: Success breeds capital.

Sramana Mitra: However, let's talk about the investment thesis that you explained to the investors? What year was this when you started on Nasuni?

Andres Rodriguez: This was in 2009. My pitch was very simple. I said that storage is very expensive in the data center. The enterprise pays a lot of money for storage. It's not just storage; it's storage as the backup that is asked to recover and replicate. All of that adds to the cost of storage. What if I can go back to the customers and say, "For a fraction of the cost of any one of those systems, I can give you all of those systems together in an integrated system and you don't have to bother running it because I'm running it for you."

Sramana Mitra: Storage data service is not an entirely new concept. There are quite large competitors in that space – cloud storage as it has come to be known. I'm more interested in going back to the time when you were starting Nasuni. What was the competitive landscape like? What was your analysis of that competitive landscape that allowed you to convince your investors that this was a great opportunity?

Andres Rodriguez: It's exactly what you just said. It's easy to confuse cloud storage, with enterprise plus storage as service. If you look at what Amazon is trying to do, it's very basic storage. It's great if you want to do backup for consumer drives. If we think of that as the new hard drive, it's a component that isn't like anything we've had before that is available to us to design storage controllers. We're going to rebuild and re-architect the storage controller so they can natively use cloud storage.

If we do so, we end up with a storage controller that is in every way compatible with what exists in the data center today – from performance protocols to security. It'll have these three wonderful properties. It'll have unlimited scale. You won't need to backup. It will be able to move or synchronize data globally in a way that is not possible today. Those three things are really valuable to enterprise customers and is something I know because I've worked enough with enterprise customers to know what their major headaches are.

Nasuni is the distribution system. In the past, companies like EMC partnered with hard drive manufacturer companies like Seagate. They use the hard drive as a component. Nasuni has the same relationship with Amazon and Microsoft and any cloud storage company. We see them as suppliers of hard drives. It just happens that the hard drives are spinning while they're available in the cloud.

Everything else we do is about componentizing that and building a system that you can put in your data center. That is very valuable.

The enterprise storage market is $80 billion today. That includes primary storage, data protection, and replications tools. If you can take an industry like that and give them a much lower cost and a much simpler model of delivering essentially the same thing, you're not trying to make a market. You're essentially taking away from a market and converting it into this new model.

Sramana Mitra: Where there are existing budgets and everything, you're just modernizing.

Andres Rodriguez: Exactly. This is exactly why the Mini was so lethal to the Mainframe, and the PC to the Mini. Those markets existed. The mainframe preceded and created the market that the Minicomputer exploited. In turn, Minicomputer created the market that the PC then exploited. That gave those companies a huge trajectory for growth.

Sramana Mitra: In modernizing the enterprise storage using cloud principles, was there any other competitor or were you the first to come into that space?

Andres Rodriguez: When we came out, we thought we were the first but there are always competitors in the space. We have competitors today.

Sramana Mitra: Big opportunities tend to have competitors and that's not a bad thing.

Andres Rodriguez: Absolutely. If you're not chasing an idea that another company is chasing, you should be worried.

Sramana Mitra: Let's get some specifics here. Who were the investors who invested in Nasuni?

Andres Rodriguez: Nasuni was led by North Bridge Venture Partners and Sigma Partners here in Boston.

Sramana Mitra: Same guys who invested in your previous company?

Andres Rodriguez: Yes, it's very important to always invest with the same group of people. All venture-backed companies go through tough times like personnel changes, product market issues, and sales issues. You want to know that you understand and trust each other enough to know how you are going to react to those obstacles. It takes a lot of noise out of the system.

I've been very lucky in my career as an entrepreneur. I've never had a bad investor experience. I'm not one of those guys who tell horror stories about their investors. I'm very picky. I choose people for temperament and I choose investors whose chemistry in the board is going to be good. They balance each other out and I can tell that they're going to be people that can work together as a team in the interest of the company. If any particular investor isn't perfect, you need to find a balance of people that balances all those weaknesses. At the end of the day, that is more important than even valuation because nothing will destroy a company faster than a group of people fighting in the boardroom.

Sramana Mitra: Let me synthesize a few things that are question marks in the mind of entrepreneurs who are trying to build businesses. This is a time in the history of entrepreneurship where the pendulum is very much swung in the direction of lean startups. The whole industry is operating with this lean startup principle.

Having said that, there's a certain class of companies that have become very cheap to build. Not so much easy to build but cheaper to build and can operate in the lean startup mode. You can go out and build a minimum viable product and get customer traction even before you get financing. Investors are looking for that class of companies. These tend to be software and Internet companies. The amount of investment or the number of companies that are getting formed and built in your genre has drastically dropped.

I call these fat startups. These fast startups have become a rarer and less active domain of investment. Part of this is because the industry has matured. A lot of these problems are solved. We are not really operating in the early days of chips and networking. Nonetheless, as you are pointing out, there are still opportunities of building infrastructure. If you want to do a fat startup today, you pretty much have to be a successful serial entrepreneur who can fund a concept based on track record, reasonable representation, and analysis of the market opportunity that investors are going to bet on. You cannot do it as a first time entrepreneur without track record. Is that your observation? Is that an accurate analysis as far as you're concerned?

Andres Rodriguez: It depends on the team. I think some things don't change. One of the things that allowed us to succeed in Abuzz is that we were able to run very lean although we didn't have the track record. Because we were technical, we could work for free. That allowed us to create enough credibility in the company that the investment followed.

Sramana Mitra: You're talking about your first company?

Andres Rodriguez: Yes, I think it hasn't changed today.

Sramana Mitra: This company is very different. You bootstrapped your first company with services and started generating revenues very early on.

Andres Rodriguez: Yes, the revenues were important. We were all working for that company for a fraction of what we could have made in the market given the skills we had.

Sramana Mitra: Anytime anyone chooses to be an entrepreneur, that is true. Nobody as an entrepreneur, to begin with, makes the kind of money they would make in the market.

Andres Rodriguez: I'll tell you the short answer. For young entrepreneurs today, they can do it but they have to have technical people in the team that have lots of equity in the company. The one thing that an investor wants to see is the proof of concept. This is for the kind of company that you were just telling me about where what you're trying to prove is a concept. It's really about getting traction or users. I don't think it has changed as long as you can get a technical team that can work. A group of two or three engineers can build a lot of value to prove a concept in six months. An investor will fund that. That is the way to do it with no track record.

Sramana Mitra: You're right. That's a very interesting observation. You can build if it's a group of highly skilled engineers who are willing to work for equity and do not cost a lot of cash. You can get to a certain level of validation working with customers and build technology. That is a scenario that can be funded. What I'm saying is, that's not a concept financing, that is a business financing.

Andres Rodriguez: The business may still not be ascending. You're just demonstrating that the concept appeals.

Sramana Mitra: You have built a product. You have got validation from customers that they're interested in the product.

Andres Rodriguez: That is correct.

Sramana Mitra: It's not a concept. It's not a set of Power Points. Serial entrepreneurs with track records are the only ones who can actually just get a concept financed.

Andres Rodriguez: I would concur with you.

Sramana Mitra: We just published a book called *Bootstrapping Using Services*, which is a technique that you have used in your first company. That is a very viable way of building fat startups. It's interesting because one of the first major stories that I did on *Bootstrapping Using Services* as a case study, was the company called Finisar, which is an optical components company. Optical components is a very capital-intensive industry. Normally, people won't think about bootstrapping companies like those but Finisar was 100% bootstrapped by the founders, Frank Levinson and Jerrry Rawls, by doing services project that got them really close to the customers. They started understanding the problems of the customers, started selling by doing projects, and then productized from there on. The company went public a few years later. They didn't raise a cent of financing until right before the IPO.

Andres Rodriguez: That is wonderful. I don't know the whole story but that's great. One of my top guys at Abuzz took his money from Abuzz and started a small consulting company. It's a company called Formulatrix and they build

robots for pharmaceutical companies. They are a very successful private company that employs 300 people around the world. He's built a great business out of it, never raised a cent of venture money, and built the whole thing on the back of professional services.

Sramana Mitra: I think what we are synthesizing are a few different options for entrepreneurs to do what we call fat startups. If you're a serial entrepreneur, you can get a concept financed. Bootstrapping using services is one way to get close to customers, get cash flowing, and then build a product from there on. Another option is if it's a group of engineers who are willing to work for equity and without salary for a period of time to build a product, that's also potentially a fundable situation.

Andres Rodriguez: That's right. In today's world, it seems to me, anything that's in a computer is called a high-tech startup. It's very important to understand whether you're building a high-tech startup or a media startup. They require different amounts of capital.

Sramana Mitra: E-commerce is very big but it's not exactly technology. E-commerce and media are not necessarily high-tech anymore because if you'd want to do personalization with a significant e-commerce company, that's very high-tech.

Andres Rodriguez: No, you said it before. The components are already built.

Sramana Mitra: E-commerce today doesn't really do personalization of any significant caliber. The personalization that e-commerce does today is very rudimentary and not available off the shelf.

Andres Rodriguez: Right. Building a dynamic HTML web server requires high-tech and engineers who know what they are doing. In today's world, anyone can do it. That's no longer high-tech. You should focus on adding value in the layer where you can add value. Instagram is far more a media entity than a high-tech entity.

Sramana Mitra: Yes, so if you're building a little app on top of an existing platform, like on Android or iPhone, that's not very high-tech. We recently did a story on a company called TextMe, which is a communication app on top of iOS. That is very high-tech because they're doing real time communication using the iPhone iOS platform. They have serious communication technology involved.

Andres Rodriguez: Absolutely. That's the way to think about it. It depends on what layer you're in. The biggest mistake that entrepreneurs and investors make is thinking that some media concept companies are high-tech companies. High-tech companies are very slow to move and require more capital. High-tech companies are much more boring with 12 to 15 hour a day engineers who are coding. Media companies are fast moving. It's all about finding exactly the tweak and adjustment that you need to make the customer happy. When you're talking about a company like Uber, that's not a high-tech company. It's a wonderful, beautiful e-commerce media company.

Sramana Mitra: Uber is a logistics company – neither a media company nor an ecommerce company. It's kind of a logistics company.

Andres Rodriguez: It's not a high-tech company.

Sramana Mitra: It's not a high-tech company by any stretch of the imagination.

Andres Rodriguez: Marketing is important. Having creative people is important. Experience is important because they do help bridge to the real world. Instagram is a perfect example of a company that is a beautiful pure media company. That is the kind of company that I could never dream of. You need artists and designers. You need UI people to think of things like that and what's important with things like that.

Sramana Mitra: I just have one last set of questions before we retire. You are one of the few entrepreneurs I have interviewed who has roots in Latin America. We see entrepreneurial activity in the technology industry from Indian and Chinese entrepreneurs. Why has Latin America been slow on developing in the technology industry?

Andres Rodriguez: There are many more people in India and China, that's one reason. As a whole, the education systems process many more people. In India, they all speak English, which is a huge advantage when you're coming here in the beginning. China is our best market today. Chinese people come here, learn skills, go back, and become great entrepreneurs. In Latin America, the entrepreneurial model is different. It's not necessarily one that's well suited to the high-tech world.

My uncles were all entrepreneurs. They ran cement factories, media companies, and big industrial companies. The advice they gave me as I was leaving was, "Find something that everyone needs that you can make for less." It's a great piece of advice but it's not your dreamy, high-tech, super advanced Jujitsu thing. In a way, we're very good at very basic things that everyone wants. We come from a modest disposition. I cannot speak for other cultures but in our case, it's definitely a culture of cement, beer, and commodities.

Sramana Mitra: Right now, there is a lot of entrepreneurship going on.

Andres Rodriguez: Yeah, there is. We have A123 here in Boston. It is a battery company started by another Venezuelan. That is a relatively boring, material science commodity that everyone needs. If you can only make a battery that's a little better and a little cheaper, people will want it. That's the mentality.

Sramana Mitra: One of the big flagship stories coming out of Latin America is, of course, e-commerce company Mercado Libre. It has been very successful.

Andres Rodriguez: They are basically adaptations of concepts that have been created here. My uncles didn't invent beer. They imported beer from Germany and then rebuilt and adjusted it. The idiosyncrasies of other cultures are very significant.

Sramana Mitra: If you look at e-commerce in India, there is actually no distribution system. There is no UPS or postal service that deliver. The e-commerce companies in India have to run their own courier services. Nobody's going to do credit card payments. You actually have to do cash on delivery.

Andres Rodriguez: There are tons of entrepreneurs that come from Latin America and find me, one way or another. I try to point in the direction of local investors that may be able to help them. But the investors just don't want to take the cultural risk. It's too risky to invest abroad.

Sramana Mitra: That change is a very slow process. There is a very small seed capital and venture capital ecosystem that has developed in India. It is actually very small. There is a little bit actually developing in Latin America.

Andres Rodriguez: I don't believe that's the way to do it. The way to do it is to fund it from here. We have a ton of capital. There are only so many good entrepreneurs and the market is completely saturated. The problem is the investors don't want to take the cultural risk.

Sramana Mitra: The way the Indian industry has developed is with investors from here. Accel, Mayfield and Sequoia have set up India versions of their funds. They have setup India funds. They have put local people on the ground. The problem is those markets are not fast adoption markets. If you try to start a company in India or in Latin America, these companies are going to develop much more slowly and that model doesn't work for venture capital.

Andres Rodriguez: What I hear from investors in the area is that it's a mixed experience right now for India in particular. Being an investor in your own turf is hard. When I look for investors, I don't just look for American investors, I look for investors that have experience in storage, enterprise, and fast growth models. There are so many things that you have to know to evaluate risk and opportunity in startups. The moment you change one of those parameters, and culture and countries involve a huge change in the parameters, you're kind of flying blind.

Sramana Mitra: Great. It was a pleasure talking with you.

Maximizing Valuation

You can do your cloud startup with or without venture capital. If you do it with capital, there are some best practices that we recommend you follow.

There is a fairly well understood methodology for maximizing valuation for cloud startups. It follows the simple maxim: *Bootstrap first, raise money later.*

Let's first look at Tableau Software, currently trading in the public market under the symbol DATA with a ~$3.5 billion market cap, as a case study.

Christian Chabot, the founder CEO of Tableau is from Milwaukee, Wisconsin. He arrived in Silicon Valley to study at Stanford, and got inspired to become an entrepreneur by Irv Grousbeck. Soon after graduating from business school in 2000, Christian founded BeeLine Software that came up with a better way of doing digital mapping. The company only had 3 people, and was sold in 18 months to Vicinity, offering the founders some early cash.

After a couple of years at Softbank, Christian started Tableau as his second venture in 2003. He and his two cofounders from BeeLine had cash with which to bootstrap Tableau for a while. He already had some deep insights into a problem he had encountered as a data analyst at Cornerstone Research. This problem had to do with visualization of structured data from databases, a technology already being incubated in the Polaris project at Stanford.

"Almost all visualization of data, even today, follows the same archaic model. First you open some data with a query interface and you work with that data. You analyze it, dice it, and pivot it, all in text form until you get what you

would call your answer. Only then do you put it into some kind of chart wizard. Once you get your data points into the chart you have an end result, which is data translation. And what happens next? You look at it and say, "That's not what I wanted" or, "That's what I wanted."

Your brain is naturally curious about data whenever it sees it. The problem with the whole paradigm to understanding data is that the visualization comes last. By then it's too late. If you have a new hunch or angle, then you have to go back and do the whole process again. The idea behind Polaris was to query a database using a picture, to be able to sort, filter, zoom up, and pivot it through a purely graphical interface. When you do it that way you are working at the speed of thought. By dragging and dropping after viewing some of the data on a canvas, you are actively querying it. That lets you generate pictures of it at the same time."

Christian had insights into the problem as a user. And he had really strong computer scientists as cofounders to figure out the solution that he envisioned. To that, they added a powerful set of cross-domain expertise: "They say that the greatest innovations are born from strange bedfellows. In our case it was PhD's in database optimization, data structures, and data queries, married in the lab with people who had PhD's in computer graphics. These are groups that even talk to each other anywhere else. They definitely don't collaborate. That is one of the reasons that we have the IP we have today."

Cross-domain innovation tends to produce strong, defensible competitive advantage.

The Tableau team licensed the Polaris technology out of Stanford for a small equity, and very quickly started selling to real customers. The first 100 customers gave them immense validation.

At this stage, there was no investor involved. In fact, for two years, and 200 customers, there was no investor involved. In effect, they bootstrapped.

Then they got a mammoth 4-year OEM deal with Hyperion including an advance.

At this point, Tableau raised $5 million from NEA at a $20 million pre-money valuation. The average pre-money valuation range at the time for Series A was $5 million. VCs love to come to the rescue of victory.

Revenue ramped very well. In 2004 they did $800,000. That rose to $2.1 million in 2005, $3.7 million in 2006, $7.8 million in 2007, $13.9 million in 2008, and $20.1 million in 2009.

Tableau went public in May 2013 raising over $250 million at a $2 billion valuation.

Let's also look at Greg Gianforte's RightNow case study one last time.

Greg Gianforte does not believe in raising money from investors. "The best money comes from customers, not investors," the former Silicon Valley software entrepreneur says.

Gianforte had to believe that. After selling his first startup to McAfee for $10 million in 1994, he moved to Bozeman, Montana, and launched another software company. But getting funding for RightNow, his new customer-service software company, proved impossible – Bozeman wasn't the tech hotbed or venture capital magnet he'd come from.

"All my business contacts literally threw away my card," Gianforte recalls. "They thought I was finished when I made the decision to start a company headquartered in Montana." Thank goodness Gianforte believes in bootstrapping; there was no other way to get RightNow off the ground. He plowed $50,000 of his own money into the company and did all the work himself – from cold-calling companies to training them on how to use the software, which lets customers get answers to questions in a Web-based FAQ. Remember, this was 1997, when Web-based automated customer service was just getting started.

Once Gianforte got a sense that he could sell the product himself, he hired three sales reps who worked entirely on commission. To further slash RightNow's burn rate he decided against paying himself a salary. Cash was being preserved at all costs, a golden rule of bootstrapping.

Before long, RightNow's revenue was doubling every three months. Two years in, with 150 employees and $6 million in revenues, the company was valued at an astronomical $130 million. Gianforte finally raised venture capital. In two rounds – the first in 1999 and the second in 2000 – RightNow raised $32 million from Greylock and Summit.

When RightNow went public in 2004 the management team owned 70% of the company. Gianforte still owned 28% of the company when the company crossed the $100 million-mark in revenues in 2006 and boasted a market cap close to $500 million.

How was he able to keep such grip on the reins? Bootstrapping offers entrepreneurs tremendous leverage with late-stage VCs. In early-stage venture capital funding, much of the power and control lies with the investor; in later

stage funding, entrepreneurs often call the shots, with VCs falling all over themselves to offer up money.

Folks, ownership matters!

Interview with Christian Chabot, Tableau Software

Christian Chabot is our last entrepreneur in this volume. He has built what we now call a Unicorn company – one with a billion dollar plus exit valuation. Let's find out how.

Sramana Mitra: Let's start at the beginning of your story. What is your background?

Christian Chabot: I am from a suburb of Milwaukee, Wisconsin. I had a typical American upbringing. I came to Silicon Valley to attend Stanford as one of two people from my high school to be admitted. The other is my wife. We were undergrads together. I studied engineering and she studied biology. We both graduated and went into the workforce for a while before returning to Stanford for graduate school. She went to law school and I went to business school.

While I was getting my MBA I met Irv Grousbeck, who has been one of the bigger inspirations in my career. Their business school is mostly renowned for its entrepreneurship program. Most of the credit for that goes to Irv. He was the founder of Continental Cablevision, which was later known as Media One. He practically invented the cable television industry. He is a decorated educator at Stanford, and I am just one of hundreds of his fans.

Sramana Mitra: What did he do that inspired you and drew you in?

Christian Chabot: I think he is one of those rare people who can communicate the lessons of life and the theory of business in a tightly integrated fashion with actual anecdotal experience. There are professors who

can do the former or the latter. Irv is rare because he can combine the two. I think everyone is inspired by him in a different way. He was one of the people who brought out the entrepreneur in me. At Stanford I realized that I wanted to be an entrepreneur as a career choice. Irv convinced me that I did not need to wait for more experience.

Between undergrad and grad school I was a data analyst. I worked at Cornerstone Research, which was in Menlo Park. It is really well-known in consulting circles for high-end economic consulting and analysis on extraordinarily complex financial problems. It was a very research-extensive private sector job.

Sramana Mitra: What did you do after business school?

Christian Chabot: I graduated from Stanford's business school in 2000. I was a part of the first class to graduate after the [dotcom] crash. I was committed to doing this as a career choice regardless of the economic situation. I remember when I was in school that everyone wanted to be an entrepreneur. By the time we graduated, there was only a dozen who went straight into entrepreneurship. More will surely do it over the course of their careers. When the crash came, all of a sudden investment banking and management consulting started to look attractive to many students.

So I started a company. It was called BeeLine Software, and we invented a better way of doing digital mapping. The business plan of BeeLine was very simple; it was to flip the company. It was to get the technology to a state to be helpful and useful and then inserted into the grand technology empire that could distribute it. That was the choice we pick for multiple reasons. It was the stated goal. It was even in our business plan. We did that and we had offers from AOL and Vicinity, which was a geospatial company. We took Vicinity's

offer. They ended up being bought by Microsoft. We did that entire company with just three people. We bootstrapped the company, so financially it was a win.

Sramana Mitra: How long did it take you to build and flip BeeLine, and what did you do after that?

Christian Chabot: It took about 18 months. Even to this day I'll look over at a stoplight and see one of our maps, which is very satisfying. A month after we sold BeeLine we had a party to celebrate, and I ran into a friend from business school. He told me about an opening at a venture capital firm he was with and convinced me to join him at this firm, which was called Softbank Venture Capital. It had a notorious reputation, but despite its woes had many successes. I did that for two years, and then I got the entrepreneur itch again. I wanted to start another company and this time I had no interest in flipping it.

Sramana Mitra: Did you come up with the idea for your next company while you were working at the venture capital firm?

Christian Chabot: No. The idea came out of relationships. My first company I founded with two computer scientists named Christopher Stolte and Maneesh Agrawala. We started meeting and talking about ideas for the next company, and we were very patient to make sure that we found the right idea. Ultimately we decided to commercialize an idea at Stanford called the Polaris Project. That is what became Tableau. This all occurred around 2003.

Sramana Mitra: What was the idea behind the Polaris Project?

Christian Chabot: The idea was to make database structured data easy to visualize and explore.

Sramana Mitra: What was the state of the art regarding database visualization at the time, and why was Polaris different?

Christian Chabot: Almost all visualization of data, even today, follows the same archaic model. First you open some data with a query interface and you work with that data. You analyze it, dice it, and pivot it, all in text form until you get what you would call your answer. Only then do you put it into some kind of chart wizard. Once you get your data points into the chart you have an end result, which is data translation. And what happens next? You look at it and say, "That's not what I wanted" or, "That's what I wanted."

Your brain is naturally curious about data whenever it sees it. The problem with the whole paradigm to understanding data is that the visualization comes last. By then it's too late. If you have a new hunch or angle, then you have to go back and do the whole process again. The idea behind Polaris was to query a database using a picture, to be able to sort, filter, zoom up, and pivot it through a purely graphical interface. When you do it that way you are working at the speed of thought. By dragging and dropping after viewing some of the data on a canvas, you are actively querying it. That lets you generate pictures of it at the same time.

Sramana Mitra: Architecturally, how does the data tie to the graphics or picture?

Christian Chabot: The core invention of Tableau, which is what it will be known for, is VizQL. One of the most important advances in using data was SQL. The idea behind SQL was to have a pithy declaration that was almost plain English to send to a database and let the database find the answer. It was declarative, not procedural, and it changed the world.

Regardless of what you send, SQL always replies with a table. You then take that table and go through the clumsy process that I just described above to get to an answer or presentation. The idea behind VizQL is to be able to send a VizQL statement to a database and have it reply with a picture, not a table. You would just turn that table into a picture of some sort anyways. VizQL is an algebraic formalism that embodies both the graphics commands and the query which is required to bring tuples back into the data engine. By virtue of marrying both into a single language, it is easy to provide a single picture of the data.

Sramana Mitra: Essentially, you are doing drag-and-drop query-building using graphics. Internally, that query is being translated into some sort of SQL which is processed and transferred back into graphics for the user. Is that a correct assessment?

Christian Chabot: Yes that's right. The language from which we are retrieving data could be anything. You can expose any declarative query interface. For example, MDX is another popular option. If you married a description of information graphics with a description of data queries into one formalism, you could then write applications which were fluidly graphic and thus generate queries fluidly. It is a unification of those two worlds into one that is the breakthrough.

Sramana Mitra: Don't you need a translation layer to accomplish this?

Christian Chabot: That's a simple thing and we could write our own. Writing a procedure that retrieves data is a computer science 101 task. That layer can be anything.

Sramana Mitra: I'm not talking about the query interface, I'm talking about going between the query and the graphics interface. That's your technology, right? Going from graphics to data and back?

Christian Chabot: Yes, but that has to be architected in a way that maps very well to relational algebra. If they didn't write the formalism that easily compiled to popular query languages, then the task would have been easier. Most analytical applications rely on using their own proprietary data silo where they expose their own custom query interface. That is why virtually any analytical application in the world requires you to import the data from the database into the analytical silo. That's true of Excel, SAS, Business Objects, and every other one you can name. They are built on that model.

You have to get the data out of the database and into their fancy silo. They'll never expose the query interface to people. They just build their captive UI to that. If we had architected that way ourselves, then the task would have been much easier. We have written the formalism very elegantly into the data query, which is part of the brilliance of what we have done.

Sramana Mitra: It's an on-the-fly compiler?

Christian Chabot: It's an on-the-fly compiler of optimized data queries which databases can understand. It's a greater burden than just writing a visual interface to any style you offer yourself.

Sramana Mitra: Was the Polaris technology already finished at Stanford?

Christian Chabot: I think a fair description is that the landmark papers had been written, the formalism had been invented, and it was a research project. Our idea in 2003 was to spin that project out at Stanford and commercialize it.

Sramana Mitra: Describe what was going on in your head in 2003 when you decided to do that. Why that particular project? Why did the next phase of your life center on that technology?

Christian Chabot: My first job out of college was a data analyst. If I did not have that job I would not have seen this opportunity. Most of the people we showed it to very early on did not get it. Everyone has seen information graphics before. When they saw it they only recognized it as something else that generated information graphics. It's only if you had worked as an analyst that you could realize the bridge between where the data is stored and getting it into a useful form that can be manipulated and explored. That is the crucial task.

Sramana Mitra: Your previous work experience gave you an actual user's point of view. You are solving a problem you faced earlier in your life.

Christian Chabot: Exactly. Even within the world of information visualization, there are many different schools of thought, and I learned about many of those in my first job. A very important school of thought to which I subscribe is proper information visualization. Edward Tufte has written landmark best-selling books on how to properly and responsibly convey data as information graphics. There is a community of a couple of million people who have bought his books and gone to his lectures. They believe there is a right way and a wrong way. I was trained in that school of thought because I worked in a highly analytical-intensive environment.

My background let me immediately see the benefit of what Chris [Stolte] and Pat [Hanrahan] had invented. They built the formalism on the information presentation side in a way where it was very easy to plug-in rules to follow those proper information visualization principles. Most analytical applications

have horrible use of color. If you put red on the screen as just another color to light a piece of data, your audience thinks it is something important because red is used to highlight. It stresses meaning and attention. You should always try to avoid or mute red in the presentation. Analytical products tend to abuse color by putting too many on the screen at once.

There is a huge body of academic work in the fields of perception and psychology. Stanford has one of the best programs in the world in this, coincidentally. Our inventors are very close with them, and they know the rules of perception design outside of computer science. Chris and Pat were very influenced by this school of thought.

Sramana Mitra: There's a lot of powerful subtlety in what you are saying.

Christian Chabot: There is also another important entrepreneurship point that I find extractable from the Polaris Project. Over the years, writers have commented on the fact that sometimes a person coming from outside of the field, or who is very young, is the best person to come up with breakthroughs. People like that are unbiased about other connotations and experience that people very close to the field have.

Pat Hanrahan is a Stanford professor and a really famous mind in the field of computer graphics. He was a very early employee at Pixar. He wrote the software that did the rendering. The fact that he started to look at data and queries as a computer graphics professor is something that I believe is one of the key events that resulted in his and Chris's coming up with a completely new way of looking at this. They were unburdened by knowing how previous applications work. They were just thinking about the right way to do it.

Sramana Mitra: I wrote a piece a year ago on cross-domain innovation. I pointed out the same fact: if you put innovation that straddles different domains you get some of the coolest stuff. It's very hard to do because normally people who spend their entire lives in one domain or another never really come together. If you have been able to do cross-domain innovation, that creates huge barriers to entry and solves problems in unique ways.

Christian Chabot: I was giving a speech to customers the other day and I used this for my intro line: "They say that the greatest innovations are born from strange bedfellows." That is your point exactly. In our case it was PhD's in database optimization, data structures, and data queries, married in the lab with people who had PhD's in computer graphics. These are groups that don't even talk to each other anywhere else. They definitely don't collaborate. That is one of the reasons that we have the IP we have today.

Sramana Mitra: Did you finance the project yourself?

Christian Chabot: When you spin out of Stanford, the first thing you need to do is license the technology. We worked with the technology licensing office. That was step one.

Technically speaking, there is a high road and a low road regarding how people handle Stanford. There have been people over the years who have taken the low road. Despite the fact that the university may have some rights in it, these people go and start something on their own and do not collaborate with Stanford at all. The most famous example is Sun Microsystems. They just left and commercialized. Google is an example of a company that took the high road. Stanford was a very successful shareholder of Google.

Sramana Mitra: What does the financial structure of a business spun out of Stanford look like? Do they take an equity position?

Christian Chabot: I get that question a lot, and I can't comment directly because each case is unique. The thing to remember about Stanford is that they license to more than startups. They license a lot of technology to major corporations. Because of that, their terms have a very wide range. It can include royalty, payments, quarterly minimums, and things like that. It's a deal negotiation and can spread all over the map. In our case, they took a small equity position as they had done in Google and other startups.

Sramana Mitra: What came next? Did you raise money?

Christian Chabot: No. We're fans of bootstrapping. We all decided to bootstrap this.

Sramana Mitra: So it was yours and Chris's money?

Christian Chabot: Chris Stolte, Pat Hanrahan, and me are the co-founders and initial funders. We all recognized early on that we had skepticism towards external sources of financing too early. For the first 18 months we just worked in the warehouse out in Mountain View. We were actually getting our space from the back half of another startup.

Sramana Mitra: Did you have any customers?

Christian Chabot: Step A was to spin out of Stanford and the rights to commercialize the technology. Step B was basic patenting and company formation. Step C was to start working on the software to an extent that it could be packaged up and used in some product form.

When I give entrepreneurship advice to people, I often tell them to sell early and sell often. Even if it's just PowerPoint slides, you have something. Go to a local company and sell them an early adopter package. You are only getting the real opinion when you start talking money. You have to qualify them by asking the right questions. We took that strategy and created the 0.5 version; it did not deserve a 1.0 designation.

Sramana Mitra: That's okay. The iPhone version 1.0 didn't do cut-and-paste.

Christian Chabot: Exactly. We started selling a very early version directly to companies.

Sramana Mitra: Can you tell us something about your first couple of customers?

Christian Chabot: The business strategy we chose was one where you could start small. You could start by buying a couple of copies.

Sramana Mitra: At what price point?

Christian Chabot: Our entry point is $1,000. That is a single copy for personal use. As a result, we have some customers who invested a lot in our product line, and other customers who have just a couple of licenses. I would say the first 100 customers gave us the best product validation.

Sramana Mitra: Were these 100 customers from a single industry?

Christian Chabot: We collectively decided that a horizontal strategy was the right move. This was controversial at the time. It was not obvious. We wanted to come across as being the company to use for broad horizontal use. We had no vertical specialty.

People typically call our industry the business intelligence industry. The traditional sets of vendors have names like Business Objects, Crystal, and there are more than 15 other companies. Those are the product lines that are still out there. Without exception every one of them is complicated. They have heavy architectures originating from the 1980s. They are very expensive and difficult to configure. They have high services ratios and their sales teams are trained at off sites to go sell two dollars of services for every one dollar of licenses.

We came into the industry with a fresh approach. The thing that was different was obvious because they were a dying set of companies. There are others in a new generation. One of those was called SpotFire. They were also a university spinout, from the University of Maryland. They got up to a couple hundred people before they got bought out. It was a real company. They were strong students of "Crossing the Chasm." They really believed in perfecting a vertical before moving on. We think the exact opposite. Pharmaceuticals was their vertical, and then they went after oil and gas.

Sramana Mitra: How did you find your initial customers?

Christian Chabot: We used things like cold calls, Silicon Valley networking, and friends of friends. When you're starting from nothing, you do whatever it takes. I was talking to anyone who would listen. I networked heavily, got friends to send me ideas, and went to alumni databases. After we put up a website, some people started to find us. That would produce one to two leads a week, and at that stage every lead was a drop of gold. If you treat every lead like gold and have enough perseverance, customers will start bubbling up.

Sramana Mitra: Where were you finding users? Did you target business intelligence users across the board?

Christian Chabot: We don't have an industry focus but we do have a user type that we focus on.

Sramana Mitra: Was it a vertical market based on user function?

Christian Chabot: It's a profile of a person. We are applicable to knowledge workers who need to interact with data as part of their job once a month or more. We call those types of users data workers. That is who our market is. You can find data workers in every profession.

Sramana Mitra: Were you using direct sales?

Christian Chabot: Yes, and we still use direct sales today. We use the inside-out model. It is the same model that Salesforce.com uses. We leverage a largely inside sales force and complement it with field reps. When I was in venture capital, virtually every VC was making the mistake of overloading company with field reps.

Sramana Mitra: I would say that over the past five years that model has matured greatly. The success of Salesforce.com and the software-as-a-service model have opened their eyes.

Christian Chabot: WebEx was probably one of the first. They are a software company but nobody thinks about them that way. That's the beauty of the model. People tend to form a personal connection with their brand.

Sramana Mitra: There are a lot of things that came together to make that work. Without the Web it would not work. Without broadband it would not work.

Christian Chabot: That is why I think WebEx is one of the first pioneers. They used their own tool to do the job. They are one of the Valley's best

successes. They have the same investors that we have. When I was selling our business model that was one of the things that got our investors excited. At the time I was proposing the model, most enterprise software companies were not doing it.

Sramana Mitra: You took venture capital funding?

Christian Chabot: We did later. We bootstrapped for the first two years. Then we started to earn our first customers and managed to secure a few really big deals.

Sramana Mitra: What kind of revenue did you get up to before taking money?

Christian Chabot: We closed a couple hundred deals in direct sales. I also closed a mammoth deal which was an OEM deal. We did that with Hyperion, which is now a part of Oracle.

Sramana Mitra: Were OEM deals with intelligence vendors part of your strategy?

Christian Chabot: Yes, but very carefully. I view OEM deals with the major platform providers as a means to an end. It was just what we needed during our startup years. I don't believe that pure OEM deals in software ultimately create big viable companies. For us it was early market traction. It was a vehicle for recognition and some financial stability as well as respect from industry analysts. That is the only OEM deal we have ever done.

Sramana Mitra: How big was that deal?

Christian Chabot: It was a four-year deal that involved a 10-digit figure. We had an advance on the deal as well.

Sramana Mitra: Why did you raise money?

Christian Chabot: Because we have big dreams. We needed capital to ramp faster. Let's define the destination as a major publicly traded billion-dollar market cap company. That destination can be arrived at by bootstrapping alone. However, we wanted to go faster. I needed more capital for that. More capital does not guarantee that we will arrive, but it can help us arrive faster.

Sramana Mitra: Who was your investor?

Christian Chabot: New Enterprise Associates.

Sramana Mitra: How much money did you raise?

Christian Chabot: We raised $5 million. We grew the company for four more years, and in August 2008 I decided to raise more funding. NEA took the whole round and we raised $10 million.

Sramana Mitra: I often tell entrepreneurs to bootstrap the early stage, and if they do raise money it should result in a better valuation. They have a validated business. Did you find that to be the case during your valuation negotiations?

Christian Chabot: We are a great example of bootstrapping paying off. In Q3 2004 we raised money. At that time the median valuation for a first-time fund-raising company was something like $5 million pre. We raised at $20 million pre. The only reason we were able to do that is because we had a validated business. VCs would rather pay a higher price for something more secure.

Sramana Mitra: How have your revenue ramped since that time?

Christian Chabot: In 2004 we did $800,000. That rose to $2.1 million in 2005, $3.7 million in 2006, $7.8 million in 2007 and $13.9 million in 2008. Our final numbers for 2009 had us at $20.1 million.

Sramana Mitra: What is your assessment of your TAM?

Christian Chabot: If you went to a traditional analyst firm and asked them how big the business intelligence market is, they will all say $6 billion to $7 billion. Entrepreneurs tend to laugh at these firms because they always look at the past and not the future. They are looking at yesterday's market, which is not the TAM. They are not willing to consider the fact that a new technology changes the market size. I'm not worried about how big the business intelligence market is today; it's how big the business intelligence market would be today if the technology was easier to use and more affordable. My answer is between $15 billion and $18 billion.

Sramana Mitra: You have positioned your company as a data visualization company. Your target audience is the data worker. To me, the TAM is the total number of data workers multiplied by their spend.

Christian Chabot: I understand the spirit of your question. So far today I have described the technology well, but I haven't told you what we're doing with it. We've targeted data workers with our first product. We now have three products. One strategy we could have taken was to be a visualization layer to the big companies. That would have been the safe business bet. However, it would have had a much smaller market size and with higher average user prices. We rejected that strategy. We decided to invade the entire market below us. Tableau sells rapid-fire business intelligence.

Sramana Mitra: That puts you in competition with Lucidera.

Christian Chabot: I don't worry about them because they are a startup. My philosophy is that startups should never worry about other startups. I want to compete against Oracle and Microsoft. In seven years I have never seen a customer use Lucidera. We have competed against Excel, Business Objects, Oracle, Microsoft, Information Builders, and companies like that.

Sramana Mitra: You have a smaller, faster, cheaper, business intelligence suite. You have very sophisticated visualization.

Christian Chabot: That is very well put. Even though we're not SAS, we are analogous to SalesForce. They were going into a identifiable market market that was very well-known with a very specific buying rule. What they invented was a brand-new way of servicing the market with something faster, lighter, and more affordable. We are almost a carbon copy of that in business intelligence with the exception that we achieved those things by delivering software without being a software-as-a-service model company.

Sramana Mitra: Have you been able to knock Business Objects or Cognos off major enterprise deals?

Christian Chabot: Every day. More important, for every deal we win we have grown the market in another way. We are winning deals where those old solutions were non-starters in the first place. That is why our TAM is much bigger. We are bringing analytics and visualization to a new part of the market.

Sramana Mitra: Why have you not done SaaS?

Christian Chabot: Our next move is a SaaS move. We are going to take our core visualization tech knowledge and start giving it away free on the Web. People will be able to populate and use it on the canvas of the World Wide Web. Our new product will be relevant to virtually anyone who posts

information online. Originally, the Web was all text. Then images became a first-class citizen. Then video merged. I argue that the fourth type of content that human beings produce is data. Nobody has cracked that on the Web yet. Nobody has made data on the Web as fun and consumable and beautiful as online video.

Sramana Mitra: Great story. Thanks for your time.

Note: Tableau went public in May 2013 raising over $250 million at a $2 billion valuation riding on the Big Data wave that has swept over IT.

Epilogue

Forrester estimates that the public cloud market will reach $191 billion by 2020, from $58 billion in 2013. There is much upside ahead, and many more opportunities for entrepreneurs to build cloud businesses, some beyond the public cloud in areas such as private and hybrid cloud.

Of all the categories of Internet businesses, cloud computing has generated some of the best returns for investors. In this volume of *Entrepreneur Journeys,* I have provided you with case studies of entrepreneurs who have built successful cloud businesses.

Through their work, and their stories, I wanted to share with you a window into the day-to-day running of such businesses, the decisions they made on a daily basis, the important steps and strategies that have determined their long-term success.

For the hundreds of thousands of cloud entrepreneurs out there, I felt that these conversations would throw light on the issues you are facing in growing your businesses. I have tried to simulate the experience of actually sitting down with these entrepreneurs and having dialogs with them, so that you can learn their lessons from the trenches.

I hope you find these conversations useful and inspiring, and they spur you on to building your own successful cloud venture.

Final Word:

Entrepreneurship = (Customers + Revenues + Profits)

Financing is Optional

Exit is Optional

Author Bio:

Sramana Mitra is the founder of the One Million by One Million (1M/1M) global, virtual incubator that aims to help one million entrepreneurs globally to reach $1 million in revenue and beyond.

She is a Silicon Valley entrepreneur and strategy consultant, she writes the blog Sramana Mitra On Strategy, and is author of the Entrepreneur Journeys book series and Vision India 2020. From 2008 to 2010, Sramana was a columnist for Forbes, and currently syndicates to numerous venues including Harvard Business Review and Huffington Post.

As an entrepreneur CEO, she ran three companies: DAIS, Intarka, and Uuma. She has a master's degree in electrical engineering and computer science from the Massachusetts Institute of Technology.

On Social Media:

Twitter: @sramana
LinkedIn: http://www.linkedin.com/in/sramana
Facebook: https://www.facebook.com/sramana.mitra

One Million by One Million Mission

One Million by One Million (1M/1M) is a global virtual incubator that aims to nurture a million entrepreneurs to reach a million dollars each in annual revenue and beyond, thereby creating a trillion dollars in global GDP and ten million jobs.

Founder

Silicon Valley entrepreneur and strategy consultant Sramana Mitra founded 1M/1M to create a framework for Capitalism 2.0, which she envisions as distributed, democratic capitalism. The program was born out of her 2010 New Year Resolution.

The Program

We offer a case-study-based online educational program, video lectures, lean, capital-efficient methodology guidance, online strategy consulting at public and private roundtables, as well as introductions to customers, channel partners and investors. The public roundtable is a free program accessible from anywhere in the world. The rest of the services are for our paying members only. Please note that we focus on business strategy and execution; capital is optional, and may or may not be appropriate for your particular business. Less than 1% of businesses that seek funding are actually fundable. However, we are perfectly happy to help the other 99% build sustainable businesses as well, irrespective of fundability or interest in external financing. 1M/1M is a for-profit business, not a foundation or a non-profit.

Meet some of The One Million Club members, and review the Quantified 1M/1M Value Equation.

If you are looking to start or expand an incubator, please look at our Incubator-in-a-Box program.

Free Public Roundtables

As part of the 1M/1M initiative, Sramana Mitra offers free online strategy roundtables for entrepreneurs looking to discuss positioning, financing, and other aspects of a startup venture every week.

Only the first five who register to pitch will be able to present their business ideas. These roundtables are public forums and recordings of all sessions are available here.

"There are large numbers of people that want to start web-based companies but don't know where to begin. Your curriculum should be mandatory. It has enormous value by itself, but when coupled with the Roundtables and 1M/1M community there is no substitute." — Dan Stewart, CEO, HappyGrasshopper

Sramana requests that entrepreneurs use the 1M/1M Self Assessment Tool to help to prepare their pitches. We strongly recommend that you address the following items in your roundtable pitch:

Your roundtable pitch should be no more than three minutes, and consist of four slides, as suggested above.

Register at http://1mby1m.com

Contact: support@1mby1m.com

Twitter: @1mby1m
Facebook: https://www.facebook.com/1Mby1M