Entrepreneur Journeys

Bootstrapping Using Services

How To Bootstrap a Product Company Using Services

Sramana Mitra

To the ambassadors who have helped support 1M/1M
since we conceived the program on Jan 1, 2010.

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**Not only is bootstrapping products using services viable,
it is a tried and true method practiced by numerous entrepreneurs.**

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How To Bootstrap Products Using Services

Raising funding for startups in Silicon Valley is a low probability game at which less than 1% who try, actually succeed.

Outside the Valley, the startup eco-systems are mostly immature, and the probability gets even lower.

The issue is that the bar to raise seed funding is getting higher and higher. Seed investors are mostly operating as growth investors, expecting that the entrepreneur will somehow manage to bridge the gap and bring a concept to realization. In fact, what these investors really want is to invest in businesses that have traction, not just validation.

In short, they want to come to the rescue of victory.

Well, as an entrepreneur, how do you go from concept to traction? How do you bridge the seed capital gap? What do you do if you are full of dreams, but stuck in the gap between concept and seed?

Because it's often so difficult for entrepreneurs to obtain seed funding for their startups, bootstrapping is one of the best methods to self-fund their projects.

And offering a service is one of the best ways to bootstrap.

This, by the way, remains a controversial point of view, and most industry observers will take the position that companies get distracted if they try to bootstrap a product with a service. At 1M/1M, we take a pragmatic and contrarian position, and back it up with numerous case studies. From where we

sit, bootstrapping products with services is a tried and true method.

Let's look at examples.

AgilOne, a company that provides cloud-based predictive customer analytics, was founded by Omer Artun in 2006. Initially, the company relied entirely on services to get close to customers, understand and address their problems, and in the process generate revenues. Today, AgilOne's product is a software-as-a-service platform. Much of what the company learnt about its customers in the services mode has been productized, although a good percentage of revenues still comes from services.

AgilOne's platform is designed to make it easier for companies to see how their customers are interacting with their products. For example, a company's online retail customers can be broken into different "clusters" based on their search and shopping preferences. These clusters then enable the company's marketing department to more accurately target those users with specific promotions.

Omer bootstrapped his company from no revenue or employees in 2005 to about 45 employees and over $15 million in revenue by the time AgilOne partnered with Sequoia Capital in 2011. Silicon Valley's top venture firm made a sizable investment at a high valuation in a company that was bootstrapped using services.

Andy Chou, a PhD student at Stanford, also bootstrapped his company Coverity, using services. Andy's research was financed by DARPA at the university. The technology allows automated cleaning up of large code-bases, and was licensed back to the company by Stanford.

Andy recounts his funding story: "We talked to all of the VCs interested in this space and told them that if they wanted to invest in us, we would only consider

certain types of deals. We presented them with our range of acceptable terms and indicated that if we did not receive offers in those ranges, we were content to continue bootstrapping the company as we had a solid clientele. We were in a sweet position where we had revenues (mid-20 million range) and did not need to receive additional investments to succeed. As a result, we got a good deal from Benchmark Capital. They invested $22.3 million in us in 2007."

In this volume, we also present the stories of Girish Rowjee who bootstrapped Greytip, a SaaS company in India, using services, and Mike Mothner, who morphed his SEO services company Wpromote to include a substantial product business. Also interesting are the stories of Bill Loumpouridis, who built an e-commerce platform on top of Force.com, and Krish Kupathil, who bootstrapped a mobility product, both using services.

I will now share a couple of examples from the 1M/1M portfolio. In our incubation methodology, we actively encourage entrepreneurs to engage in services businesses. In particular, we encourage them to immerse themselves in customers, learn their problems, do some services projects that not only generate cash, but also generate customer intimacy and trust. Through these kinds of dialogs, entrepreneurs diagnose real pain-points in customers, and end up building products that customers are willing to pay for.

RailsFactory, a consulting and app development company that provides solutions for the web application framework Ruby on Rails, was co-founded by Senthil Nayagam and Dinesh Kumar in 2006. RailsFactory provides numerous services primarily focusing on app development for the Ruby on Rails platform.

Senthil and Dinesh bootstrapped RailsFactory themselves, starting with about $1,250 in seed money. When they needed to, they each utilized other personal

resources: Senthil reached into his savings, and Dinesh turned to his parents. But they started generating revenues fast—thanks to the services they offered, they were generating revenue by their second month, and they've been growing since. To date, RailsFactory has executed over 100 projects and has worked with clients in the US, Canada, India, Australia, Singapore, and the UK. Their services revenues have crossed a couple of million dollars, and the company has recently built a product that they have started validating with those 100 services customers. The productized offering enables them to offer a support package to the small- to medium-sized enterprise segment based on packs of trouble tickets.

Similarly, Mansa Systems is a SaaS-based IT company, founded by Siva Devaki in San Francisco in 2006. Siva founded Mansa Systems to focus specifically on cloud computing. Currently, Mansa publishes a number of apps to be used in conjunction with Salesforce.com through Salesforce's AppExchange app marketplace.

AppExchange allows partners to create apps to enhance Salesforce for business, and Mansa Systems currently offers eight different apps for Salesforce. Each of the apps is designed to address a limitation with Salesforce; for example, cloud storage app Cloud Drop gives users additional cloud storage space, MassMailer allows users to circumvent Salesforce's bulk e-mail limitations, and EaglEye provides Salesforce users with secure, trackable document filesharing. Mansa Systems remains entirely self-funded via the company's service business, and there are currently no plans to use outside funding. The company already has achieved $2 million in annual revenue, and enough profitability to be able to develop and launch its apps at a steady clip.

I have often heard that capital intensive businesses are difficult to bootstrap.

There is some truth to this observation. However, Finisar offers the counterpoint.

Finisar produces optical communications components and subsystems and was founded 25 years ago by Jerry Rawls and Frank Levinson. Jerry and Frank bootstrapped Finisar by first providing consulting services while doing product development in high-speed fiber optics for computer networks. They searched for a need in the computer industry that wasn't filled, and discovered that need in the early 1990s when they pioneered a low-cost gigabit optical link that made optical drives more affordable. By 1994, their product had changed the fiber channel standard, and sales of their optical components doubled every year after that for seven years in a row.

Even while Finisar was taking off, the company remained fully self-funded. Jerry and Frank bootstrapped Finisar for the first 10 years of its existence and received no outside funding until 1998. In 1998, they were approached by TA Associates and Summit Partners, two private equity firms who bought 20 percent of Finisar in anticipation of an IPO. Jerry estimates that the company's sales pre-IPO were in the $30 million range in 1998 and, by the time the company went public in 2000, sales were around $67 million. Finisar went public at $19 and closed the first day of trading at $86.

Optical communications components and sub-systems, for all practical purposes, are considered to be extremely capital intensive. Yet, Frank and Jerry, obviously, managed to bootstrap their venture using services almost all the way to an IPO.

Each of the companies I have introduced you to bootstrapped to profitability via services. Not only is this a viable method of getting your startup off the ground, it's a proven method of reaching profitability, as well. In some cases, it

can take you to the enviable position of having VCs like Sequoia or Benchmark knock on your door. In other cases, you could even have investment bankers come calling, wanting to take you public, and a whole slew of late-stage investors wanting to shower you with funds.

All those are desirable outcomes!

Case Studies

Interview with Andy Chou, Coverity

Andy Chou is a text-book case study for the 1M/1M philosophy "Bootstrap First, Raise Money Later" and in this story, he demonstrates how he managed to get to an amazing negotiating position with Benchmark Capital, one of Silicon Valley's premier venture firms. This interview was conducted in December 2011.

Sramana Mitra: Andy, tell us a bit about yourself and the genesis of Coverity.

Andy Chou: Back in 1999, I was a Ph.D. student at Stanford University studying computer science. I was researching methods to improve software quality and software security. It was an area I felt was worth my time. I felt that at that time, the profession I had chosen, being a developer, had a bad reputation. A lot of software was out there that was very poor, and I wanted to work on that problem.

I found a professor, Dawson Engler, who was interested in solving this problem as well. Along with four students, he formed a research team that took some grant money from DARPA intended for something completely different and repurposed it to work on this project. We did it on the side really cheap. Our vision was to build an analysis that could be extended to allow people to find defects in their software code without having to run tests and do a lot of extra work.

We started off by building something that could analyze the Linux kernel. We were hacking on this for a long time and built a prototype over several months. We were working on the prototype to get results for a paper we wanted to publish, and a week before the paper was due we had nothing. We had no results, prototype, or even a draft of the paper. It was really crunch time, and Dawson was a new professor going after tenure. That weekend we spent the entire weekend hacking on the project, focusing only on the Linux kernel. We found thousands of defects in the kernel in a matter of days.

Sramana Mitra: Did you find those defects by hand or with a software tool?

Andy Chou: We finished our software prototype that weekend and ran it for the first time on that code base. We were shocked at how many defects we found. After we found them, we verified our findings with the Linux kernel developers. They responded and verified that we had found problems that required fixing. We ended up publishing that paper and won the Best Paper award at the prestigious Operating Systems Conference in 2000.

That paper really got the interest of a fair number of people from the industry. We started getting a lot of inbound inquiries from industry thought leaders. These were people who read academic journals and who had been to graduate school. They were VPs of engineering or very senior developers. They wanted to get access to the code base because they felt it was valuable. Being researchers, we had no intention of starting a company, so we pushed them all off and continued to do our research.

For the next four years we published more papers about how to extend the technology to do even more. We showed how to find even more defects, how to find different types of defects, and how to figure out the core technology.

We built a platform over the four years we were in graduate school.

Sramana Mitra: From a computer science point of view how were you solving the problem?

Andy Chou: In the world of static analysis the idea is to take the source code for a program, dissect it and digest it, and then analyze all of the different paths through that program. We can then semantically detect problems along a specific path such as buffer overflows or a pointer reference error. You do that by symbolically executing the program by pretending the variables are symbols and determining what happens to those values as the program executes along its different paths. It is a systematic way to review the code and find inconsistencies and crash causing defects automatically.

For a long time, some of the core technology has been used in compilers to optimize the speed of software. Very little of that technology has been used to find defects. We adapted that technology to help find defects with very few false positives. This had been done before but never in a way that produced accurate results or that was capable of being scaled to very large code bases with millions of lines of code. We figured out how to build static analysis in a way that was scalable, accurate, and that developers could actually use.

Sramana Mitra: You worked on this technology for four years and had a reasonably well-formed prototype. What came next?

Andy Chou: It was definitely a prototype. Only the researchers could run it because it did not have any of the things developers could really use. It was a pile of code that we licensed through Stanford University's Office of Technology Licensing. We struck a deal to exclusively license our own technology back to ourselves and formed the company in 2003. There were

five of us who founded the company, one who was a professor and the rest of us were PhD students in computer science.

I spent two more months cleaning up my thesis and finished my PhD. The others just quit school and jumped into it right away. This company got bootstrapped because we could sell consulting services and products from day one. We had tiny amounts of initial capital. We wrote checks of 5,000 dollars a piece to start the company. That situation persisted for four years.

Sramana Mitra: So you were talking to chief architects and VPs of Engineering and helping them clean up their code bases?

Andy Chou: Essentially that is it. We often talked to someone who was in the know. We did that for four years while we turned our prototype into a real product that could be scaled up. We figured out a model for selling the product by offering a trial that demonstrated our capabilities.

Sramana Mitra: How much revenue did you generate during those four years of bootstrapping?

Andy Chou: The first year we had $400,000 of bookings. We hired our first VP of Sales that year and he told us that the next year we needed to target $4 million of bookings. We thought he was nuts but we ended up doing that. In 2005 we did $12 million in bookings.

Sramana Mitra: How did you go about raising funding?

Andy Chou: We talked to all of the VCs interested in this space and told them that if they wanted to invest in us that we would only consider certain types of deals. We presented them with our range of acceptable terms and indicated that if we did not receive offers in those ranges, we were content to continue

bootstrapping the company as we had a solid clientele. We were in a sweet position where we had revenues and did not need to receive additional investments to succeed. As a result, we got a good deal from Benchmark Capital. They invested $22.3 million in us in 2007.

Sramana Mitra: What did you do with that funding?

Andy Chou: We received the funding in 2007 and brought in executives to help scale the company.

Sramana Mitra: Who was running the company at that point?

Andy Chou: Our CEO was one of the other founders, Seth Hallem. He was the CEO from the beginning of the company until that point, which is when we brought Anthony Bettencourt on board. I was part of his executive team.

Sramana Mitra: What was your revenue when you raised $22.3 million in 2007?

Andy Chou: Our revenue was in the mid-$20 million range. I think that might be a bit unusual for companies.

Sramana Mitra: I think it is great. RightNow was just purchased by Oracle for over a billion dollars. That company was bootstrapped to the $5 million revenue point when they received a $120 million Series A valuation.

Andy Chou: That was similar to the founders here. We gave up about 20% of the company, which I think is very good for us. We were fortunate to be able to bootstrap to this point. Bootstrapping is very hard to do and we had several close calls. We were fortunate to have our research funded through DARPA during our time at Stanford. We had something the very first day, and I don't

think that a lot of companies have the luxury.

That is a definitive advantage of coming out of a university. We have access to prototype funding, research & development, and quality talent. We had the freedom to explore our ideas without having the constraints of a business. That turned out to be great because we figured out a lot of things in a safe environment that we may not have had in a corporate environment.

Sramana Mitra: What was the next major event after you raised your funding?

Andy Chou: We had the financial crisis, which hit every company pretty hard. That caused us to re-evaluate our company. The good thing was that our customers stuck with us because they saw the value we provided even in the dire economic environment.

Sramana Mitra: Absolutely, software still needs to be developed and tested. Any automation to that could save companies money.

Andy Chou: We did not grow as fast, but we were able to continue with our growth. We had a little bit of time to breathe. Instead of hiring new people, it gave us time to figure out our internal processes. Every company needs to mature, so we spent some time maturing. Once we came out of the financial crisis our next bit step was to hire Anthony Bettencourt as our CEO.

Sramana Mitra: What had you settled on for your business model and pricing model after you emerged into the mature stage of your company?

Andy Chou: Very early on we followed the example of other software companies and sold perpetual licenses. One of our board members recommended that we switch our model to a term-based license. The idea is

that you get a subscription to the software for a period. That revolutionized our business. It meant that we collected recurring revenue from our customers, and it stabilized us as a company.

Our model is to sell to a customer based on an entire software project. We size them physically by length of code. The cost of our annual license is based on the number of lines of code in your project. We sell licenses in one-, two- or three-year packages.

Sramana Mitra: What are the price points?

Andy Chou: Retail cost is 8 cents per line.

Sramana Mitra: What was the competitive landscape like when you started, and how has it changed?

Andy Chou: In the beginning, the static analysis market was very small. My estimate was that it was less than a $20 million market as a whole. The technologies were not ready for prime time back then. Over the past few years, that has fundamentally changed. Our revenues have passed $50 million in the past year (2011). We are bigger now than the entire market was less than 10 years ago.

If you look at the competitive space, there were products that did minimal standards enforcement, and they were not used widely by developers. Since then, many competitors have cropped up who use this core technology in security, quality, embedded software, enterprise Web applications, and many other vertical markets. Our major competitors are IBM and HP, which have product lines that address some of the things we do. They are not best-of-breed products like we are. Customers come to us looking for something to solve their product problems, and they want the best they can buy. They ask us

to integrate us with our competitors, so there is a degree of 'cooperative competition.'

Sramana Mitra: How does your business break down within your clients' structure?

Andy Chou: A majority of our business comes from embedded software. That includes consumer electronics, military and aerospace, medical devices, mobile, and verticals like that. We do have ISVs as well, and we are just starting to crack into the enterprise IT space.

Sramana Mitra: Why is your core market embedded software?

Andy Chou: We analyze C and C++ as a language, and that is the language used in embedded software. Another reason is that a defect in those types of systems requires sending a field engineer out or a hardware box upgrade. That is much more expensive. I also think another reason we have had such success in the embedded space is because there are no good solutions otherwise. You can't use dynamic analysis.

Sramana Mitra: It sounds as though you found a niche and are addressing a specific gap.

Andy Chou: It is a great starting point for us, and we worked hard to dominate that niche.

Sramana Mitra: The Internet has created a distributed environment for developing software. In most cases it is not of the same complexity as embedded software, but I would imagine the quality requirements of that software are still critical. Is there a possibility that you could infiltrate that population of developers?

Andy Chou: Absolutely. We look at mobile development and enterprise applications, and we see millions of developers out there writing software. As software gets more capable it gets more complex, and the more complex it is, the more difficult it is to get right. A single line that is wrong with software can take down an entire software system.

Modern systems consist of millions of lines of code. It is like a house of cards where one wrong thing can result in a catastrophic problem. The key is fixing problems when the code is written. That is when you can save time and money. The trend is that quality in software is getting increasingly valuable, which makes us increasingly important. That is why we have seen financial services become our first big growth segment after embedded systems.

Sramana Mitra: Where do you go after financial services? What market segments are ready for penetration next?

Andy Chou: If you look at the Fortune 1000 you will see that all of them are becoming software companies to some degree. Each company has software infrastructure to some degree. Each company that I have talked to has customizations to their third-party software. There are applications for Coverity everywhere. These companies have thousands of software developers working for them. Outside of financial services, we are doing very well in automotive.

Sramana Mitra: The automotive industry seems like a good fit for Coverity because it historically does not do a very good job with software.

Andy Chou: If you look at the [Mercedes-Benz] S Class coming out next year, you will see that the driver assist module has 25 million lines of code. Automotive applications are very large.

Sramana Mitra: I know of some Indian outsourcing companies that focus only on embedded software for automotive companies. Those are very large applications. They are doing very well in that niche.

Andy Chou: It is amazing how much software is in a modern automobile. Estimates range from 10 million to 100 million lines of code. That is enormous. That is as much as you will find in Microsoft Windows. Our focus on embedded software reflects that demand and we have a clear dominant play there. Source code never gets smaller. Our product is very sticky because the false positive rate is so low. The alerts we come back with are accurate and actionable. We will typically start out with a single deal with a company and then conduct three or four more transactions with that company over the next couple of months. The developers really like our tools.

Sramana Mitra: I have not heard you mention software-as-a-service as a category you are doing a lot of work in. That seems to be dependent on uptime and reliability. Are you seeing any traction in that category?

Andy Chou: We do have customers in the cloud services space. That is one of the verticals that we are looking at. If you look at our strategy for expansion, you will see that we have a good brand and great core technology. We know that businesses need our product to enable delivery of complex software, which saves time and money.

We also want to look at what we can explore beyond static analysis. First, we want to explore how to bring in information from your test organization so that we can analyze that as well. We want to know what the test organization is doing in terms of measuring the functionality of your product and understanding how good their software test coverage is. Most organizations do not understand that very well, but it is critical to delivering high-quality

software.

Second, we want to look at security. Obviously, that is a big concern that is growing quickly. We want to explore it further. At the end of the day, software security bugs are defects in the code. Our perspective is that developers should be able to understand, find, and fix these defects just like any other error they find in their software. Many of the defects we find are already security problems today.

Sramana Mitra: How do you verticalize security? Do you segment it to software vendors working in security, or do you want to sell to enterprises and governments that are buyers of security?

Andy Chou: It is really for enterprises and is not much different from our current product set. Our focus is development testing, quality, security, and test coverage analysis. It is a suite. At the very top end, we can begin to define policies to govern your code base and define your supply chain in such a way that you can set parameters for defect density, complexity of the code, remediation of defects, and those kinds of things. For us it is a platform as well as a process.

Sramana Mitra: What have you done with the venture money you raised?

Andy Chou: We still have $22 million of venture money that we raised sitting in the bank. We are cash flow positive and do not anticipate having to go back and raise another round. We now have 200 employees, and we have 5 billion lines of source code under management distributed across 1,100 customers. The renewal rate of our business, which is our lifeline, is at 95%. We have been responsible for shipping 11 billion applications or devices, including every Ericsson and Nokia phone. We have an amazing culture of smart, engaged,

competent people who also happen to be really nice. It is a fantastic place to be.

Sramana Mitra: You have created the ability for organizations to apply quality standards to software development. Are you looking at consulting with them in best practices as well?

Andy Chou: If you are a large organization, you want to have the ability to control what is getting into your code base. It is not just about individual defects, but rather about the aggregate picture. Larger organizations tell us that they want to be able to set a policy for their software components that specifies how many defects are allowable, what defect densities are allowable, and what kind of complexity is allowable. They want to be able to enforce that policy and ensure, from a big picture perspective, that the software they are delivering is up to par.

This will allow them to measure teams against each other and components against each other to enable them to deliver software of a standard level of quality. We see this as an opportunity.

Sramana Mitra: I love it that you have bootstrapped to $25 million and did your fund raising after that. I constantly tell entrepreneurs in the 1M/1M program how important that strategy is, as it allows them to get into an enviable negotiating position. It is not always possible to build a lot of technology by bootstrapping, and this is where leveraging the resources at Stanford seems to have been incredibly beneficial for you. Bootstrapping is an increasingly viable option, especially when you do it using consulting services as you have done. That is a tried and true technique. Thank you for sharing your story.

Interview with Omer Artun, AgilOne

I often get asked the question: "Would VCs invest if I bootstrap a products company using services?" The answer is a resounding yes, as long as you productize a good portion of your services before trying to raise money. Omer did that. Sequoia Capital invested. This interview was conducted in December 2012.

Sramana Mitra: Omer, let's start with some context. Tell us a little bit about your company. How long has it been in business? I know you are moving from stealth mode to a more public launch, so please give us some context.

Omer Artun: I started the company about seven years ago. I bootstrapped it from no revenue to having about 40 employees when I received the first funding. I started the company out of firsthand frustration that I had as a marketer. I used to run marketing for a division of Best Buy – Best Buy for Business – and before that I was VP of marketing at Microwarehouse, which was a direct marketer of computers and related products. Before that I did strategy consulting for McKinsey, and I have a PhD in Machine Learning.

When I was running these marketing departments that had millions of customers, millions of transactions, and billions of clicks, there was so much information in this data that could be utilized [to make] better marketing decisions. You need both the data management skills, and you need the strategic skills to know what questions to ask regarding the data. Then you also need the math skills to filter the noise out of the data. This is why I started the company seven years ago (2005).

At that time, there was no talk about big data, which is what I tried to do. Then

demand for the company suddenly increased with the big data fad, so I moved the company to Silicon Valley to get it to a higher gear, as well as to focus on software – to take all the services we had done with the domain expertise and IP, with all the algorithms and the machine learning we had developed, and turn it into software. We have mainly been focusing on that for approximately the past three years. This past year has been [one of] explosive growth in terms of both how we were getting into the market and how we are investing in the technology.

Sramana Mitra: Where were you located before?

Omer Artun: Norwalk, Connecticut.

Sramana Mitra: You were in business for six years before you actually raised money from Sequoia. How big was your company before you received funding?

Omer Artun: We were about 45 people and were profitable.

Sramana Mitra: Could you give me a revenue range?

Omer Artun: It is between $5 million and $15 million.

Sramana Mitra: That is interesting. Our program is a big believer in bootstrapping. We always love stories where after a successful bootstrapping phase the negotiating power ends up being in the hands of the entrepreneur. Reading between the lines of your story, I guess this must have been your experience.

Omer Artun: When I started the company, in the first year, we had approximately $300,000 of revenue. The second year we went to much more than that. But it was very stressful. The first year you ask yourself questions

like, “Am I stupid? Is this a good idea?” The second year you start asking yourself if you can hire a couple of employees and make it a real and viable business. In the third year you go into the growth mode and you ask yourself if you can hire an office manager and an accountant, etc., and then it goes from there. The first two years are lonely. It is hard.

Sramana Mitra: The advantage of this model is that you get to validate your assumptions. You get to work with customers and get a sense of what the business that you are building really is. Often you start with a hypothesis, and that hypothesis needs to be tweaked a lot before you hit the right product-market fit. Sometimes, where you start is not where you end up. Doing that kind of experiment with investor money is very expensive.

Omer Artun: It really is. I remember sitting by myself for the first six months with no employees and calling up companies, trying to convince them to give me money. They said, “Have you done this before? How many people do you have? How long have you been in business?” And I had to say, “I have zero employees, I have never done this before, and I have been operational for three months.” You need to have something really special to get those first couple of contracts.

Sramana Mitra: How did you convince your first couple of customers to go with you?

Omer Artun: They were people whom I helped as a consultant. Once I built up trust with them, I told them I could do what this other vendor was doing for them much cheaper and better. That is how I received my first contract. Then I got several more and after that you have a story to tell, that you have been doing this for a year or two.

Sramana Mitra: This is another "tried and true" principle that we follow actively at 1M/1M. Going to customers in a consulting mode or in a service mode where you say you have expertise that you can bring to the table for them, you can do a custom solution for them, and you understand their business. This way, there is both building of trust, and you also get to see the customer's situation from up close. You really understand the customer's problem at a deep level, which helps you build a solution that is then going to solve that problem. How many customers do you have today?

Omer Artun: We have 35 customers right now.

Sramana Mitra: You are obviously working on a big data solution. What is the primary source of the data? Are the clicks and the views on a website the primary source of the data you are manipulating?

Omer Artun: They are not. We get data across all touch points. This involves orders, returns, product information, customer information, clicks, and emails and catalogs the customer received, etc. Clicks are a portion of it, but they don't tell the whole story. We are getting offline transactions as well, we are getting emails, and we are getting direct mail information.

On top of that, we also have our own internal sources that we can attend to in order to make it more useful for the marketer and the sales team. You might have a million customers in California. But then the question might be: "How many customers do we have in California with income of over $50,000?" Let's say there are 10 million people like that. Then I know that your penetration in California is 10%. We have other information that the customer doesn't see, so we bring it in to make it more actionable. Therefore our clients can start focusing on matters like customer penetration, which they weren't able to do before.

Sramana Mitra: What kind of customers were you working with before you raised the money? You mentioned that you built your business in a bootstrapped mode, and then demand for your company or products went up. That is when you decided to move to Silicon Valley. Tell me a bit about what happened in the pre-funding incarnation of the company. Who were the early adopters of this technology?

Omer Artun: The commonality between all of our customers is that they are all in a high-volume marketing and sales environment. This means there are millions of transactions, thousands of products, and billions of clicks. Companies like Sports Authority, Shazam, and Ideeli, are the type of companies we are working with.

Any time you have a direct transaction with a customer, whether it is B2C or B2B, we can help you. We have a large PC manufacturer, [the name of] which we can't disclose, as a customer. We are helping with their B2B efforts. It is not a retailer; it is a manufacturer that sells directly. Any time you have a lot of customers and a lot of interactions with those customers, that is where we come in. Let's take a seller of X-ray equipment, for example. Let's say they sell 500 [pieces of equipment] to 5,000 hospitals. That is not our core focus.

Sramana Mitra: So, your customers need to have lots of customers, whether it is B2B or B2C.

Omer Artun: That is right. We believe that when you have lots of customers and those customers mean having lots of interactions, mathematics and machine learning are really needed. This way you can cut through the noise and understand information within this large data set. This doesn't mean you will get to know detailed, one-on-one information, though. As an example, if you have 15 bills at any given time, you can know all those 15 bills in detail. But if

you have millions of visitors to a website, you can't know all those customers or what they are looking for. In that case you need a more automated system that will help you distill this information.

Sramana Mitra: Let's talk about specifics. We have seen applications for machine learning like collaborative filtering algorithms in Amazon and other companies that do online recommendations. I assume you are doing something more sophisticated than that. My own background involves AI, too, so I would love to hear a little bit more about what you are doing on an algorithmic level, without disclosing your "sweet sauce," of course.

Omer Artun: Collaborative filtering is definitely one of the tricks in our bag, and we utilize it. But we also have other algorithms, for example, clustering, which we use to create mixtures of expert-type models, whether it is collaborative filtering or propensity modeling.

We use clustering a lot, and we use it in different contexts to solve different problems. If you are selling shoes as a retailer, for example, you might say: "Every person buys 5, 10 or 20 different pairs of shoes. But if I look across, can I categorize these people, in a self-learning way, into different groups that behave similarly?" Then you might encounter categories such as businesswomen buying business shoes and also sneakers for their kids. Then you can have athletes buying athletic shoes most of the time, but also buying other shoes. You can start grouping people together based on their product behavior. Our system does that automatically. It doesn't mean that the businesswoman never buys sneakers; it just means that her general interests are business shoes and shoes for kids.

We create those groups. When the marketer then sends an email, instead of sending out one email with merchandise for everybody, they can start

contextualizing the email or the website for a specific person. Now you are not sending 100% one-on-one emails anymore, but you get to a point where you are relevant to the audience.

Sramana Mitra: Personalized recommendations for customers.

Omer Artun: That is right. Think of it like in the collaborative filtering example. If I go to Amazon looking for audio amplifiers, everybody would get the same type of audio amplifier when accessing the same audio amplifier category page. Underneath that I see product recommendations specifically made for me. If my knowledge of audio amplifiers is basic, I should see basic information in that section. But if I am a very advanced user of audio amplifiers, which Amazon can gather from my previous transactions and clicks, then the page I am looking at should be merchandized with high-end audio equipment.

This is going beyond collaborative filtering. This goes toward being more relevant and targeted. It is all about cutting through the noise. The one thing that is true for the past 10 years is that the [number of] messages consumers receive has more than quadrupled. How do you cut through that noise? How do you become more relevant? That is what we are doing.

Sramana Mitra: Is the clustering itself dynamic? Are you coming up with algorithmic clusters?

Omer Artun: That is right. The platform we use runs on a Hadoop-based framework, and it is cascading frame-working. It also has Algebraic Construction Techniques (ART) integrated. This way, we can run these algorithms in a scalable, multi-tenant way. Basically, each customer gets his own clusters. Or each customer gets her own propensity model. The whole process

of pattern recognition, feature generation, feature selection, classifier design, and system design is implemented into cascading in a fully configurable way. Out of the box, the marketer gets a bunch of things to use automatically. For example, if they want to predict people with green eyes, we can do that, too.

Sramana Mitra: When you start with one data body to work with – how many clusters do you start with, and how does that evolve? I suspect that the number of clusters is evolving, or does it stabilize at some point?

Omer Artun: There are so many tricks when it comes to clustering. You try a different number of clusters and test them for stability. You split two data sets into clusters and then see if the clusters you come up with are similar. If they are not similar, you don't have a stable clustering scheme. You also look at the cluster's size. From a practical perspective, you don't want to have clusters that vary too much in size. You don't want some clusters to be 30% or 60% and other clusters only 1% or 2%, so you put constraints on what the clustering output should be.

There are also other methods of inter-cluster distance and intra-cluster distance metrics. You basically have to figure out what the optimal numbers of clusters should be, and the system picks the best one. There is an art to it, but that art can be programmed into it. The order of manageable clusters is usually between 5 and 15. If you have fewer, you don't have a lot of personalization; if you have more than 15, it is just not manageable. We will get the answer within that boundary.

Sramana Mitra: I have to believe that in the types of clustering you talked about, for example, the businesswoman buying shoes for herself and then also for her kids, there are far more than 15 combinations of clusters, aren't there?

Omer Artun: Not in a statistical sense. This doesn't mean we take all the products customers buy and create combinations with that. What we do is create combinations of people in a meaningful way. This doesn't mean they can't buy other products. Basically, we are coming up with combinations that are similar to each other.

Sramana Mitra: That is interesting, because I did a startup in the late 1990s. Our entire premise at that time was to create a personal store. We were working in fashion e-commerce. The idea was to cluster the product catalog and also to cluster customers based on eye color, hair color, body type, style preferences, etc., and create personalized stores for each type of customer. What I hear in your description is the possibility to do that to a certain degree, is that right?

Omer Artun: Yes. As I mentioned before, you don't have to do one type of clustering. The way you choose, depending on the problem you are trying to solve, we would do a product-based clustering by looking at the products you buy or the categories you buy from. But then I might have intrinsic demographic variables that I might be doing clustering on as well. Those are the different layers of labels. I might have an 8-cluster solution for product needs. Then I might have a 6-cluster solution for my demographic behavior and a 12-cluster solution for behavioral variables like how much was bought, what was spent, when was the last time I visited, etc. Now you can combine all those options. That's called micro-segmentation: you can target people who are frequently interested in work shoes and who are in the upper end of the market.

Sramana Mitra: When you show a store online, are you taking all of those settings into account in order to come up with a dynamic store, or is it still

something static?

Omer Artun: All of these clusters and customers' cluster IDs are available through our API. This way the IT department can program a business rule that determines what the customer sees when they log in based on values like high end of the market, low average order value, interested in business shoes, etc.

Sramana Mitra: And any content management system is able to interface with your API in order to pull that kind of dynamic merchandising information?

Omer Artun: Yes. It is available through our API.

Sramana Mitra: What e-commerce systems do they work with?

Omer Artun: This doesn't matter to us. Any e-commerce system can pull the data out of it. If you think about the day in the life of a marketer, we are trying to do other things than just starting up recommendations or cluster IDs.

Sramana Mitra: I am talking more about a personalized store. That is one of the ways to use this data. The other way to do the data is to run different kinds of promotions whether these are email marketing, coupons and discount offers, catalogs, marketing pieces, and so on. From an organizational point of view, it is marketers and merchandisers that use your technology, right?

Omer Artun: Yes. Sales ops do as well. For B2B cases we see the salespeople as a channel as well, just like web, email, and catalog. The salespeople also need the information.

Sramana Mitra: How is this system architected? Is something sitting in the cloud in your data center and the processing is happening in a public cloud, or are you being asked to put this on private clouds for various customers? How does the deployment work?

Omer Artun: It is a private cloud environment with multi-tenancy, but the multi-tenancy doesn't mix customer data together. Basically, it is all in the cloud.

Sramana Mitra: Would you talk a bit about specific customers and what kind of impact you are having on their business?

Omer Artun: Sure. But I think I haven't described a solution to you yet. We went down the clustering path. Let me pull back up and tell you what we do. As we get data from different sources, this data is usually not in a great form to do any sort of analysis on it. So, we bring this data from different sources – we have a very powerful innovation engine that brings us data on a near real-time basis and cleanses data like names, phone numbers, addresses, geo-codes, etc.

All of this is done automatically on our platform. That is the foundation for adding intelligence to the data. Aggregation algorithms work based on that cleansed data to add intelligence to it like clustering, propensity predictions, and so forth. This is what we call a smart data hub. It exposes that to a set of features that we have on the application layers, which then can be used by the marketer.

The user experience is designed around solving a problem for the marketer. How does it start? When I come in to the office in the morning, I go into the application and see a bunch of alerts the system is showing me. It might say that I used to acquire 1,000 customers from XYZ affiliate, and that has dropped to 500 over the past two weeks. This is a significant drop that is going to cost me a certain amount of customers over the next certain number of days, and I should do something about it.

Another example of an alert might be: I have this many high-value customers

that are about to lapse. You should be able to understand why they are lapsing.

Once it gives you this alert, it prompts you to take action on it. The next question a marketer would ask is: why? Why is this thing happening? So the next two applications we have are the metrics application, where you can look at who these customers are and when was the last time they bought, their value, what is their affiliate, the way they had been trending over time, etc.

I can also go into our pathway application, which is the interworking of the black boxes we have. If I have a churn problem, for example, it factorizes that problem and tells me why people are churning. It is all about preparing the marketer, coming up with ideas about the situation, whether it is good or bad.

Once you are equipped with that, you can consider your options. You can take all your high-value customers who are about to lapse and find out which of them live within a 20-mile radius of a store, or which of them have outstanding quotes, so your salespeople can call them up and offer special deals. You basically want to take that intelligence and act on it.

This is where our 360 profile and action applications come into play, where you can look at individual customers and understand their behavior. This action application is a campaign automation tool that allows you to disseminate this information to various marketing channels like email, SMS, direct mail, websites, Salesforce.com, etc.

One of our customers is PetCareRx. They are a private company so I can't talk about their revenue, but they are a sizable e-commerce operation. I believe they sell pet medicines. Last year, they introduced different product lines like pet food, which they didn't sell before. Their average order value (AOV) immediately dropped – they started selling a lot of pet food products. Our

system immediately picked that up and said: you have a huge drop in your AOV, your product mix is changing, and you are acquiring far too many customers. This immediately created an alert. They went to the BI tool and started understanding that the new customers they acquired are actually coming from food categories, and they are buying stuff at a much lower order value than their original buyers. This way they started to understand that they built a new business model on top of an existing business model, and that the AOV drop was because of this.

The system then automatically picked those customers up and put them in a different cluster. Now they can start treating those people differently because the retention rate of the pet food-buying people and the regularity with which they buy is higher. This way they got a much better handle on their customers than they would have had if they had just run a bunch of reports. They would have had to face a much higher effort by hiring a bunch of analysts to figure out what was going on.

Sramana Mitra: What kind of competition are you seeing in the market? I know there is a lot of activity in the big data space right now. It sounds as though you have relatively mature capabilities since you have been in business for seven years working with real customers. What do you consider as real competition?

Omer Artun: There are three types of competitors, but we don't touch them; we don't really compete with them. There are IBM and Teradata, but they are very high-end and they are not cloud based. But they have similar capabilities and they try to solve a similar problem. The IBM smart commerce initiative is similar to what we do.

The second type of competitor is the marketing service provider. These are

companies that work with services models and cobble [together] technologies from different vendors, which again deal with on-premise solutions or custom solutions. These are companies like Axiom, Experian, or Miracle Exelon. Again, we are not competing with them for the market we are going after because they are very high-end as well, and they take 6 to 18 months to install. They are running in a custom environment. We are much more agile – 6 to 12 weeks implementation – and we are going after mid-market companies.

The last type of competition we have are the internal IT people who try to help the marketers themselves by buying point solutions and trying to stitch them together. Among other cloud members we don't see any competition yet, but we believe it is going to come.

Sramana Mitra: What is the average deal size of a customer? How much does an e-commerce company that wants to use your product have to budget, say?

Omer Artun: Our average price per year is about $200,000 for the software portion per customer. If they want services on top of that, it costs extra.

Sramana Mitra: What size are the companies that are usually going for your solutions?

Omer Artun: For companies that are mature and making money, our minimum is between $15 million and $20 million revenue range. That is the absolute minimum. Our comfort zone starts at a $30 million to $40 million range.

Sramana Mitra: Going up to?

Omer Artun: The median [amount] for the high end that we have is around $2 billion. The biggest one in terms of data that we have in our system is $100

billion.

Sramana Mitra: What is your estimate of the total available market for your business?

Omer Artun: This is based on our bottom-up approach in terms of how many companies are out there and how much they are spending to put together a solution like this. The market size is a total of $2 billion to $4 billion. That is what we have estimated.

Sramana Mitra: I am slightly surprised by the number you quoted in terms of the bottom-up TAM. I haven't done the TAM analysis. Obviously you have. I assume you have supporting data for that. It just sounds a little high to me.

Omer Artun: I looked at how many consumer-facing companies there are in different industries in the U.S. I assume this to be roughly 40% to 50% of the market. For those companies that are in the range of what we are looking for – companies that are in the $25 million to $100 million range, [or] $100 million to $500 million or $500 million and above – and what our fees would be for those companies. We realize that we are replacing a bit of what they are spending on database licenses, data-cleansing licenses, data-management licenses, BI, etc.

Sramana Mitra: I love this kind of technology, and I think, at a broader scale, this kind of technology and these kinds of efforts have happened at the very high end with very expensive solutions. But being able to bring some of that into the mid-market is very interesting. And it is great to see that these sophisticated technologies are finally having deeper penetration into the broader market.

Omer Artun: I picked the mid-market because it has the skill but not the expertise. At Best Buy we had a 50-person customer insights team, with

millions and millions of dollars spent on Teradata and others. If you are a $200 million company, you are at scale. A $200 million consumer-facing company probably spends 20% to 30% of its gross margin on marketing. That means the company spends around 6% to 10% of revenue on marketing. That is a significant amount of money. Improving that by 10% or 15% adds around $5 million to $10 million to the bottom line. It is a business that has some scale.

These companies might have 5 to 10 people in the marketing departments. They are not going to hire a technician or buy a $500,000 a year [IBM] Unica. Their IT department is more focused on running the network than on doing complicated installations and maintaining applications. So, this is a perfect solution for them. In my opinion, the solution we bring is all about cutting through the noise.

Sramana Mitra: This has been a very interesting story. Good luck to you.

Omer Artun: Thank you.

Interview with Bill Loumpouridis, EDL

We have seen numerous system integrators transform themselves into product companies. EDL did so on the Salesforce eco-system. For these transformations, riding on the coattails of a larger platform vendor is very effective as it comes not only with technology leverage, but also customer acquisition opportunities. This interview was conducted in October 2010.

Sramana Mitra: Bill, let's start with a review of your background. What is your personal story?

Bill Loumpouridis: I am the son of Greek immigrants. My parents got here in the late 1950s and did not know the language and were unskilled. All they had was a burning desire to be successful and make it in the land of opportunity.

Sramana Mitra: What city did they come to?

Bill Loumpouridis: Chicago, which is where I was born.

Sramana Mitra: What did they do to establish themselves in America, and what kind of environment did that create for you to grow up in?

Bill Loumpouridis: My parents were always working. As a result I needed to be very self-sufficient. I needed to be their window into the country and world. I was my father's secretary and dealt with bank correspondence from a very young age. I was balancing the family checkbook at 11.

Sramana Mitra: What drove that? Was it the language or schooling levels?

Bill Loumpouridis: My parents were busy working, and I got to do a lot of the things around the house that were normally done by adults. That gave me a strong grounding in written and oral communication. Their hard work and their entrepreneurial spirit were passed down to me. I had my first business in my early teens. We had a lot of snow, so I started a snow shoveling business.

Sramana Mitra: What did you do after high school?

Bill Loumpouridis: I went to the University of Illinois and got a degree in math and computer science. I got into consulting at a very early age, and at the perfect time for our industry because the IBM PC was just coming out. This was in the mid-1980s, and it was a very exciting time to be entering consulting. I watched that progress through successive waves, on to client servers, on to Web 1.0, then web 2.0, and now the cloud era.

Sramana Mitra: Did you consult for large companies?

Bill Loumpouridis: My first firm was Lante. They eventually IPO'd during the dot-com bubble. I left in the mid-1990s to start my first company. The great thing about Lante is that we were all the same age. It was a very forgiving learning environment. We could make mistakes and consider learning a part of the result. We learned a lot about what to do and what not to do. We learned that being focused is very important and that you need to choose your partners closely.

Sramana Mitra: What was your first company, and what were the circumstances in terms of leaving Lante to start that company?

Bill Loumpouridis: The primary motivator to leaving Lante was to start my own business and apply my lessons learned. In the early 1990s there was a big shift away from procedural programming toward object-oriented programming.

It opened up a whole new way of approaching how problems were solved and how IT was applied to solve business problems. Reusable components made a lot of sense in the business world. I created Strategic Technology Resources, which was extremely successful in the Chicago area and is still around. We were able to carve out a niche as the experts for object oriented programming. We were doing work on the NeXT computer and its operating system. When Steve Jobs came back to Apple, that operating system became known as OS X.

Sramana Mitra: Where did you apply the object-oriented paradigm? Did you go to IT organizations within the Chicago-area enterprises? How did you generate business?

Bill Loumpouridis: As specialized consultants, we tried to align ourselves with some larger companies that needed our skill set. Larger companies would then pull us into more deals.

Sramana Mitra: Were you operating as a value-added resller?

Bill Loumpouridis: The focus was system integration.

Sramana Mitra: Was NeXT one of the brands you aligned yourself with?

Bill Loumpouridis: We never had a formal relationship with NeXT. We worked with some financial services firms in the Chicago area that were deploying NeXT computers.

Sramana Mitra: How long did the consulting company era last for you?

Bill Loumpouridis: I was there for about five years. I was there through the mid-1990s. The, I founded the company and moved on.

Sramana Mitra: Why did you move on?

Bill Loumpouridis: Because of another powerful lesson I learned. Choose your partners wisely. I learned the importance of chemistry at the founder level. We had some disagreements about the future direction of the company. I felt it was best if I moved on to pursue my own vision.

Sramana Mitra: What was your next move?

Bill Loumpouridis: I took advantage of the dot-com era to work with some startups. There were a lot of stock options flying around, and I took a look at a couple of those. By the time things busted in 2001, I had come to some hard conclusions. The lessons learned from the dot-com bust were around unsustainability of business models. That is where EDL came into play. The acronym stands for Excellence in Delivery Leadership. It was a response to the greed and excess that largely drove a lot of behaviors in the dot-com run-up.

After watching a lot of companies mismanage their products, I saw that a back-to-basics movement was needed. We founded EDL with a strong focus on the fundamentals of consulting such as process, methodology and behaviors that drive sustainable growth. We focused on integrity and honesty.

Sramana Mitra: What was the value proposition of EDL?

Bill Loumpouridis: Coming out of the dot-com bust, we felt the value would be in e-commerce. There was a lot of hype, energy, and attention on B2C. There were some failed initiatives with Ariba and Commerce One, which attempted to disrupt the B2B paradigm. We realized that the notion of disintermediation, which was part of the hype of the Internet, was fundamentally unsound. If you look at how a high-tech manufacturer goes to market, their distribution channel provides a valuable function. The idea of selling direct through the Internet and skipping the channel was misguided.

We connected with a company called Comergent. They were a B2B e-commerce platform that was considered best of breed largely because of their ability to handle complex pricing. B2B has very different pricing issues because every company has different prices. There are a lot of B's in the B2B. We hooked up with them at the right time as they were a brand that had velocity and greater recognition. We were able to become their go-to implementation partner for large enterprise B2B e-commerce installations. We are talking about Pitney Bowes, Best Buy for Business, Intel, and Hitachi. At the time we had about 20 people.

Sramana Mitra: How did you establish your relationship with Comergent?

Bill Loumpouridis: Entering business partnerships like the one we did with Comergent is crucial and difficult. Establishing that relationship came through my personal business network. When the dot-com crash happened I reached out across my network and had a lot of conversations with people across the entire industry. The importance of a network is very great. I had a couple of former employees who ended up at Comergent.

The more I looked at Comergent, the more impressed I was with the space they occupied and the elegance of their solution. I saw the potential for a significant business. I liked the fact that their solution turned the paradigm of the dot-com height on its head. Fortunately, we were in the right place at the right time. I also had a level of credibility. If this had been my first job right out of college I don't think I would have been afforded the opportunity.

Sramana Mitra: How big was Comergent at the time you established your relationship?

Bill Loumpouridis: They were doing $25 million in revenue.

Sramana Mitra: They had already achieved some measure of success, so in getting behind them you were getting into a validated business. What was the first major account Comergent dropped you into?

Bill Loumpouridis: Pitney Bowes. We went to market as a staff augmentation firm because that was our only choice, but the goal was to be project centric. The staff augmentation was supposed to be interim to allow us to build critical mass around a problem set so we could go direct and sell projects. That is what we did over the course of five years. With Pitney Bowes we did a staff augmentation model.

Sramana Mitra: You said it took you five years of staff augmentation work before you started doing project consulting. What were the years you did staff augmentation consulting?

Bill Loumpouridis: We did that from 2002 to 2007.

Sramana Mitra: What kind of revenue level did you reach with that model?

Bill Loumpouridis: We made it to $4 million.

Sramana Mitra: What happened to Comergent during that period?

Bill Loumpouridis: In 2007 they got bought by Sterling Commerce.

Sramana Mitra: How did that impact you?

Bill Loumpouridis: In a very big way. All of our contacts within the first two years of that acquisition ended up leaving the company or moving on to other roles. That is around the time that Salesforce.com became more important to

us. In late 2007, Force.com was announced. That was a very significant event for our firm because we saw the potential for that platform to be significant in our space. That is when we started shifting our resources to developing custom applications in the cloud versus development of traditional Web applications.

Sramana Mitra: Does that mean that your Comergent business went away?

Bill Loumpouridis: It did not go away. In 2007, I saw the trend that would take us away from traditional premise-based application development and move us toward cloud development.

Sramana Mitra: How did you leverage that trend, and how did it translate into business for you?

Bill Loumpouridis: It took time to leverage it and ramp up that business. It has taken two years to get to where we are today (2010) where we do significant work in the cloud. When you see a trend emerging you need to invest, train, and build a capability. We did the exact same thing with the Force.com platform that we did with Comergent. We hired people, trained them, and put them out as staff augmentation. We then built a capability to the point that we had critical mass and we are now doing project work. A lot of our early work in the Force.com space was staff augmentation to Salesforce.

Sramana Mitra: What kinds of clients were you working with? The Force.com model is different. Comergent was an application for B2B commerce where you could help manufacturers that sold through multilayered channels with staff augmentation and system integration which turned into the project business model. Force.com is a platform

on which a lot of development has occurred. How did this trend evolve for you? What kind of projects were you brought into?

Bill Loumpouridis: A year later Sites was announced, and that allows companies to expose their Force.com work as a website. You can use Salesforce as your Web platform. We saw an opportunity to become an ISV and build that premier package for e-commerce for Force.com. That is how CloudCraze was born. We are able to codify our very rich legacy of building out complex enterprise e-commerce deployments within Force.com.

We took CloudCraze and became the pre-eminent solution provider for e-commerce on the cloud on Force.com. That is where we find ourselves, and that is what is so powerful for us today. We saw the opportunity, seized the day, executed our strategy and became the go-to option all in the space of 18 months.

Sramana Mitra: What is the focus of this CloudCraze product? Is it also a B2B platform like Comergent?

Bill Loumpouridis: One of the trends that started to emerge in the middle part of the decade and became more prominent in the second half of the decade is the need to provide both B2B and B2C capabilities in a single platform. We call it hybrid B2B and B2C. You need the rich UI capabilities associated with B2C, but you also need to provide the B2B underpinnings as it relates to channel selling. A lot of manufacturers do both. Today there is also the expectation that the B2B experience is going to be a high quality experience. Five years ago that was not the expectation. Today, everyone shops on the Web, and expectations regarding look and feel have risen.

Sramana Mitra: Clearly you have enormous domain knowledge in the e-

commerce space collected over a decade. Now you are bringing that knowledge to a new cloud delivery model.

Bill Loumpouridis: Salesforce's objective is to be an enterprise platform. We fulfill a big part of that requirement. By demonstrating our capability, we become the poster child for how Force.com can be a game-changing platform for your business. Salesforce is no longer just CRM, because all of that CRM data can be taken to the next level as an e-commerce play.

Sramana Mitra: How did the business development happen? How were you able to leverage Salesforce.com to gain new customers?

Bill Loumpouridis: What we had built was significant to Salesforce. As a result, they are pointing a lot of customers to us when the subject of Force.com or e-commerce comes up. We are one of their top tier go-to partners. Any time someone takes an e-commerce approach to Force.com, the executives at Salesforce will tell them that they need to talk to EDL first. There is a tremendous amount of flow coming from Salesforce explicitly. We are also listed on the AppExchange. If you type in e-commerce on the AppExchange, you will see we are one of the top results. We get a lot of lead flow from the AppExchange as well.

Sramana Mitra: How has that translated into customers? What type of revenue ramp have you seen?

Bill Loumpouridis: Right now in terms of a run rate, it is about a third of our services mix business.

Sramana Mitra: In this model, are you using your CloudCraze product as well as offering all of your integration services on top of this platform to your customers?

Bill Loumpouridis: Yes. We are still doing some legacy Java work. We are still doing work with Sterling Commerce, and they have their own value proposition, which is the right mix for some clients.

Sramana Mitra: Are you using the Sterling Commerce service business to fund the CloudCraze product business?

Bill Loumpouridis: You could say that, although we are doing a lot of Force.com consulting work that is funding the product as well.

Sramana Mitra: Earlier you articulated the desire to go from staff augmentation to project-based consulting models. Is your vision now to move away from the consulting model to a product model? Your current business is one-third product, two-thirds service. Are you looking to change that mix?

Bill Loumpouridis: We see tremendous potential for the **CloudCraze** product. Right now, we are taking it week by week. We are measuring the interest in this product. Product companies tend to have higher valuations than services organizations. There is a lot of appeal behind having a repeatable revenue stream that is associated with subscriptions versus one that is based on time and material. How the proportions work out will be hard to say, but there is no question that we have a goal to increase our product revenue. I don't know where it will land.

Sramana Mitra: You must have dedicated a substantial amount of resources into developing CloudCraze on the Force.com platform.

Bill Loumpouridis: Yes, we have, and it remains ongoing today. We have dedicated developers and support staff. It is a significant ongoing investment.

Sramana Mitra: What was the decision process? Do you own the company 100%?

Bill Loumpouridis: I am the majority shareholder.

Sramana Mitra: Were you in position to make that strategic decision on your own, or did you have to get buy-ins from other partners and shareholders to make that type of investment?

Bill Loumpouridis: This was entirely my decision.

Sramana Mitra: I asked that question because your decision was one that changed the company culture and required taking a certain amount of risk, which services companies are often not comfortable doing.

Bill Loumpouridis: Having the advantage of hindsight has been helpful. I have seen four disruptive waves in our industry. This is now the fifth wave. This is the greatest opportunity that I have ever had the chance to capitalize on, so I am going to give it every ounce of energy and financial backing that I can without putting my consulting business at risk.

Sramana Mitra: You have reached the point in your career where you have ownership of a company that has sufficient liquidity and cash coming into the business that it can fund a product development effort without raising outside financing. That is an evolution in your personal journey.

Bill Loumpouridis: Absolutely.

Sramana Mitra: Can we discuss some of your customers who are worth mentioning?

Bill Loumpouridis: Our flagship customer for CloudCraze is LI-COR Biosciences. They went live on October 27, 2009, and have embraced the cloud and cloud-based development on the Salesforce platform. They have seen tremendous value and benefit.

CloudCraze allows you to maintain a site without programmers. When we built CloudCraze, one of the imperatives was that it had to be as easy to administer as Salesforce is. That was the secret sauce for Salesforce. A VP of sales could pick up his or her credit card and be automated in a week. That is what I wanted for CloudCraze. It needed to have no more than a couple of months of development time, and the administration needed to be done by a functional marketing person.

Sramana Mitra: So a marketing person could just upload the stock-keeping units (SKUs) and perform functional administration?

Bill Loumpouridis: Exactly. They can upload SKUs, change prices, and create coupons. They can do it in real time, on the fly, all through our user interface. LI-COR is living the cloud dream right now. Their head of marketing and his team are capable of doing things that nobody else can do with their e-commerce system in terms of breadth and depth of administration. They have seen dramatic upticks in user volume and order sizes. All of their e-commerce metrics have gone up by healthy double digits in the past 12 months.

Sramana Mitra: Are the increased e-commerce metrics experienced by LI-COR a direct result of their use of CloudCraze?

Bill Loumpouridis: Yes. They have used CloudCraze in a manner that has allowed them to focus on their business, not on running an e-commerce architecture and the associated challenges.

Sramana Mitra: What model do you follow in the use case you mentioned? Does LI-COR pay a subscription fee?

Bill Loumpouridis: There is an initial setup fee as well as an ongoing subscription fee.

Sramana Mitra: What is the pricing model?

Bill Loumpouridis: The pricing depends on the scope of the project. In the Java world with Comergent, a typical project for us would be $500,000 to $1 million in services. Large enterprise e-commerce projects would easily run into the multi-million dollar range for services. Most of the proposals we are doing now are for 10 to 15 percent of the cost that the legacy Java technology solutions would have cost.

Sramana Mitra: Is the 10 to 15 percent the integration cost for CloudCraze?

Bill Loumpouridis: Yes. If you are a client of ours you will receive a million dollars of value at a cost of $100,000.

Sramana Mitra: Integration costs are significantly lower than legacy systems. Are you still doing legacy integration work?

Bill Loumpouridis: We are, simply because of the nature of e-commerce. Businesses still need to connect to ERP systems and accounting systems. E-commerce systems do not stand alone. They have to be wired to legacy systems. There is some effort required to drop the solution into a legacy environment and have fluid operations.

Sramana Mitra: What is the size of your typical customer?

Bill Loumpouridis: We are seeing shorter sales cycles in the mid-market. We consider mid-market to be $100 million to $300 million in revenues. There is a screaming need for enterprise e-commerce in the mid-market, and it is largely unfulfilled because until now it has been too expensive. Businesses in the mid-market have the same complexity as their larger cousins. We are able to provide mid-market companies with millions of dollars of value at a hundred thousand dollar price tag.

Sramana Mitra: Who is your competition? Who else is targeting that market segment?

Bill Loumpouridis: We run into companies like Demandware and iCongo. We occasionally run into Microsoft products hosted by IT organizations. In that case we are breaking through the IT departments' internally hosted Microsoft solutions. It takes vision and courage for those shops to break out of the Microsoft mode. E-ecommerce to the power of CRM is unprecedented, and right now we are the only ones with that solution.

Sramana Mitra: What do you mean when you say "e-commerce to the power of CRM?"

Bill Loumpouridis: We are native on the Force.com platform. We share the same data objects as the CRM system. If you are using Salesforce CRM, then there is no reason to create another silo. The product data and the customer data are already there. Why replicate that in another cloud?

Sramana Mitra: From Salesforce's perspective, having you as an extension of their CRM system means all of their customers who are in the B2B e-commerce space, such as manufacturers catering to value-added resellers and retail customers, are all potential clients for you. Is it

just an extension of their current deployment to get into your product?

Bill Loumpouridis: Exactly. We are on the same platform and share the same data objects.

Sramana Mitra: How many customers that fit your target profile does Salesforce have?

Bill Loumpouridis: That number grows every day. Right now it is in the tens of thousands.

Sramana Mitra: So you can get into those tens of thousands of companies with customer little acquisition cost?

Bill Loumpouridis: Yes.

Sramana Mitra: Great. Good luck! You should have a very good run for the next few years.

Interview with Krish Kupathil, AgreeYa

Also echoed in the AgreeYa Mobility story is the notion of leveraging large, existing platforms, building services and expertise around those, and identifying niche product opportunities through that process. This interview was conducted in June 2013.

Sramana Mitra: Krish, let's start with your personal story. Where are you from? What is the story of your personal journey?

Krish Kupathil: I was born and brought up in Delhi, India. I did my schooling and college in India. I started dabbling in software in 1987 and did some initial work in India. I got into software related businesses surrounding finance. I did some work out of Europe and Singapore before landing in the U.S. in 2003. I was involved in a few startups in earlier years as well.

Sramana Mitra: What kind of startups did you get engaged with?

Krish Kupathil: I joined a company called FSMLabs. I joined it a bit late but my colleague there was the original founding member. I was a late founding member. This was in early 2002 and we did real-time Linux. We did a lot of work for the defense sector with things like missiles. That company was ultimately acquired by Intel.

My second startup was Azingo. That company was in the mobile space, and I was the third employee of that company. The Linux and Mobile Foundation was started by Motorola and the other big names in the mobile

industry. We were one of the founding members of that group as well. We created a platform to sell to the mobile industry. It was a bit late because Android came in and took the steam away, however, Azingo was acquired by Motorola in 2010. I opted out of that position, and I did not join the acquisition team. There were about 18 of us who opted out of Azingo and the transfer to Motorola and we went off to start AgreeYa Mobility.

Sramana Mitra: This was in 2010, correct?

Krish Kupathil: Yes.

Sramana Mitra: What was your analysis of the market and what was the process of founding AgreeYa Mobility?

Krish Kupathil: in 2010 the mobile industry was in a lot of flux, including handsets. Apple had launched very successfully, and Android had just launched. Most of the industry was still trying to assess and whether Android would be successful. That is when Samsung stepped in and announced that they would adopt Android.

Sramana Mitra: Given the market flux that you observed, how did you start AgreeYa Mobility, and what was the premise of creating that company?

Krish Kupathil: There were 18 of us, of whom 13 were in India and four in Korea. I was the only person here in the U.S. We felt that since mobility markets were in a flux, there was an opportunity for a new player like us to find a space. Since we all had backgrounds in the mobility space, we already had contacts at all the major carriers and handset manufacturers.

There was still some doubt in our minds. Each handset vendor had its own

proprietary platform. Motorola had PTP, Samsung had SHP, and LG had their own platform. Each of these large handset vendors had their own proprietary operating systems and they launched their phones based on those operating systems. We knew that building application services around each of these handsets would be a lot of work and most of that work would be internalized in those organizations.

With Android and open platforms coming in, the space suddenly changed. For example, a browser in those days would be very specific to the platform. The browser would have to be ported to the Motorola PTP platform or the Samsung platform. A browser took different shapes and the same webpage or game that you would access on different handsets would look completely different.

Then Google came and standardized the Android platform and made a lot of things free. In those days, I still remember a typical bill of materials would cost between 70 cents and a dollar, per phone. Suddenly it was all free.

In 2010 we started our company and we thought we knew what we were going to do. Being a startup, we did not want to take the risk of wasting time, effort and money on a certain technology only to see one of the big boys develop something similar and then throw it out into the open for free. That had happened before. Multimedia frameworks developed by a certain company were surpassed by things Google did.

We decided to stay engaged with mobility and find the right timing. Once we felt the timing was right, then we would step in. In that process, the challenge was finding a way to stay engaged with the market. In our group we had a lot of expertise on what the mobile space needed. We had excellent programming skills, so we decided to do some programming services. That let us stay in

touch with all the customers in all the important regions such as China, Korea, North America, and Europe.

Sramana Mitra: Can you give me some examples of the type of engagements you would perform for handset vendors?

Krish Kupathil: Our first engagement was for LG. To this day they still make a device platform called a feature phone. We took an open source browser and ported it to their feature phone so they could have a more powerful browser for that phone. That project was right around a million dollars.

Sramana Mitra: Was that engagement what you used to get a product developed and launched?

Krish Kupathil: That was just one example. We did other engagements as well. We did an engagement for Samsung and have customized devices for operators across the world such as Verizon, AT&T, Sprint and T-Mobile.

Orange mobile had made a conscious decision not to go with open source technology that included Android. Any devices launched on their network had to be qualified by our team for compliance. Those were the types of engagements that we started with.

Sramana Mitra: What year was this?

Krish Kupathil: We did that in mid-2010. Today we have almost 400 people, just under three years later.

Sramana Mitra: As you maintained these close relationships with handset vendors, what occurred to you as a product opportunity? You were already bootstrapping using services and getting close to the customers to understand the problems and find an opportunity for a

bigger business. Can you walk us through the process of coming face to face with your product opportunity?

Krish Kupathil: We saw that iOS and Android were the dominant platforms, followed by Windows 8, which is finally coming on strong now. The iOS and Android platforms became huge success stories. Both application stores had a very large number of applications. The consumer space was a huge success.

The underlying chips went from single core to dual core to quad core. The devices were becoming more and more powerful because of the hardware improvements. The software was desktop capable operating systems, which was very powerful. The consumer space got very crowded. We were working with telecom operators, handset vendors, and chip vendors. Several of those players approached us asking if we had a solution to enable VPN. They were asking if we could help them access Microsoft applications from an Android phone.

That is when we realized that the operating systems were strong, there was phenomenal computing power in them, and that these devices could do a lot more than play Angry Birds. They were much more powerful than the computers I was using 10 years ago. The only enterprise device at that time was BlackBerry, which was going down. Why can't and Android or iOS devices become enterprise devices?

To be an enterprise device, the phone needed to be secure and the admin needed to be able to control the device. That is when we decided that enterprise mobility was a space we were going to get into.

Sramana Mitra: When you decided to get into the enterprise mobility space, what is the first problem domain you decided to focus on?

Krish Kupathil: After a lot of brainstorming and a couple of enterprise customer inquiries, we found an area of interest. Several of our enterprise customers came to us asking how they could access SharePoint from their Android device. This was a nice business problem, and we wanted to bring a solution to the market that was centered on the business problem.

As a startup, the lowest hanging fruit for us was determining how to enable Microsoft technologies on a non-Windows-based handset. At that point Windows phones had not been released. Even today (2013) they only have around 4% of handsets.

Once we knew there was a market for accessing Microsoft technologies from non-Microsoft handsets, we knew there was an opportunity. We knew there was a market because we felt pull from the handset manufacturers as well as from the larger enterprise customers. They would have SharePoint, Exchange and other databases that they wanted to access. Anything that they were used to accessing on their PCs and laptops would need to be accessed on mobile devices. The question was how to give people access to all of that data on a secure network.

Sramana Mitra: What form does the product take to address that problem?

Krish Kupathil: First we did analysis on what the most prevalent corporate back-end technology was. We did a survey and realized that 80% of corporations were on Microsoft technologies. They used Exchange for email and SharePoint for collaboration, as well as Microsoft Lync.

In Q1 of 2011 we approached Microsoft and initiated discussions. At that time they had a very closed policy. Their protocols were intended to be accessed

only by Windows devices. It took us six months to lobby inside of Microsoft for interoperability. In November of 2011, we convinced them to license 100 protocols to us. That was a major policy shift from Microsoft, and we are still the designated interoperability partner for Microsoft.

We used that to enable access to Microsoft technologies on non-Windows devices. That meant having the ability to port it to iOS, Android and BlackBerry. Microsoft also ended up paying us to implement the technology on the Windows handsets as well. We created a native solution that runs on iOS, Android, and Windows 8 to allow corporate back-end access on any of those devices.

These devices are not ones where you will likely see data created. In most cases data would be consumed, so we focused on making sure that data access and consumption were simplified. We also had to make sure the CIO was perfectly convinced that his data was secure. The data placed on a mobile phone could not be corrupted, and the data could not be distributed without the CIO or IT admin knowing about it.

Our solution allows mobile users to access corporate resources. If a document is in a SharePoint cloud then a mobile user can tap on the document to open it, or do a long press and see a pop-up that asks if you would like to discuss the document. You will then have discussion options such as by chat, call, VTC or email. If you press audio call, then it will display a list of everyone who is part of your contact list who is also part of Microsoft Lync. Lync is a secure communication tool. It will also show which users are currently online. Our technology also checks for user permissions, so only those who are supposed to have access to the document will be invited to discuss it.

Once colleagues are invited to the call a link of the document is sent to them.

They just click on the link and the document will appear in front of them. This can all be done over a Wi-Fi network or over a mobile network.

Sramana Mitra: Let's talk about customers. Who did you receive product validation from?

Krish Kupathil: Currently, we have received validation from operators like Vodafone Spain and Vodafone Group in Europe. From the handset vendors we have received validation from Samsung who is distributing it in their store and on their latest secure platform. The validation is from all the major players in each ecosystem. There are 2,000 Vodafone resellers who sell this solution for us. The entire Samsung enterprise team promotes this solution for their enterprise customers. We also have our direct customers as well. The oil and gas giants are discussing solutions with us.

Sramana Mitra: Were these companies people you had talked with before you set out to develop this product?

Krish Kupathil: No. These people all signed up after the product was developed.

Sramana Mitra: Who validated the opportunity for you? You had enterprises and operators asking for a solution, but how did you check that your solution was the correct one to build?

Krish Kupathil: We did the validation of the idea with the telecom operators, Verizon and Vodafone. On the handset side we did the validation with Samsung. They are the largest player in the Android space so we went with them.

Sramana Mitra: What assumptions did you make about how this product

would get sold? Did you assume it would get sold through the operators?

Krish Kupathil: Our assumption then and now is that the product would be distributed through the mobile ecosystem. We still believe the telecom operators are a great channel since there is an operator store on every corner. We also believe the major handset vendors such as Samsung and Nokia are good channels.

Of course we also leverage the fact that our current solution has relationships with Microsoft. We are leveraging the Microsoft reseller network. Since our personal contacts are the strongest in the mobile space we did launch our product with those connections.

Sramana Mitra: Do the operators sell on your behalf?

Krish Kupathil: They do sell. In the case of Spain, Vodafone has 2,000 resellers. our product is loaded onto tablets and phones and is sold and displayed at all the reseller sites. We do a revenue share with them so they receive a certain percentage of everything that we collect.

Sramana Mitra: In building the company, you were initially bootstrapping with services. Did you ever raise money?

Krish Kupathil: We raised money a few months ago. We bootstrapped with services. We raised money specifically to allow us to focus on marketing. We raised money in March from Saama Capital which is an offshoot of Silicon Valley Bank. We raised equally from Saama and some working capital financing from SVB.

Sramana Mitra: How much financing have you secured?

Krish Kupathil: We took very little from Saama, only $2 million. We also took

$4 million of debt financing.

Sramana Mitra: How much were you doing in revenue?

Krish Kupathil: We did $10 million in revenue last year, and we will do over $20 million this year.

Sramana Mitra: What are some of the other interesting strategic moves you have made, and what was the thinking behind those choices?

Krish Kupathil: I believe that most of our interesting choices were made with partner alignment. Partnering with Microsoft was important. If you have to do anything in the enterprise space, then you need Microsoft. People hate Microsoft, but on the enterprise level, everyone uses them. Some shops are 100% Microsoft and others are 50%, but they all use it.

Of course, there are a lot of new technologies coming up, like Dropbox, and we will be aligning with them as well. As a startup, it was important to align with the correct partner and convince that partner to support us. We have licensing and interoperability deals that we have signed with them, and those deals are very important. That gave us a good initial push and also gave us a lot of credibility.

Another key partner was Samsung. Apart from support in terms of hardware and a global marketing effort, the Samsung team also gave us a lot of good advice when we were developing the solution. Obviously they have a team that understands customer problems.

The thing I want to stress was aligning with the right partners. I believe that raising money or getting money is the easy part. Having partners who give you the depth and support from a technical and marketing perspective is extremely

important. I think aligning with the right partners has really helped us. That has set up a very nice foundation for us to get to the next level.

Sramana Mitra: Do you credit your $20 million business all to Microsoft?

Krish Kupathil: No. I think around $15 million will be aligned to the services side of our business, and the other $5 million comes from our product side.

Sramana Mitra: Are the services part of the Microsoft ecosystem as well?

Krish Kupathil: The services have nothing to do with Microsoft. Those services are purely Android and iOS. They are the same services that we used to start the company with.

Sramana Mitra: Right now your product offering is Microsoft-centric. Do you see that remaining your strategic outlook?

Krish Kupathil: We will definitely continue to support and develop around enabling access to Microsoft products. We will also look at other technologies for which we can enable corporate access. We are a startup, and we are more opportunistic. We will look at which companies it makes sense to work with based on our technology.

Sramana Mitra: Aside from the Microsoft productivity suite, what else do you need to enable? Do you need to enable Google?

Krish Kupathil: Yes, and we will do that. We are working on a cloud component of our solution, and we are looking to launch that by the end of this year with telecom operators in Europe. Google is going to be among the other technologies that we enable. There are also new technologies coming out that are being adopted in the market, and we will enable those technologies as well.

Sramana Mitra: I am assuming that you are talking about Dropbox?

Krish Kupathil: There are so many communication and collaboration solutions coming up, but, yes, Dropbox is one of them. There are also major solutions like SAP and Oracle that we need to look at.

Sramana Mitra: What about collaboration technologies such as WebEx?

Krish Kupathil: Absolutely. WebEx is an interesting technology, and we are in discussions with them.

Sramana Mitra: How big is that product opportunity, specifically for collaboration and productivity?

Krish Kupathil: We call it unified collaboration and communication for mobile devices. It is a very large space. I just came back from an overseas trip and I met a bunch of CIOs in Europe and Asia. From their perspective, they see the world divided into three platforms. One is Windows, the second is Linux, and the third is mobile platforms.

What they want from any solution they adopt is universal application. Any solution they adopt should work across all three platforms. Imagine all the enterprises in the world, and all the productivity solutions that exist, and make all of them work on the mobile platform. They don't want to know that the mobile platform is fragmented. That is the size of the opportunity.

Sramana Mitra: What is preventing Microsoft from doing this natively in their Windows 8 phones?

Krish Kupathil: We asked them the same question. The answer was never very clear. What they told us is that they have their Windows 8 platform which they will focus on, and that they will leave integration with other platforms up to a

third-party partner.

Sramana Mitra: What is the geographical makeup of your business?

Krish Kupathil: We have our company spread across the U.S., China, Korea, India, Poland and Canada. In the mobile space, a lot of stuff gets done in Korea because two of the largest manufacturers are there. On the services side, we need to be physically close to where our customers are.

Sramana Mitra: How big is your team?

Krish Kupathil: We are closing in on 400.

Sramana Mitra: How is that split between the product business and the service business?

Krish Kupathil: On the product side we have around 60 on the development team. We have a sales and pre-sales team of around 20 people.

Sramana Mitra: This has been a very interesting story. I appreciate your time, and thank you for sharing your insights.

Interview With Shaul Kuper, CEO of Destiny Solutions

Similar to alignment with large technology platform vendors, another strategy that helps identify product opportunities is to immerse in a specific business domain. Shaul Kuper did just that to build Destiny Solutions in the Education space where he provided services, and thus bootstrapped a product business. This interview was conducted in December 2013.

Sramana Mitra: Shaul, let's introduce you to our readers. Where are you from? Where did you grow up?

Shaul Kuper: I was born and raised in Toronto, Canada. I had a fairly normal childhood: I grew up, I went to school and went to university. I was promised the dream of "make sure you learn math, science, and French, and you will be able to do anything you want in the future."

Sramana Mitra: Did you stay in Canada?

Shaul Kuper: Yes, I stayed in Toronto. I haven't moved far from where I grew up. My office is fairly close as well.

Sramana Mitra: And you went to university in Toronto as well?

Shaul Kuper: Yes. I went to the University of Toronto. I finished school in 1988. I did an undergraduate degree in molecular biology and genetics. I hadn't specialized in anything previously. I was just taking sciences until I got called into the dean's office and was told I had to specialize to move forward. So I looked around the room and saw a book on genetics. Then I asked: "Do you

have a course on genetics?" The response was, "Yes, we just started the course this year, and we have one seat left." So, I took the course. During that time I worked at SickKids [hospital for sick children] in Toronto to discover the cystic fibrosis gene.

Sramana Mitra: What kind of work did you do after you got out of college?

Shaul Kuper: When I graduated from college, I never clearly pushed the doors open, asking, "What am I going to do now?" Biology and genetics weren't really my calling. My brother worked in a company that did insurance replacements. He asked me if I wanted to come work for him for two weeks and help him clear his desk and do some filing for him. I left years later.

When I started working there, there was a XT computer sitting in the corner. I then figured out how that worked, what it did and how it automated his business and helped him grow his business. In late 1994, I went to a COMDEX show. It was really impressive. I saw the first version of Mozilla and the web. Then I took a few weeks off and learned how to program HTML and quit my job. I went home and told my wife. We had two kids at the time. I quit my job and started a new company called Destiny Web Designs. She had one question: "What is web design?" At the time there were maybe 200 to 300 websites. It was simple. My goal was to become a preeminent company for websites. That is where I got the start.

Sramana Mitra: How did it go when you started Destiny Web Designs in the mid-1990s?

Shaul Kuper: It was difficult. No one knew what a website was. I was way ahead of the curve. I had an instinct that this was where the future was going. I remember my father telling me that I was crazy. It was hard at the time to

explain to someone what it was. I had to pick up a huge tower computer and a huge monitor, put it in the car and take it to someone's office to set it up, because I couldn't afford a laptop – they were just too expensive. When I got there they were hooked up to the Internet – there was no wireless – so I had to have everything hardwired to show them what it was.

In the early days there was no demand, so we had to create demand. We did that by just coming out of the jewelry industry for insurance replacement, we created something called the Insurance Adjuster Resource Center, where I would call up detectives and say, "I understand you do work in the following cities for insurance companies." Then they would say: "Yes." I would ask, "Would you like to do a free placement in the IARC?" They would ask, "Great. What do I need to do?" So I would respond, "It is free. You just need a website. What is your website address?" So they would say, "What is a website? Where do I get one of those?" And I would say, "Well, we can build one for you." The first one we paid the company to build it for them. On the third one we were charging $50 or $100. By the end of the first year we were building $100,000 websites. It grew exponentially.

Sramana Mitra: Who was your first large website design for?

Shaul Kuper: Our first major client was the University of Toronto's School of Continuing Studies. That really set us off in the direction we have today. At the time we did all sorts of things for insurance companies, insurance brokers, towns, logistics companies, etc. One of the things that set us off in the beginning was that we didn't do textual websites. We did sites that had a real purpose and ROI. Insurance brokers could actually get quotes and follow up, make sales, etc.

The key to our success was tying into a database early on. So in 1995-96 we

were tied into databases and were able to do all sorts of interesting things. In 1997 we received an RFP from the University of Toronto School of Continuing Studies. I can quote the RFP word for word to this day: "The University of Toronto School of Continuing Studies requires a website." That was the entire RFP. I remember thinking at that time that it was a great place to be in higher education. If we could take everything we learned in e-commerce and put it into education, it would be a great space doing something of value.

I was a terrible golfer. Most of the business deals I did, people were expecting to do them on the golf course. I figured you wouldn't have to do them on a golf course if you were an education supplier. So we won the RFP, and in 1997 the University of Toronto School of Continuing Studies became the first university in the world to do online enrollments. You could transfer, you could drop, you could pay for your courses and get your grades online.

But it wasn't integrated into their system. Somebody would enroll, it would print out in the registrar's office and they would re-key it in. We said that we would be happy to integrate it with them – we do this with a lot of our customers. They had a really old-school Unix system and every time they would fix one thing, something else broke. It was held together with tape and rubber bands. They needed a new system. We were a provider for them for about three to four years. They then put out an RFP to get a new system built. We had been hanging around with them for about three to four years, learning everything about what they did, what was different about it, learning from different angles, the student's perspective, the instructor's perspective, the registrar's perspective, etc.

When they put out the RFP, I asked the dean if I should respond to it. The answer was, "Shaul, you are a nice guy and you have a great company. You do

great websites, but you don't really know anything about software. While it is an open RFP and anybody can respond, I highly recommend you don't waste your time or your money. We have professionals coming in to do this." She really didn't think we had the capability or the know-how to be able to compete.

Being an entrepreneur, I listen to my gut more than to good advice sometimes. Since it was an open RFP, we could bid. I remember going home that night and being the visual person I am, I figured out the use case the RFP mentioned and what I thought was going to be required. Then I came up with the concept of what we call Destiny One CE. The idea was that there is one system that all users would use, which was unheard of at that time. This way, they would only have to key things in once. Much to their frustration, they were keying in things five to six different times into different systems. They keyed things into their financial systems, their registrar systems, student information systems, etc. I created page after page of how I thought the system would look and all use cases.

I came in on Monday, gave it to my designer and asked if he could please put this together, make it look good, and show how this would all be held together. We responded to the RFP. Weeks later I got a call and was told that my time for presenting the system to the committee was Tuesday at 1 p.m. I then gave all those designs to my developer and asked him to tie all this together. We put together a demo based on those designs. Then I went down to the presentation, and there were about 50 people sitting around. A few days later I got called into the dean's office, and to my surprise she asked me if I really thought I could build this, to which I replied that I really thought I could. She told me that after I presented the system she asked the team two questions:

"Independent of who we hire, who do you think could do the best job, and who understands our business the best?" She said that it was unanimous that it would be us. Then she asked if they should hire us and everybody said "no," and that you couldn't be fired for hiring IBM. They all felt it would be too risky – we were a six-person shop at that time. We had never built software. We had built websites. Sitting in their position, I may have felt the same way.

Ultimately the decision was up to her, and she had known me long enough to believe that I live up to my word. We shook hands on it, and the next thing I knew was that I was in contract negotiations and had gotten the deal. It was never my intention to build it. It was my intention to project manage and design it. So I was going to hire a software company to build it and we would just manage the project. As it turned out, I couldn't find a software vendor that had the same work ethic and beliefs that I did – that it had to be perfect and it had to meet the client's needs. I gave my word, and I couldn't find another company that would do this. So I ended up building a team. I ended up hiring an architect, developers, and everyone else we needed. We built a software company. That is how we got started.

Sramana Mitra: That was your first major education project?

Shaul Kuper: Yes, that is correct.

Sramana Mitra: What year was that?

Shaul Kuper: In 2001 we got the deal and in 2002 we delivered the product.

Sramana Mitra: So by 2002 you had a reference account in education. Did you go after other education companies?

Shaul Kuper: Absolutely. I realized that this is what we wanted to do. We

knew the product and we built it to resell it. Our next deal was with the University of California, Santa Cruz. They bought our system. About a year after that, we sold to Stanford.

Having Stanford changed the game for us. I remember negotiating a deal at the time and one of the directors said to me, "If you don't know what to do with the Stanford name, you shouldn't be in business." He was actually right. It made a huge difference. To this day, every time somebody asks me who my customers are, I mention Stanford. Usually when companies are small, they go for smaller companies, and then bigger and bigger companies. We did it in reverse. We went for the biggest schools we could find and went downstream after that as opposed to upstream.

Sramana Mitra: Typically if you can get something large, the reference account effect is much more powerful. In terms of specs of these projects, what did you find? Were they all trying to do roughly the same thing?

Shaul Kuper: What they wanted was very similar. We dealt with continuing education divisions for the most part, or the professional development divisions of universities. They were the ones who dealt with what today is commonly known as post-traditional students. They were dealing with students who were going to school to get a better job. They were doing online courses, they were going part-time, etc. So they were dealing with students who weren't 18 to 22 years old and going to school full-time, not working and no kids. Some were doing strictly non-credit, some were doing credit. Some were dealing with corporations and some were dealing with individuals. Every school, depending on the geography they are in, gets something different, but the students they were serving were very similar in nature.

Sramana Mitra: So you have a lot of leverage across the industry, because you

had experience in the workflow and you knew what the requirements were. There was a lot of domain expertise developing in your shop.

Shaul Kuper: Back in 2003 and 2004 and even today when we go into schools that don't have a system like ours, they are running 70 to 80 different separate systems to manage their business. Nothing is centralized, and everyone has these silos of information – very inefficient in most cases. There is information all over the place. At the time there were second-class citizens within the university. That has all changed today.

Sramana Mitra: It sounds like you were also productizing. You were building a product you could then use as you grew up through the domain. Can you talk to us about that process?

Shaul Kuper: That is exactly what happened. We were going to customers saying, "Here is what our product does." They were pretty wowed. We heard from a couple of people that they had never dreamed that a system like this would exist, but also if we could do this or that as well. So we do gap analysis. We analyzed what business processes they had that perhaps we didn't. At that point, they would pay for that gap to be filled.

Our philosophy was that we would always have one code base. Even today with 24 customers, it is still one code base. Whatever someone paid for to fill a gap, we would incorporate into the product. In some cases we would foot the bill for it, because we thought it was something that would be needed repeatedly.

We needed that to take hold of the marketplace. What we learned from the University of Toronto is that we could never hard-code things. When we started building things we would always make it configurable. The University of

Toronto may have said they give a 15% discount for something, for example, and we would probably hard-code it 15%, as opposed to creating a discount engine that you could put in any type of discount.

Sramana Mitra: Ten or 12 years later, where do you stand? What percentage of your business is product versus customization services?

Shaul Kuper: In the early days it was not uncommon for a school to pay a few million dollars for customizations, and it would take a year or two to implement. Now we are down to literally weeks of implementation and in the $20,000 to $30,000 range. That is an implementation cost. Many schools don't need any customizations whatsoever right now.

Sramana Mitra: What is the price of the product?

Shaul Kuper: We started off with a perpetual on-premise business model. We have since switched it to a cloud based SaaS offering that is based on subscription. Our typical model is a percentage of revenue – similar to how a credit card company charges a percentage to do the transaction. We charge a percentage of the transaction to run the entire system for the university.

Sramana Mitra: What does that amount to typically?

Shaul Kuper: Some are between one and two percent. Some schools range between $3 million and $35 million in tuition revenue.

Sramana Mitra: So this is revenue from discrete courses, from full degree programs, etc.

Shaul Kuper: Typically speaking, yes. Schools we deal with typically don't charge for degree programs but for degree courses. But whatever they run through our system is what we get a percentage of.

Sramana Mitra: Where are you revenue-wise today?

Shaul Kuper: We are just under $10 million today.

Sramana Mitra: Have you completely self-financed the company?

Shaul Kuper: In 2001, when we got the deal from the University of Toronto, I realized that we weren't going to be able to afford building everything. Payment terms were staggered in terms of deliveries. At that time I raised money from angel investors.

Sramana Mitra: How much?

Shaul Kuper: We raised $1.4 million at that time.

Sramana Mitra: Did you raise any more money after that?

Shaul Kuper: No. We have been self-financed ever since.

Sramana Mitra: So the angel investors are your only investors?

Shaul Kuper: That is correct.

Sramana Mitra: You have been in the continuing education space for a good decade or more. What are the trends of the industry?

Shaul Kuper: What is interesting to us, having dealt with continuing education for so long, is that about two years ago presidents of the universities woke up one day and realized that the students they thought they had on campus aren't the students they have on campus. There has been a fundamental shift in higher education from traditional to non-traditional or something we call post-traditional. Now you have lifelong learning – people learn forever.

At one time you had push education, where professors would tell you what you

are learning and how you are going to learn it. Today it is just-in-time learning. People learn it when they want and as they want.

Degrees were very important, and now outcomes are becoming more important than degrees. Educational achievements were extremely important, whereas lifetime experience is becoming just as important. It was unheard of to have more than a single institution credit recognition, whereas now people are looking at universal outcome acceptance. People used to go to school for knowledge's sake, and now it is about knowledge for employability. We have seen a huge commoditization of education. It has gone from student to consumer in terms of the mindset of who these students are.

This is nothing new in continuing education. It has always been about the individual, that they want great service and they want to be able to get the information when they want it, how they want it, and in a convenient way. They are typically paying for it, and they want service. They are going to work during the day, so they want it during the evening or online. It is about the experience for them. What has shifted the most for us is the fact that this is now mainstream. Continuing education was the red-headed stepchild of universities, but now it is being looked at as the prodigy of universities. A lot of people realize that the future of higher education is the business model the continuing education divisions have, which is working with individuals, providing education just in time for them, the way they want to learn it. That has become a massive change in understanding the space.

Sramana Mitra: What is changing from a continuing education system point of view in designing an education curriculum?

Shaul Kuper: Ultimately what it means is providing students with a great experience. When they get online, being able to find the information they need

in a timely manner, being able to double click on information they require, being able to instantly ask a question and have it automatically routed to the appropriate person to get back to them in a timely manner, helping with courses in terms of ensuring that courses are available to the student at the appropriate time and in the appropriate manner, with great service, etc.

One of the things we do really well is build a profile of a student before he or she becomes one. A potential student may ask a question, like if this or that class is offered on Tuesdays, for example. We start building a profile for that student that continues for a lifetime, and we continue adding information every time they inquire about something, every time they take a course, every time that they attend something, etc.

The school is now building life-long relationships with these students. This is a huge ROI for them over a lifetime. They don't really just want to have a "here is one course, see you." It is about stickiness and understanding the student, finding information about them, being able to continually market to them at the right time, understanding the student, understanding why they are taking courses. This allows universities to bundle the right courses for them, creating certificates, stacking those certificates so they can get the outcomes they are looking for, understanding who their employer is, being able to work with their employer to provide them jobs, etc. In the old campus systems, you typically applied to get into a program. If you didn't get in, you were purged from the system. In a continuing education system, you are never going to be purged. You are constantly going to have more information about yourself and marketed to you in terms of providing you with the right information at the right time.

Sramana Mitra: Talking about connecting to job systems, does the system

offer connectivity to various employers, or is that specific to the universities and colleges and them having the relationships with the employers?

Shaul Kuper: Yes, at the moment it is specific to universities and colleges. As an example: Cornell is a customer that deals with many businesses, but the businesses can get online and facilitate the learning of their employees through our system.

Sramana Mitra: Let's say there is a consumer taking courses in the Cornell system. What is the process of that consumer to find jobs? Is that something that is specific to Cornell's career development program or is it something you bring to the table for all of your customers?

Shaul Kuper: Cornell has set up with various employers to provide education to their employees. It is customized for each customer and the corporation, so they are able to send their employees to learn through their system.

Sramana Mitra: You said you also cater to B2C scenarios – you don't only do B2B scenarios. You don't only do schools that train employees of their customers, or do you?

Shaul Kuper: Consumers would go to a university and find courses.

Sramana Mitra: Let's say I am a consumer, and I sign up for a course in economics on the site of Cornell. I am a consumer, not one of Cornell's business customers. Then I want to find a job. When I go to the Cornell's website, are the resources I am able to access specific to Cornell, or are you also bringing employability resources through your relationships with various employers?

Shaul Kuper: At this time we are not doing that. These resources are provided

by the universities.

Sramana Mitra: Wouldn't it make a lot of sense for you to build those relationships and have a packet of relationships you plug in for all of your customers?

Shaul Kuper: It may very well be. It is a good idea. Right now there is so much to build and so many opportunities to build on that it is a matter of prioritizing.

Sramana Mitra: What are the top things on your list that are changing?

Shaul Kuper: The top things are the fact that online is going crazy right now. We see a complete commoditization of higher education. With that, we see schools tripping over each other to provide free education. In order to become free, you have to do a lot of things very well and become extremely efficient. We help them become efficient at what they do.

Ultimately what we are trying to do is take all the non-differentiating things they do and automate them all so they can spend more time on differentiating factors. A student right now has so many choices on where to go to school. They can go anywhere in the world without leaving their home. Schools are competing like crazy to get those students. It is a different world for them now, where they have to compete not only on course content and curriculum, but on services and trying to give students an experience. That is where we are helping.

One of the things that is interesting with MOOCs, for example, is that schools are often giving the relationship they have with the student to the MOOC and not keeping track of the student. The students come to a website and they are redirected to a MOOC, where they join the MOOC and take a course for free. The university has no record of that student whatsoever. One of the things we do is keeping track of that student and help the school build a relationship with

them, even if they have gone off taking one of their MOOCS, ensuring that they maintain that relationship.

Sramana Mitra: How do you foresee all of this playing out? How are people going to be able to differentiate?

Shaul Kuper: I think corporations are going to start playing a much larger role in paying for the education of their employees. I think corporations are going to be asked to step up and pay much more for education in the future. We are going to see a world like the U.S. Army, for example, where corporations are picking employees in high school and paying for their education in return for so many years of service.

What is interesting with the MOOCs is that they are offering free courses. Where is the business model here? Is this really just a way to get students to campus? How is this going to work in the future? Is somebody going to fund this? There are lots of unanswered questions at the moment.

Sramana Mitra: Is it legal for a corporation to pay for a student's education and then require that the student spend five years in that corporation, for example?

Shaul Kuper: That is a great question. I don't know. It sounds like slavery.

Sramana Mitra: It is a very fair transaction, though. If I pay for you to go to school, you had better pay me back by working for me. Otherwise why would I pay for you to go to school? I am a corporation, not a charity.

Shaul Kuper: I don't know the legality of it. Consider it as a student loan. You have to pay it back, and you can't declare bankruptcy on them. I am not a lawyer, but I think that is where things are going to go. The demand for

education is greater than it ever was. The growth rates for our customers are huge. You can see companies that are offering all the education you can eat for $99 a month. It is very interesting to see how cheap it is becoming. These things are fine in the beginning, but eventually they need a business model. VCs will invest in them for a while, but then they are going to want to see a return.

Sramana Mitra: Absolutely. I am not totally convinced about the Coursera business model and whether it is going to scale to the extent to support the amount of venture funding they have raised. EdX is a different story, because it is a non-profit. As long as they sustain themselves, they are going to be fine. But with a MOOC business model, can you be a venture-style multi-billion dollar business? I am not at all convinced about that.

Shaul Kuper: I agree with you. Unless you are going to start selling advertising, I just don't understand that model. I typically believe that you get what you pay for.

Sramana Mitra: The other thing you said about corporations and employability – in the case corporations paying for students' scholarships – corporations would probably want to drive what they study. If the corporation is Google, they are probably not going to fund you to study philosophy or history, they would want you to study computer science.

Shaul Kuper: I think you hit the nail on the head. One of the biggest issues corporations have right now sending students to university is that [what the students are studying] is not related to what these corporations are doing. That is something that is going to have to change. Universities and colleges are going to have to realize that their market has shifted and that they are going to have to meet the new "pay master" and understand what it is that they are looking for.

We did some research on this very topic last year. Seventy percent of employers we spoke to said that their employees need continuous learning just to keep up with their jobs. It is moving so quickly. At the same time, they said that only a small percentage of what they pay goes to universities. The material just isn't the right material for them. It is going to have to become much more aligned in terms of what is needed.

Sramana Mitra: What is your prognosis vis-à-vis the liberal arts education system in America? I actually went through a good liberal arts college. Even though I went to MIT for my graduate work, I am a very big fan of the American liberal arts education system. This doesn't fit with the view you are presenting, though.

Shaul Kuper: Liberal arts gave you a good foundation. They taught you how to think, how to think critically, how to write and read, etc. This gave you the foundation to do what you do.

Sramana Mitra: I also did computer science and economics, even for my undergraduate work. I did not study philosophy or history. The philosophy of liberal arts education embraces what you are talking about – critical thinking, communication, reading, writing, etc. I do believe that we as a society are operating at a layer of innovation that promises to address what is called human-centric computing. There is so much going on through social media and other technology disciplines that carry huge promises of being able to improve society at scale. We are seeing that in politics, in education and in a variety of other areas. I believe that liberal arts do have a very big role in the future of innovation. If employers are going to demand certain specific skills without paying attention to that innovation that is emerging, liberal arts education is going to be in trouble.

Shaul Kuper: I don't think any of this is one size fits all. You have people today who go into very specific learning endeavors. They learn a trade and go and apply that trade without getting any liberal arts education. I did my undergraduate work in molecular biology and genetics, which I look at and ask myself if it is related to what I am doing today. No. Was it a good foundation? Yes. I learned to learn. I learned a lot, and I wouldn't trade that for anything.

If you look at the average online learner today, she is 33 years old and female, working full-time and taking business degrees. Most people don't have any inclination of what they want to become when they grow up. I also don't think that most people want to jump into a workforce right away and get trained for something specific. In my opinion**,** many people want a pause to be able to experience different things in life and to understand where they want to go, where they can be most productive, and what they enjoy doing. I don't think that is ever going to go away.

A lot of the stuff that we look at today will be on top of that. The liberal arts education is perhaps going to be delivered in a different way. I worry a bit about the effect of every 10-year-old now having a smartphone, and they text each other even if they are sitting next to each other. People in the future are not going to know how to speak to each other.

Sramana Mitra: Every time we have friends over who have small children, the children go to the next room and play with their gaming devices, and they are not learning how to converse. That is really irritating to me.

Shaul Kuper: That is going to be a big problem. And it is also where it ties in to a liberal arts education. Part of the liberal arts education is the experience of getting out of your house, living on your own, living with other people and experiencing what they have to offer. I think that is a big part of growing up.

We are also those who can afford it, but I think that it is going to become awfully expensive.

Sramana Mitra: It was a pleasure talking to you, Shaul.

Shaul Kuper: Likewise. Thank you very much.

Interview with Girish Rowjee, GreyTip

If you think there is a seed capital gap in the United States, you'd be amazed how deep that gap is in India. The Indian seed capital eco-system is minuscule, but the number of entrepreneurs interested in building significant product companies is growing by leaps and bounds. In the absence of a robust seed capital eco-system, bootstrapping is the only viable solution. Also, India's history as a powerful IT services industry has created many entrepreneurs very comfortable with bootstrapping product companies using services. This interview was conducted in December 2013.

Sramana Mitra: Girish, what is your background? Where do your entrepreneurial roots come from?

Girish Rowjee: I was born in a small town about 300 kilometers from Bangalore. I did my basic education there before moving to Mysore. My family has generally been an entrepreneurial family. My grandfather ran a bus service between several small towns, which was the first time a bus service had been made available [in that area]. He then branched out into several retail shops where he sold electronic goods. Today my father runs the operations of the electronics retail business that my grandfather founded in 1937.

Sramana Mitra: What year did you move to Mysore?

Girish Rowjee: I moved to Mysore in 1989. I enrolled in engineering courses at SJCE.

Sramana Mitra: What type of engineering did you study?

Girish Rowjee: I studied computer science. My family background was in electronics, and everyone at that time was very keen on electronics. Electrical engineering was definitely a cool subject to study at that time, especially when compared to computer science.

Sramana Mitra: When did you finish your engineering degree?

Girish Rowjee: I finished in 1993 after four years of coursework.

Sramana Mitra: What did you do after graduation?

Girish Rowjee: I spent the first couple of months trying to figure out what to do. The normal route at that time was to study for exams like the GMAT, which was followed by a graduate degree in the U.S. From there it was fairly easy to get into a cushy job. I was not OK with that idea.

Computers were very rare at that time in India. Computer time came at a real premium. I was never able to just walk into a computer lab during college and have easy access to a computer. Students generally only had 30- to 45-minute slots allocated to them to get their work done on the computer. We had to stand in a long line and fill in our name next to the desired time slot.

There was a group of guys who were really good at getting the first spot in line. They took the morning and afternoon slots. There were generally six or seven of us who would lose out and get stuck with the late-night slots. Generally the midnight slots were the only ones available by the time we got through the line. That led to a group of us working in the lab at the same time every night.

We did some interesting things in that group. In 1991 and 1992, we set up a small mailing system because email was not popular or prevalent. We wrote a basic interface in C++ which would send and receive emails. We then wrote a

filing system that would move data from one operating system to another. We did a lot of projects like this during college.

Sramana Mitra: Did you form a business out of one of the software projects you had developed in your study group?

Girish Rowjee: Not directly. In 1993, after we finished college, a couple of folks in our late-night programming group stayed in the area to study for their GRE. Three of us from that group decided to start a company. The group included Sayeed Anjum, who is a co-founder of Greytip.

Sramana Mitra: You come from a family with entrepreneurial traditions. Did Sayeed's family have an entrepreneurial background?

Girish Rowjee: No. Neither of the other two came from entrepreneurial families. Their parents were looking for jobs for them.

Sramana Mitra: Did the parents support their wishes to create a company, or did they create a fuss?

Girish Rowjee: Even though the practice of starting a company out of college was not readily accepted back then, somehow their families were OK with what we were doing. They were not especially happy, but they did not actively discourage us from our pursuit.

Sramana Mitra: What did you intend to do when you set out to start that company?

Girish Rowjee: The grand idea at that time, in 1993, was to start a bulletin board service. We were looking to model what AOL had been doing and planned to do it out of Mysore instead of Bangalore. Those were the days when modems had just been introduced at a rate of 9,600 bps. We were completely

excited about the idea of writing bulletin board software, but we never wrote a business plan. We never thought about who would purchase the software or what the market would be. We only had one Sun computer in our entire university, but never thought to ask how many modems there were in Mysore.

Sramana Mitra: Did you get paid to develop the software for someone else, or was it your own initiative?

Girish Rowjee: We were building it for someone else. We got paid about 5,000 rupees (~$100) once the project was completed. We were just happy that we found someone who was willing to pay us to write software. We developed our software to connect to AOL and download messages from AOL. We envisioned building a grand email connector for people in Mysore who wanted to use AOL.

The problem we encountered is that we did not have a computer. There was another co-founder whose father had an old 286 machine. We borrowed that machine and decided that once we received our payment for the first project, we would use that money to purchase our own machine. Our business plan was to write the software, get the money, and purchase a new 386 machine.

It took us about four months to complete the task. This was Mysore in 1993. We had frequent power outages, and we did not have a UPS [uninterruptible power supply] or stabilizer for the machine. We would start coding, and then we would get a surge of power. The moment the power surged, some component in the 286 would break. We would then get on a bus to Bangalore and purchase the replacement part before jumping on a bus back to Mysore so that we could fix the machine. This happened about once a week.

Sramana Mitra: Did you complete your project as planned and purchase

a new computer with the 5,000 rupees earned from that contract? It's a bit low to buy a computer even …

Girish Rowjee: We did finish the project, however, the individual did not pay us. We were able to get the bulletin board up and running in Mysore and we were able to connect to AOL and download messages. Unfortunately, he was not able to find anybody in Mysore to subscribe to the service.

Sramana Mitra: He did not honor his commitment?

Girish Rowjee: No, he did not.

Sramana Mitra: What did you do after that?

Girish Rowjee: We started thinking about the next big idea that we wanted to pursue. We also made a strategic decision to move to Bangalore in October of 1993. This time we set up a proper company. One of our co-founders left because he did not feel that our work was going anywhere.

Sramana Mitra: How were you paying your bills? Was your family supporting you?

Girish Rowjee: Our families were supporting some of our personal expenditures. Our rent was 400 rupees. We used to do some side jobs as well to earn money. For example, we would assemble machines for other people.

Sramana Mitra: Were you able to pay the majority of your own bills?

Girish Rowjee: We mostly took care of ourselves. Once we had paid our rent, our monthly expenses were done for another month.

Sramana Mitra: What happened after you moved to Bangalore in October of 1993?

Girish Rowjee: We found a partner for our business who had good business contacts. We made a deal where he would do business development and we would do the coding. We started our current company in Bangalore. We got our first order from a child company of Unilever. They had an HR database of all of their employees' data. It was provided to all of the child companies of Unilever. The database was FoxPro, but they did not have a good reporting tool for the database.

We went there looking for work, and they asked us if we could develop a good reporting tool. We took on that project. Internally we had taken the initiative to purchase our own x386 machine. My co-founder and I split access to the machine in two slots. He worked the morning shift and I worked the evening shift. Together we finished the project and built them a very nice reporting tool. At that time nobody had heard of things like data warehouses. We were able to do more work where we took data from disparate places and put it in a single location where it could easily be queried.

Sramana Mitra: How much did you get paid for this project?

Girish Rowjee: We were paid 5,000 rupees, and this time we were paid! The first thing we did with that money was purchase a stabilizer! We were still scared because of all the pain we went through in Mysore. I still have that stabilizer with me as a reminder.

Sramana Mitra: Were you able to get follow-on work and build on your success?

Girish Rowjee: Yes. Once we completed the first job, then they asked us to write a small application to help them manage their employee data. We essentially wrote the first portion of our employee information system. We

really wanted to write something that would be useful in many business cases and that people would enjoy using. We were extremely happy that a big company would use an application written by two guys and that they would get a lot of value out of it.

After we completed that application, we started getting a lot of other sub-jobs. We did some work in the market research department. We wrote a training module. We did a few other projects. After a short time, we started getting jobs at different companies and since they liked our software, they would call us from the new companies to see if they could use it there as well.

Sramana Mitra: You essentially operated your business in a consulting mode while you built your product suite. How much business did you do in 1995 while operating in this mode?

Girish Rowjee: We may have done around 4 or 5 lakhs in 1995 ($6,000 to $8,000). We were just a couple of guys who were extremely happy with what we were doing. We really did not have any pressure.

Sramana Mitra: How long did you operate as a consulting company working for Indian corporations, and how did your revenue ramp during that period?

Girish Rowjee: Our work with Indian corporations grew by word of mouth. As employees moved to new companies, they brought us in to do work. During that time we also wrote our own mini-ERP because so much of our work was repetitive. We operated that way until 1997 or 1998. By 1999 our revenue was hitting 70 lakhs in Indian rupees ($120,000). We had about 15 people working for us at that time.

We had about 40 clients by 1999, and most of our work was on the HR side.

By that time we had developed a payroll module and had done work for companies like Compaq. Our payroll module really started getting decent traction around 1998.

Sramana Mitra: What was the price point of your payroll module?

Girish Rowjee: We were selling a full license for about 50,000 rupees ($1,000). The issue we faced was that the market was flooded with products. A lot of competitors were selling their solution for 8,000 ($160) rupees. We had to differentiate ourselves. We knew we could go the route of a becoming a product company and sell the software for less money or we could go a different way and sell a high-end solution that could be customized for our customers' needs.

We decided to position ourselves as a comprehensive solution that could fully address a company's needs. After that, we ended up picking up larger corporations and that gave us a steady stream of revenue. There were companies willing to pay for the type of solution we were offering.

Sramana Mitra: The market was also different in India because there was no Internet.

Girish Rowjee: Very true, the Internet was very new and nobody had it. We did adopt Internet technologies very early. We were one of the first companies in India to offer a web-based front end to our products. We also were the first to offer an electronic pay stub in 1999.

We had to migrate our technology several times. We went from DOS to FoxPro for Windows. When the Internet was introduced, we had to adjust again. We had to remain relevant despite the rapidly changing technology ecosystem.

Sramana Mitra: You had 15 people working in your company and you were bringing in 70 lakhs a year. That is a very comfortable situation.

Girish Rowjee: We had steady revenue. We did not have a significant sales team. Most of our orders came in via references. Around 1999 we focused solely on our HR business.

Sramana Mitra: In the early days of your company, your primary method of sales was through referrals. How did you go from a referral sales model to a more formal sales model?

Girish Rowjee: We had a lot of growing pains. We had to create new sales, but we also had to service our existing customers. When 2000 hit, we really had a hard time due to the fallout of the dot-com bust. We really did not have a lot of sales that year. In 2001 we had another crisis when our entire development team left. Since the fear of Y2K had subsided, there was a boom in the market and programmers were in strong demand.

We took that as an opportunity to change the platform of the technology to Java. We had been a Microsoft shop up to that point, but the licensing fees were getting too expensive for us. Moving to an open source platform offered us significant savings. By 2003 we had completely rewritten our payroll product based on Java. Payroll was our flagship product because all Indian companies wanted to automate that process before doing anything else with HR.

Sramana Mitra: What was your price point for selling this payroll solution to Indian corporations?

Girish Rowjee: We had two versions. One version was for smaller companies and the other version was for larger corporations.

We then opened offices in Mumbai and a small operation in Chennai in 2007. Our primary customers were IT companies because they were the only ones that were capable of buying software. We then developed a sales strategy to target the IT companies in each city. That focus gave us a good boost.

Sramana Mitra: Were you selling only to large IT companies?

Girish Rowjee: We sold to all sizes of IT companies. Our clients typically had between 500 and 2,000 employees. They had enough employees to justify the purchase price of our product.

Sramana Mitra: This brings us up to 2007. What happened that year?

Girish Rowjee: Initially we thought sales were not growing because we had some capability issues. We wanted to reevaluate our business because we did not feel we were getting enough return on our effort. We knew we wanted to sell software in India, and we knew that most Indian companies were not buying our solution. We did have 250 large customers in the country, but we were unable to scale the business. We were profitable and comfortable, but not growing fast enough.

Application services were just starting to come online. We felt that price was a constraint for smaller companies. We started looking at the ASP module, and we saw that people were offering software online in the U.S. We decided to conduct an experiment and see if we could offer that type of service in India.

We then had to build out a data center and ensure we had the correct security. We purchased a server and leased space in a data center. We offered our application to small companies, and we realized that we were going to get good traction. SaaS was not a buzzword at the time, so we did not get good reception from everyone, but we did find plenty of people who were interested in that

model.

Sramana Mitra: Selling to small businesses in India is quite different from selling to Indian corporations or MNCs. How did you adjust your strategy?

Girish Rowjee: When you approach a small business in India, the first thing they do is start to compare you to the cheapest solution available. They want to bargain with you on price point. The actual support and software capabilities are evaluated after addressing the price point.

We had to develop a strategy to let us move forward with this market mentality, so we developed a pricing strategy to accommodate Indian small businesses. We established a monthly price based on the number of employees in the system. Once we had the pricing set, then we were able to focus on scaling the business.

In 2008 the application was not a cloud-ready application. We had to completely rewrite the product around the cloud-based infrastructure. We already had 250,000 employee payments processing every month, which gave us a steady revenue stream.

We had to develop our new platform on a LAMP stack using Java just to keep the product affordable for our customers. A large number of small solutions in the market had created a very fragmented market with wide price variations. The only common element of competition for payroll systems was price and this was very negative for the ecosystem. Nobody could do any significant ecosystem in building something really good and investors were not interested in hearing the whole story. Even today when investors come to us, they ask us if we have a U.S. story or a European story. They don't believe in our Indian

story.

Sramana Mitra: Selling software to Indian customers is generally a very long process. It gives rise to slow-growth businesses. The kinds of investors you are talking about are looking for high growth companies. It has been very difficult for Indian VCs to find high growth companies that cater to the Indian market. That is the reaction you encountered.

Girish Rowjee: We definitely experienced that.

Sramana Mitra: There is no harm in building a slower growing business as long as you don't have to deal with investors.

Girish Rowjee: We were certainly debt free and running on our own. We had good clients and a comfortable revenue run rate. It was difficult to build a sales team because the sales cycle was so long, and as a consequence, our sales happened by referral and word of mouth.

Sramana Mitra: How long did it take you to bring your cloud solution to the marketplace?

Girish Rowjee: We spent a year and a half building that solution. As a result we had a down year in 2008. We did keep a steady stream of existing payroll customers. We reinvested the money from our legacy business into our new SaaS business.

Sramana Mitra: Did you position your SaaS business to cater to the IT companies that made up the core of your customer base?

Girish Rowjee: We build the SaaS business model for small Indian businesses. We did not specifically focus on Indian IT.

Sramana Mitra: It seems that your early adopters of the SaaS model would come from the IT space. Was that the case?

Girish Rowjee: Yes, you are correct on that. They had access to Internet connections that were more reliable.

Sramana Mitra: How much new revenue did you do from SaaS in 2009?

Girish Rowjee: We had a minimal level of revenue. I think we did 30 lakhs ($60,000).

Sramana Mitra: When did you bring a production version of your SaaS product to the marketplace?

Girish Rowjee: By 2009 we had the product completely rewritten for the web and had everything in place to support a SaaS model. We offered a free trial for companies that were interested in our product. We wanted people to evaluate the software without any barriers. Our offerings were also very inexpensive. Our lowest priced plan was 10 rupees ($0.20) per employee per month. We had a more comprehensive plan available for 20 rupees per employee.

We had to find an inexpensive way to host our web application in order to allow us to deliver our product at such low price points. Amazon was the only option left. Indian cloud operators could not offer that price point.

Sramana Mitra: How did you acquire customers at this point?

Girish Rowjee: We did not believe that it was necessary to put feet on the ground for a SaaS business. We wanted people to come online and find us. We did some Google AdWords campaigns. We figured that if people liked what they saw, then they would buy from us. That turned out to be a bad move.

After that failed, we started running a lot of experiments. We did banner ads, pop-ups, and did everything we could to get people to evaluate the product online. We spent almost a year and a half running those experiments.

By 2011 we had a few things converge which helped us overcome that barrier. First, cloud computing became widely accepted and was talked about a lot in the press. Second, we dropped our online-only sales model and put in an actual sales force.

Sramana Mitra: It seems that selling your solution with salespeople would not be a profitable model.

Girish Rowjee: Initially it was not a winning model in terms of revenue. However, the customers we were able to find started getting us more customers via word of mouth. We also still had our legacy on-premise business. We were doing 400,000 pay slips monthly with that business. The SaaS business generated 60 lakhs ($120,000), which would represent 20% of total revenue.

Sramana Mitra: Growing organically with revenue is the only way to do it if you don't have access to huge investments.

Girish Rowjee: There are no other options. We fueled our growth by investing our profits. By 2012 we knew how many salespeople we would need and we had turned that sales force into a profitable model. By March of 2013 we had 1,250 clients and we were doing 2.3 crore ($375,000) of revenue from the SaaS business. We had 8 crore ($1.3 million) in total business. Today we have a sales team of 28 people with about 3,000 customers. We are still doing online sales, and we have about 45 clients from online sales. Those clients are coming from outside of India. We have several clients in the Middle East.

Sramana Mitra: What kind of growth rate do you anticipate over the next five years?

Girish Rowjee: I am guessing that in 12 to 18 months we will double our SaaS revenue. I think we are close to hitting the hockey stick. Smartphones are making it easier for people to access the Internet. Smartphones are the future in India. I am bringing on almost 90 new clients a month in India. We have 2,000 clients now. I think our available market is 3 million companies. I think we could have 20,000 businesses using our application within three years. On average, we get 200 to 300 rupees per month per employee.

Sramana Mitra: I love stories like yours. Congratulations on your success.

Interview with Mike Mothner, WPromote

Michael Mothner is the founder and CEO of search engine marketing firm Wpromote. The company has maintained over 2,700% growth from 2003 through 2007. It was bootstrapped while Mike was in college, and later, using services, before it hit this high-growth stride. This interview was conducted in December 2010.

Sramana Mitra: Mike, what is your story leading up to Wpromote? Where are you from?

Mike Mothner: I am 29 now. I was born in Manhattan Beach, California. My parents were both teachers. I got into computers and the Internet when I was pretty young. I wrote a software program when I was 14 called Calendar Man which was a moderate success. I would come home from school and have $15 checks in the mail.

I went to college at Dartmouth. I was a computer science and economics major. My sophomore year, in 2001, I recognized that there were over 200 different search engines. I wrote a script that would submit a website URL to all 200 different search engines and charged a nominal fee, about $10, for people to use that script to submit their site URL to search engines. That solved the problem of getting found by the search engine, a very basic problem of SEO.

Google was one of those 200 search engines at the time, although it was not a brand name. They were offering paid search, so I bought keywords related to submitting sites to search engines. That is essentially how Wpromote began. Whenever somebody did a search on submitting their site to search engines,

Wpromote would pop up on the right-hand side. We gained traction from there because we had a monthly recurring subscription.

Sramana Mitra: Did you run a PPC campaign for website search engine submission services?

Mike Mothner: Back then it was not even PPC, you just put up money for the service. They stole the PPC model from Overture, which used to be called GoTo.com. Ironically, I was using search engine marketing to offer search engine marketing services. To a certain extent that remains true today. We are essentially our own case study.

Sramana Mitra: Did you finish college or did you drop out to do this?

Mike Mothner: I did finish college. I had a wonderful college experience. I always had the entrepreneurial spirit. Starting your own business was not something that people did very often at Dartmouth. It was not cultivated. It seems like at Dartmouth students were either pre-med so they went to medical school, or they were a business major so they went to work for an investment bank, or they did not know what they wanted to do and so they went to law school.

By my senior year I had been running the business for a year and a half. I had a couple of hundred clients and the service was generating a couple of thousand dollars of revenue a month. I worked about two hours a day, but it was not clear if I could turn it into a bigger business. There were a lot of pressure for me to follow the corporate route. The notion was that if I wanted to make money I should go join one of the 20 companies that come and recruit at Dartmouth. It felt like that was the path everyone thought I was supposed to follow. A lot of people thought the idea of doing my own business was a bit of

a joke.

I went through corporate recruiting my senior year. I thought that was what I should probably do because I had a nice little hobby business. I went all the way to a final round of interviews with Goldman Sachs and finished nine hours of interviews with them. I was sitting across the desk from the managing director of the floor, who was kind of a prick. He looked down at my resume and saw Wpromote on there and said, "If this is true, then why would you want to work at Goldman Sachs?"

He was trying to call my bluff, but it was not a bluff. Something snapped in my head and I realized he was right, so I told him that he was right and that Goldman Sachs was not the right place for me. He was very surprised, but he called me a car, and I walked out and cancelled the rest of my interviews. At that point, the die was cast that I would give Wpromote a try and see what I could do with it.

Sramana Mitra: So you graduated from Dartmouth, turned down Goldman Sachs, and decided to focus on Wpromote. What was your next move?

Mike Mothner: It was June of 2003, and I moved back to Los Angeles. I had a good idea what I wanted to do to expand Wpromote. I was using PPC to drive an organic search optimization product and I was aware of two things. First, through the process of running Wpromote I had become very good at PPC campaigns. Those campaigns were getting harder and harder because of the increased competition.

I also realized that as the search engine industry became consolidated as AltaVista, Dogpile, and all the other sites started dying off, that my product

was becoming less and less relevant. Once your site is in Google you are in Google, and people would not need our monthly service any more.

I realized that there was an opportunity to provide higher end PPC management services to companies. That is what I knew I had to do and I knew that I wanted to hire somebody to do it for me. I had a really good life because I was working only two to three hours a day. It was a lazy post-college first year. I knew what I was going to do, but I did not wake up in the morning and go do it.

Sramana Mitra: How much revenue were you getting from the automated search engine submit product?

Mike Mothner: In 2004, our revenue was around $250,000 with profits of about $50,000. Halfway through 2004, I hired a childhood friend who was from Manhattan Beach and who had gone to Dartmouth as well. He had been a liberal arts major and his plan was to go to law school. I convinced him to work for me for $10 an hour while he was studying for his LSATs.

About three weeks after I hired him we realized we had to move into an office to get real clients, and two weeks after we moved into that office he stopped studying for the LSATs.

Sramana Mitra: What was his role?

Mike Mothner: In the very beginning we both did everything. There was not much division of labor. A month after I hired him, I hired a second employee who was also planning on going to law school. The exact same thing happened with him. That summer the three of us worked out of a single office.

Sramana Mitra: What about clients?

Mike Mothner: The only clients we had were the original service clients. We had to tackle a branding issue because the original search engine submit product was called Wpromote. At the same time, we named our new PPC product WpromoteSolutions.com, and we kept the original basic submission service at Wpromote.com. We got our first PPC management client, who is still with us today. We have raised our prices a number of times since then, but she is still grandfathered in under our original pricing plan.

Sramana Mitra: What was her business and how did she find you?

Mike Mothner: Her business is AmeritekID. They do fingerprinting for businesses that do background checks. We got her as a client through PPC advertising. I think the keyword we used was 'PPC help.'

Sramana Mitra: Was there a lot of competition for the keyword phrase 'PPC help' at that time?

Mike Mothner: We were one of a small handful of companies that were advertising PPC management solutions. In this case, there were very few companies who were dedicated to doing only that.

It is very difficult to land your very first client. We are honest and we are not going to lie and say that we have clients when we don't. She ended up becoming a client because we were able to push the conversation down different avenues to show our expertise.

Sramana Mitra: How much did you charge your first client?

Mike Mothner: Our fee back then was $250 a month to manage her budget. Her budget was $1,000 a month.

Sramana Mitra: What exact service did she get for $250 a month?

Mike Mothner: It was focused on PPC, and we built a livescan fingerprinting campaign for her. Her business was a livescan fingerprinting business for companies that were running background checks on potential employees. Her keywords were 'livescan fingerprinting' and 'livescan fingerprinting locations'. We geo-targeted her ads so that the only people who could see her PPC ads were people who could walk into her business, so they had to be within a certain distance.

When the user clicks from Google to her site, it would cost her a certain amount of money, which is the amount she had to pay for that click. The budget she had for that was $1,000. From a management perspective we took her budget and divided it across 30 days of the month. That came out to $33 a day. We would then track the conversions from PPC to filled out consultation forms. We were able to track that lead back to the exact keyword that brought in that conversion. We were able to identify 500 keywords that were effective for her. 'Livescan fingerprinting' and 'fingerprinting' may both be relative keywords, but I don't necessarily know beforehand which one will give her more conversions.

We come up with every keyword that could be helpful, and we found the ones that produced results. Each of those keywords has its own auction rate with Google. Google wants to reward more ads that people want to click on because they only get paid when people click. They weight your bid for how much you are willing to pay with the likelihood that somebody will click the link.

To evaluate which keyword was better, we would run one campaign with both and then evaluate the leads between them. If 'livescan fingerprinting' cost $1 and 'fingerprinting' cost $2 every time someone clicked, then you have cost difference. However, if 50 people convert off of 'fingerprinting' and only 5

people convert off of 'livescan fingerprinting,' then you have another factor to weigh. At the end of the day, I want to tell my client that she spent $1,000 which resulted in 20 forms filled out and 40 phone calls, and that next month I expect to be able to get her more value with the exact same budget.

Sramana Mitra: As you were going through this process, you likely found there was a multivariate optimization algorithm that could apply. How do you feed that algorithm? How do you decide which keywords should even be considered in the beginning?

Mike Mothner: That stage of the process involves creating a net of keywords. We call that keyword research. We look at all the products that you sell, and all the ways that people could search for those products. Wine.com is a client of ours that sells 3,000 different bottles of wine. The keyword research for Wine.com is massive because of all the wineries they sell, types of wines they sell, and so on. They can also sell only to certain states, so it becomes a massively complex campaign.

To help us create that keyword net, we have built tools to help us find all of the different permutations of keywords. A keyword is rarely one word, it is more often a key phrase. In the wine example, a user may type in 'buy cabernet wine,' or 'cabernet wine reviews.' Those are all variations on the keyword 'cabernet.' During our keyword research process, we will generate thousands of permutations and phrases just for cabernet. 'Cabernet wine review' may turn out to be far more valuable than 'cabernet wine.'

We have to go through our process always assuming that we do not know the answer. We think we need to test and find data to support the conclusion. We don't like hypothesis because we have the ability to test and find the right answer. We like to know that 'cabernet review' is 30% more valuable as a key

phrase than 'cabernet wine'. We can actually answer that question.

Sramana Mitra: How do you do get to that answer?

Mike Mothner: By answering on both. We spend $100 on clicks for each keyword or key phrase. We can then say that the second key phrase brought in $300 more revenue. As a result we would lower our bid on the less effective keyword and raise it on the keyword that performed better. The ultimate goal is sales maximization given a fixed input. It is a fairly complex challenge to solve.

Sramana Mitra: You test various campaigns to see which keywords yield as a first step. I recently spoke with 1000Bulbs.com, and their keyword list has 14,000 phrases. How can you test 14,000 phrases?

Mike Mothner: We would have 14,000 keywords and look at the daily, weekly, and monthly data on those keywords to determine the relative effectiveness of keywords. When you look at 14,000 keywords, you are dealing with a long tail concept. The idea behind the long tail is that the Internet brought about mass customization.

The long tail theory is that after the 10 or so best sellers, the heads, and the body of the next 100 or so, then the rest is the long tail which will have far greater volume. If you can effectively reach that long tail by customizing the message then you don't have to do a Super Bowl ad, you can do a unique ad for a unique person. Tiny niche businesses can now do well by reaching a tiny, unique audience. The closest thing to a long tail effect is the Yellow Pages.

1000Bulbs.com is a great example of the long tail because it would be very challenging to be an industry leader in the light bulb category without the Internet. People would just get their light bulbs at the store and probably pay a bit more to get them there. Now there is a company that can only sell light

bulbs and do a lot of business by reaching all of the long tail customers with unique light bulb needs.

Sramana Mitra: When you do get a list that includes all of the long tail keywords, how do you prioritize that list? How do you manage lists that have tens of thousands of keywords?

Mike Mothner: We group keywords semantically. We will focus on the major keywords individually which are determined by search volume. We will then look to create keyword groups, which can happen semantically or in other ways such as by brand. We do not actually have to pick one of the 14,000 and try and draw a conclusion from it.

If we get very long key phrases that are similar, but one starts with the word 'buy' and the other starts with the word 'purchase,' then we are going to group those phrases together. We will try to get the keywords down into a dozen or so buckets, and we can then manage the buckets effectively.

Sramana Mitra: Is there any prioritization strategy? Do you go for the head, the body, or the long tail first?

Mike Mothner: The best way for me to answer that is to give you an example. I'll refer to the 1000Bulbs.com scenario we spoke about earlier. In that case, we would take the 14,000 keywords and place them into 40 buckets. If this is a brand new campaign, then we will set all the bids at one dollar across the board.

The keywords that have a higher volume of searches will inherently have a large amount of spending out of those buckets. As soon as people start purchasing, we will start to see the relative value. We would then take the bucket that is performing well and raise it to one dollar and ten cents, and lower the other

bucket that spent at the same rate but did not have any sales to 90 cents. We start at the average and make tweaks from there. The result will be a campaign that is optimized daily.

Sramana Mitra: What happens when there is a large competitor in the market? For example, Wine.com must face a lot of competition.

Mike Mothner: Being in a competitive market is challenging. There are some things we can do and there are some things that the client should do which are fundamental to the business. If you can't compete on price, then you have to find something else to compete on. We can help businesses connect with prospective clients.

Let's assume your message is that your service is the best around. We will help clients optimize their campaign around their customer service message. The very large companies have so much ground to cover that they have a hard time optimizing a campaign because they have thousands of product lines. We can make a client more efficient in their PPC budget than the big companies' PPC budget.

Sramana Mitra: What if you are optimizing a campaign for a small startup that is going after a large competitor. Assuming you figure out the differentiation, are there keyword strategies that you would follow? Would you focus more on the long tail?

Mike Mothner: Focusing only on the long tail does not work like you think it should. Google has broad match technology, which means that if a company just enters 10 major keywords and places a lot of money against that keyword, Google will automatically pull thousands of relevant keywords and run the PPC there, too. You can't avoid competing with the big player by coming up with

long-tail keywords. Google likes it that way because they make more money by making the marketplace more competitive. The long-tail strategy is just not realistic anymore.

Sramana Mitra: In general, what metrics do you track and optimize against?

Mike Mothner: We always want to have a metric to use to track effectiveness. That metric will vary from client to client. We can track when somebody purchases a product, when somebody fills out a lead form, phone calls by using different numbers for different keywords, and user website interaction. We look for the metric that is the closest proxy to a successful visit to a site.

Sramana Mitra: What tools do you use to track those metrics?

Mike Mothner: We have our own proprietary tracking technology. If a client has a separate analytics package that they would like to use, we certainly will work with them.

Sramana Mitra: What do you automate with your technology?

Mike Mothner: We love technology and automation, but we realized early on that you cannot replace the human element when it comes to marketing. An algorithm is good at telling me that Ad A performed better than Ad B, but it is not that great at telling me that Ad C would outperform both A and B.

Sramana Mitra: What are the tasks that are capable of being automated?

Mike Mothner: We automate the processes of putting the right information in front of the PPC account manager at the right time. We know in real time how much people are spending, what keywords are performing well, and it aggregates conclusions to place in front of the expert. It also does it across

Yahoo!, Google, and Bing at the same time. If you did not have the data automation capability, then you would have to spend a lot of time in Excel to figure out what was going on.

Sramana Mitra: You also offer search engine optimization (SEO) services, which require a different strategy. What is the philosophy that you follow for SEO?

Mike Mothner: With SEO the focus is on getting a site high organic visibility on valuable keywords. That avoids PPC and can be a cash cow, or at least incremental revenue. The trick is that time and effort is spent to achieve those results, so it is not a free result.

The first thing to remember is that Google wants to reward sites that are authoritative in their subject areas, are well respected, and have a good user experience. They have a huge number of variables to make that determination. Good SEO means that you need to have a site with good information, a good user experience, and that has enough merit to be an authority in the space.

That means we have to make sure that we remove the red flags that prevent Google from realizing the content authority that your site has, which means we make sure Google knows about every page on your website. We then work on increasing the authority of a site, which often means the site needs more content which is fresh and relevant. Finally, we consider the weight of the inbound links to your site. That involves getting recognized and cultivating relationships with other sites. That is where getting more content on your site which external sites link to becomes key.

Sramana Mitra: How do long-tail keywords play out in SEO?

Mike Mothner: They work well in SEO. You still have the broad match technology to deal with, which explains why Wikipedia ranks for everything. The site that is the authority for wine is probably going to rank high in a lot of the long-tail keywords for wine organically, and it won't necessarily matter that Wikipedia is there with a search result.

Sramana Mitra: What role do inbound links to a site really play? There seems to be ambiguity and controversy around link-building techniques.

Mike Mothner: You can have 10 experts in a room and get 10 different answers, hopefully with some overlap. Fundamentally, the best links are those that are not negotiated or traded for. They are links to great, unique content on your site that someone else thought was worth linking to. We call that digital PR.

The problem is that a lot of sites just sell a widget. There is no blog dedicated to installing window blinds in Santa Monica, California. In that case, people may choose to buy links which will prove to be effective. It may not be an ideal long-term strategy, but it does offer consistent short-term gains. Our approach is to be anchored in good long-term value building SEO while engaging in what is necessary to keep our clients on the cutting edge.

Sramana Mitra: In SEO what role does Twitter play?

Mike Mothner: Search engines have just started announcing their intention to include tweets in their results. That implies that if a lot of people tweet about a website, there will be a lot of rewards about that site. There is unequivocal value in getting the word about the site out there. It is also a great way to do **reputation management**.

Sramana Mitra: I have been blogging for five years now. In the early days

of blogging if somebody saw your post, they would use the blog to link back to that post. Now they are using Twitter and Facebook to broadcast posts that they like. The link back effect there has diminished.

Mike Mothner: I think that is exactly the reason that Google made their announcement that they would start to weigh Twitter. They realize that conversations spill over, and they need to account for that.

Sramana Mitra: You said you were charging your first client $250 a month to manage a $1,000 a month campaign. How has your pricing evolved since then?

Mike Mothner: Our standard pricing now is the greater of 15% of your search budget and $1,000 a month. At the high end, where clients spend $30,000 a month or more, we will develop an alternate pricing schedule.

Sramana Mitra: How many clients do you have?

Mike Mothner: There are two divisions in the company. The Small Business Services Section handles clients who spend around $150 to $300 a month. These are local mom-and-pop shops. Our Agency Services Division handles the higher-end clients, whose pricing we just walked through. On the small business side we have 2,000 customers and on the agency side we have 200 customers.

Sramana Mitra: How does the revenue split?

Mike Mothner: We will end 2010 at about $11 million in revenue. Our 2011 projections will be $17 million. Right now the revenue split is about 65% agency services, 35% small business. Small business services, however, will continue to grow rapidly. We estimate that in Q1 of 2012, the small business

side of the house will eclipse the agency side of the house.

Sramana Mitra: How do you manage the small business side? What do they get with your service?

Mike Mothner: The small business offering is a self-service platform. You can either come up with your keywords and ads or ask us to do it for you, and then we will manage them in aggregate. Quicklist is our small business PPC product, which is a micro PPC campaign for budgets that are too small to run on their own at Google.

The small business will pay us either $99, $247 or $495 a month for us to spend a percentage of that budget. The small business pays a fixed fee and we pay the variable costs. If you pay us $100 we might spend $70 at Google and Yahoo. We will spend $70 far more effectively than you will spend $100. Most businesses at that budget will be very wasteful with their funds.

Sramana Mitra: Have you taken any external financing for this company?

Mike Mothner: No, we have funded it from day one with operational funding. We are talking to some equity groups about potentially doing our first round to help us with growth right now.

Sramana Mitra: Great story. Good luck with everything!

Interview with Jerry Rawls, Finisar

The commonly held belief is that highly capital intensive companies are hard to bootstrap. This is true, by and large. However, I want to close this volume with a myth-busting case study: the story of Frank Levinson and Jerry Rawls who bootstrapped a highly capital-intensive optical component company to close to an IPO using the bootstrapping-using services model. This interview was conducted in March 2007.

Sramana Mitra: Where I would like to begin the interview is to ask a bit about your background before you started Finisar. Take us back to where you come from, where you grew up, your family, did you have entrepreneurial roots?

Jerry Rawls: I am a Texan. I was born in Houston and I grew up in Texas. I went to the University of Texas Tech. I can't trace entrepreneurial roots back very far other than that when I was a kid I always had jobs. I had a newspaper route when I was 10 and I always had jobs doing something, but I don't remember starting much of anything.

I was in a junior achievement organization where we actually made soap and sold it to supermarkets and that was fun, we did that for a year. I went to college and studied mechanical engineering. Texas Tech was a great experience for me, the social and educational parts of it, and I also had some great summer jobs. I worked for IBM, Shell Oil, and US Steel during the summers.

I learned in that process that I did not want to be a design engineer, and though I was majoring in mechanical engineering it seemed the kinds of activities I would enjoy were more involved with people. I had been a bit of a

student politician, a student body officer and a member of the student senate. I was a fraternity officer. I was a member of a lot of organizations, and, I don't know, somehow maybe that steered me along that way.

At the time the Vietnam War was running hot and heavy, and Linden Johnson had just abolished what used to be known as the II-S (two "S") scholastic deferment for education from the draft, but he had grandfathered everybody that was in school, and essentially what it said was you have four years to complete your degree, and after that you are subject to the draft, which at the end meant you were subject to going to Vietnam.

I did not want to go to war. And I decided that what I wanted to do was go to business school as opposed to more education in engineering, or moving into a job as a mechanical engineer somewhere. I went to business school at Purdue.

Anyway, it was a very quantitative MBA; everybody in the program was either an engineer or a scientist.

One of the companies that had interviewed at the school the year I finished was Raychem. I ended up joining Raychem and I actually moved to Menlo Park, California for a few months as part of a technical training program before my first job as a sales engineer in Chicago.

So, I went off to Chicago to be a sales engineer, and I did well at it and my customers grew and I sold a lot of Raychem materials. Then I moved to Dallas and became a Sales Manager, and then I moved to California and became a Marketing Manager. I progressed through the marketing management roles and became national sales manager and head of product marketing for our division, and eventually the division manager of a couple divisions of the company.

Sramana Mitra: What year does that bring us to, when you left Raychem?

Jerry Rawls: About 1986 I would guess. In 1986 I was the general manager of a division called Interconnections System Division, in California, and in our division I started a fiber optics product development group because most of our customers were either computer companies or defense companies. Most of the wiring in their systems was electrical, it was copper wire, and they were expressing preferences to change some of their high speed signal connections to fiber and fiber optics, and at Raychem we had no fiber optics products.

So, we started a product development effort trying to understand how to serve our customers in the area of Fiber Optic transmissions, and as part of that I hired a young scientist from Bell Labs on the east coast and his name was Frank Levinson. Frank was a bright young PhD and he had a lot of patents at Bell Labs, so we moved him to California to be a principle technologist in this area, and he worked in that area for only a few months and then was transferred. Literally the Chairman and CEO of the company came in and said we are going to move this guy to a subsidiary they had just created called Raynet.

The Famous Raynet, and it is famous because it lost more cash than any other startup, I think, in the history of the Bay Area.

Sramana Mitra: The famous Raynet!

Jerry Rawls: The Famous Raynet, and it is famous because it lost more cash than any other startup, I think, in the history of the Bay Area. They burned, I don't know, $200 million in not too many years. It was a drain on the whole company, but Frank went over there.

Raynet was having trouble gaining success, and there were some of us around who were skeptical that it could ever be successful. Not only was the technical

basis flawed but the whole notion of a company outside of the telephone industry being able to walk in and compete with AT&T was a little…well, ambitious, I might say.

So, anyway, the drain of Raynet on the company – and just Frank's experience with Raynet and my experience with Raychem were such that we met one day and talked. Well, Frank wanted to go off and start a company. Actually he and I had talked about starting a company previously in a different area. So, he came back again and said, "Hey, I would like to start a company in fiber optics."

So, we talked about it, and he said, "I am committed – this environment at Raynet is not positive, they are not going in the right direction." He had become disenchanted with the progress Raynet was making, and thought life would be more fun trying to build our own company.

Well, let's talk about this. There is no business plan. There is no particular product focus, and there are no customers. The only customers who were possible at the time were consulting customers, consulting in fiber optics.

Sramana Mitra: So to support the company initially, Finisar relied on providing consulting services. It's a very common way that companies bootstrap themselves. I have done it myself. What kind of consulting did you provide? Like System Integrators?

Jerry Rawls: Well, actually, the first customer would be Raynet themselves, but we would have to get others soon enough. We did not have any outside investors, so it was clear that we did not have enough money to support both of us. So, I stayed at Raychem and he went off and got started. At the end of the year I left Raychem and joined him fulltime.

Now, in the meantime I had worked nights, weekends, vacations. I made calls

on customers, I visited several places to try to generate business, and I thought we had some opportunities for success. Anyway, this is getting to be a long story, but off we went, and we had a company and it was two guys, then it was three, and four and five and that was about it for a while. We did a lot of contract design services in those days to keep ourselves afloat. It was our money, we had bootstrapped the company, we had to be profitable, so we had to be able to cover our costs and that meant we could not expand much.

Sramana Mitra: So you were bootstrapping the company by doing consulting for a while – how long was that?

Jerry Rawls: While we were doing product development we supported ourselves, probably, for four years doing mostly consulting work.

Sramana Mitra: Four years, that's a long time.

Jerry Rawls: We were doing product development in high speed fiber optics. Our product goal had become trying to develop high speed fiber optical links for computer networks, not telecommunications networks. At the time Alcatel, Nortel and Lucent in collaboration with Bell Corp, pretty well controlled the Telecom market for optical components and we did not think we could really compete with those guys given the limited investment that we had in this company.

So, we had to find a place where there was a need that was not filled, or need that we could see coming that wasn't filled, and some innovation that we could bring to the opportunity. We targeted high speed networks – that is gigabit links for computer networks as opposed to telephony. We spent a fair amount of time with the workstation manufacturers at the time. Daisy, Apollo, IBM, Sun, and they all had very similar outlook, "We're going to need more

bandwidth for these workstations than we have today."

The fastest connection they had at the time was fast Ethernet. So, we could see that Gigabit per second for connecting -networks was a big deal, and our dream at the time was to be able to put an optical device on every PC and we still haven't gotten there.

Along the way, in the early 90's, IBM was defining a Fiber Optic link for computer networks they called Fiber Channel. These were the days when Akers was the CEO of IBM, and Fiber Channel, their vision, was going to replace Ethernet, Token Ring, SCSI. They would have one protocol and that would be Fiber Channel. Well, Akers got fired, Gerstner came in, and they decided this project wasn't as strategic as they previously thought and they disbanded the project. Fiber Channel persevered, and it evolved into a storage networking standard, and it was the basis of the SAN market.

Sramana Mitra: Were you still working with IBM? Was IBM pushing the SAN market, or did you have to find other customers to do SAN with?

Jerry Rawls: IBM was still participating, and they had a midrange computer group in Austin, but actually the company that saved Fiber Channel was Seagate. Seagate invested in the Barracuda Fiber Channel disk drive. It was a serial IO for a disk drive as opposed to wide bus SCSI disk drives that were previously available in the industry, so I would give Seagate the credit.

Our contribution was that we, in the early 90's, had developed what we called a low cost gigabit optical link. We had introduced it. Actually we got a fair amount of press coverage over this gigabit optical link that was probably one tenth of the cost of a gigabit telephony link. And using that as the basis we drafted and revised the Fiber Channel standard so that a physical pair was

defined as optical over multimode fiber, not optical over single mode fiber, and a wavelength was defined as a short wavelength that is typically 780 to 850 nanometers as opposed to 1310.

Now what that meant was that it enabled us to lower the cost of the link literally by a factor of 10. We had a lot of difficulty convincing the standards body to change the standard. I can remember a meeting in Austin that Frank and I went to, where we made a presentation about the work we had done and these high speed links we had built, and we showed slide after slide, and in those days there was no PowerPoint, it was all overheads (this was '92), and we showed the reliability of these links, the data transmission and the fidelity and all these characteristics.

At the time, in the audience, there were 225, maybe 250 people, most of them from Hewlett Packard, IBM, Sun, AT&T, Seagate, wherever, but there were guys in the audience that were knowledgeable in optics, and there were companies there who had presented papers saying what we were trying to do was impossible. I can remember in the meeting, a PhD from one of these big companies stood up and pointed to these slides and said, "You may have found one laser in the world that can do that, but you can never do it in production," and we had to explain that we thought we were doing something important for their standard. The physical layer they had defined was so expensive that their standard would never be implemented; nobody could afford to implement it, while what we were proposing was a standard that could be one tenth of the cost and could be affordable.

Sramana Mitra: Did you think the objection he raised about the laser not being production possible was a defensive objection, or was it a real objection?

Jerry Rawls: It was an ego objection. There were a number of people in the audience who had presented papers or had made presentations to their management saying that what we were trying to do was impossible. That gigabit data transmission over multimode optical fiber had an inherent bit error rate that was too high for reliable data networks, and therefore what we were doing was folly, it was cold fusion. Our explanation to them was that we thought we had done good technical work, had understood how to make these transmissions, understood where the limits were and how to modulate these lasers, but please buy our products, do your testing, and if we made a mistake tell us because we are not here to deliver cold fusion, we are here to help the standard become economical. We wanted it to be successful for our business and we wanted it to become successful for all of your businesses as well.

So, with that we went home and over the next three months we were visited by almost every major systems company in the world. Guys came from Europe, they came from Japan, all over the US, from every major computer company, and they all came to our little lab in Menlo Park, and they bought products from us and tested them.

The happy ending to the story was exactly nine months later – and it is ironic that it was nine months it took to deliver this baby – that the Fiber Channel standards group met in Minneapolis and they voted unanimously to change their physical layer standard to adopt our multimode transmission at short wavelengths as the basis of the fiber channel network. From there we took off, and the fiber channel standard was ratified in 1994 as a total standard. Starting in 1994, our sales doubled every year for seven years in a row.

Sramana Mitra: All of this you were still doing without outside money; it was still a bootstrapped company?

Jerry Rawls: Still a bootstrapped company.

Sramana Mitra: Wow, that is incredible.

Jerry Rawls: We went public in 1999.

Sramana Mitra: With no outside money?

Jerry Rawls: Well, not exactly. In the summer of 1998 we actually sold 20% of the company to TA Associates and Summit Partners, Private Equity firms. We sold it because we were doing really well; we had been profitable every year since we were in business, and that was because we had to be profitable. In the summer of 1998 the IPO market shut down, and there were no more IPO's. It wasn't clear when it was going to open up again. The Private Equity guys came to us and worked a deal, said they were willing to buy a piece of the company at a relatively high evaluation.

This would put some money in our bank accounts because we had been in a mode of personal sacrifice now since 1988 trying to run this company. There were long periods of time when Frank and I did not pay ourselves any salary because we had to pay our employees.

I can remember only a few years ago somebody said, "Wow, you must be very proud that you built this company that has hundreds of millions of dollars of sales and thousands of employees around the world!" I said, "You know, the point I am most proud of is that we never missed a payroll."

Sramana Mitra: What was the valuation that TA and Summit gave you at the time? This is the height of the bubble, right?

Jerry Rawls: The bubble was still rising.

Sramana Mitra: Yes, 1999 was the height of the bubble.

Jerry Rawls: So that was a pretty neat deal, we took money from them and we kept going. A guy from TA, Mike Child, joined our board of directors, and we worked toward an IPO. Our sales were still growing.

Sramana Mitra: What were your sales pre-IPO?

Jerry Rawls: I think in the '98 period they were probably $30 million. Our fiscal year 2000, which is when we went public, was $67 million.

It was a really successful IPO: we went public at $19, the stock traded as high as $106 on the opening day and closed at $89.

In January of 1999 the IPO market came back. We did a bake-off with all of the bankers and selected Merrill Lynch to be our lead, and we scheduled and started working toward an IPO in October. It was a really successful IPO: we went public at $19, the stock traded as high as $106 on the opening day and closed at $89. We were the seventh largest increase on the first day of trading in the history of the US stock exchange. Our market cap was well over a billion dollars. I think our peak market cap in those days was as much as $5 billion.

Sramana Mitra: $67 million revenue with a $5 billion market cap?

Jerry Rawls: Yeah, it was pretty unbelievable. Our sales in that fiscal year were $67 million, and then our sales in the next fiscal year were $188 million. So, we grew a lot in that year, but the world was booming still.

Sramana Mitra: And then it collapsed.

Jerry Rawls: The whole market collapsed in 2000, 2001, and all of a sudden it was a whole new brand of reality. In early 2001, it was an unbelievable time:

our sales were growing 30% a quarter; we could not find buildings to rent in Sunnyvale; we could not hire engineers fast enough; and our suppliers could not keep up with us.

Then the collapse happened, our peak quarter was $65 million in sales, that was the third quarter of 2001, which ended in January 2001 for us. In two quarters our sales dropped 47%, and that sounds horrible, but in the same period Nortel's Optic division sales dropped 98%, and Lucent's Optic division dropped more than 98%, and in the end Nortel literally gave their Optical division away.

Sramana Mitra: Did you have an option to buy that?

Jerry Rawls: We did, but we decided that the amount of money it would take – remember this is an organization that had 1400 people, and it had $1.4 billion in sales in its peak quarter.

Remember the crazy thing is Corning, in '99, had offered Nortel $100 billion in cash to buy this division. They turned it down because they thought it was not enough money. Now, in two quarters, their sales dropped from $1.4 billion to $23 million. It was a crash that nobody could manage their way out of, all you could do was try to unload it, get rid of the division and make somebody else deal with it. Nortel came to us and had chosen Finisar as being in a complementary industry. They said they would like to have us manage this division and have us be a supplier to them, because they knew they had all these sole source products designed into Nortel systems which were built in this division.

Sramana Mitra: Nortel had interest in survival.

Jerry Rawls: Yes. We spent two weeks in Ottawa trying to figure out how we

could assume this division, and could we operate it and turn it around and make it profitable when it was only going to start with $23 million in sales. We concluded the risk was too high for a little company like us and our shareholders.

There was going to be so much cash required because the business had big fabs in Ottawa, huge manufacturing facilities in the UK, and a cost structure that was so bloated that we did not think there was any chance we could have enough cash or raise enough cash to support it. We could not get Nortel interested in putting enough cash into the deal that we could see with certainty, the other end. They decided to shop it around, and they got Bookham to take it from them.

Sramana Mitra: In hindsight was that the right decision?

Jerry Rawls: Absolutely. Bookham is still suffering negative cash flow trying to operate this business and trying to get it to recover. It has been a long, difficult time for them. I think we did exactly the right thing. We knew at the time that as this market had collapsed and revenues had come down, there was enormous capacity in the industry for optics, and I don't know what the typical investment in optics in the 90's was from venture capitalist, big corporations and from the public markets, but it had to be in the trillions.

Sramana Mitra: It was enormous.

Jerry Rawls: It was an unbelievable time, and the Chinese had pushed hundreds and hundreds of bright young men into the optics PhD programs in their universities because the country viewed optics as a strategic technology. So there was a flood of Chinese guys with PhD's in optics now in the world, and it was, I don't know, a joke at that time when I heard that a PhD in optics

was a cottage industry. Almost any venture capitalist would invest in optics and the idea that we could do anything.

But it changed overnight; it was the most dramatic collapse I have ever seen in anything. I wasn't there in 1929 during the crash of the market, but even then there were very few companies that lost 98% of their revenue in 6 months.

The first thing we had to decide was if it was a business we were going to stick with long term, not only with our money but our lives.

Sramana Mitra: So what did you do? How did you cope with the situation?

Jerry Rawls: It was very sobering. The first thing we had to decide was if it was a business we were going to stick with long term, not only with our money but our lives.

We concluded that in the long term we think optical communications is a growth market. The physics are such that there is really no way to move data any distance at high speeds other than over optical fiber. Our view was that optics is part of the infrastructure of the Western world, or the industrialized world and long term it is going to be a growth market.

There is a correction and there is an overcapacity, and the issue is how do we survive? How do we come out of this?

The answer for us, and maybe it was simple but it did not seem very simple at the time, was we really have to change the way we do business. We have to change our cost structure, we have to change our expense structure, and we have to be a much more cost competitive company, in this era of overcapacity.

Everybody else in the industry was moving as fast as they could to

outsource their manufacturing, get rid of their factories, get rid of their fixed costs, and here we were buying a factory.

In 2001 we bought a factory in Malaysia. Everybody else in the industry was moving as fast as they could to outsource their manufacturing, get rid of their factories, get rid of their fixed costs, and here we were buying a factory. Our rationale was that we had outsourced our manufacturing, we were the first optics company to outsource manufacturing in South East Asia, we understood the positives and the negatives, but we believed we could control our costs better if we ran our own factory.

We were sure we could produce better quality, because we had our names on the product and we would be committed to quality. We also knew we could protect our intellectual property. In optics a lot of the intellectual property has to do with the manufacturing process. Not only, how do you take a die, a semiconductor device, and get light out of it, but now how do you steer that light through an optical fiber that is smaller than a human hair? That is part of the trick, being able to do that rapidly and automatically, to run the measurements and the tests and get the confirmation that you had done well. This was all about the things we had to develop proprietary techniques for, and there was no point exposing that IP to competition.

Sramana Mitra: And there were lots of process innovations along the way?

Jerry Rawls: Exactly. So sharing all of that with a contract manufacturer meant that you were giving away your intellectual property. We bought a beautiful factory from Seagate. It was a head assembly factory in Malaysia, and Ipoh was the town half way between Penang and Kuala Lumpur.

We got a 640,000 sq ft plant that was less than five years old. We got a 200,000 sq ft clean room, $25 million of scientific equipment, scanning, electron microscopes, optical microscopes, chemical analysis equipment, x-ray, you name it – fabulous laboratories and 20 acres of land, and we got it for $10 million. In California it would have cost us $400 million.

So, we bought a factory but we had no people. So, we started hiring people and moving operations. The next thing we did was look at our cost structure, and our variable costs of manufacturing. About 85% of our costs is in materials: lasers, IC's, etc. We started an IC Design Group in 2001, so instead of buying IC's from the merchant semiconductor companies and paying them 70% gross margin to sell us devices, we could go to foundries, and buy them for a lot less money and we could improve the performance because we knew more about optics than the semiconductor companies did.

Sramana Mitra: You could optimize chips for your products.

Jerry Rawls: Exactly, we could optimize the performance.

Sramana Mitra: How much optimization in your cost structure did you get out of the Ipoh factory, and vertically integrating the chip manufacturing, and how much more cost shaving did you still need to do?

Jerry Rawls: We focused on the Malaysian assembly operation – it was all about assembly and labor – and being efficient there. We've cut our costs of manufacturing, of producing an individual unit, by almost two thirds since that time. We have probably taken 70% of the material cost out of our product since then as well.

Sramana Mitra: How did you do that? Did you change materials? Did

you renegotiate your supply contracts? I mean 70% of material costs is a lot of material costs to shave.

Jerry Rawls: The way we did it was we bought a laser fab in Fremont to make lasers. And remember, we had started our IC design group, and we are making IC's instead of buying them from semiconductor companies. We went directly to foundries to produce our own ICs. That dramatically reduced the costs of our own ICs.

We were able to integrate multiple IC functions into a single IC, reducing the number of ICs on a board. We bought an edge emitting laser company, and a vertical cavity laser division from Honeywell, so we were able to produce the highest cost elements in our product, which were the lasers, and the photo detectors which were probably second or third in costs.

Then, in 2005, we bought Infineon's Fiber Optic division and we shut it down in Europe – in the Czech Republic and Berlin – and we moved it to Malaysia, and that gave us no technology, but access to a few European customers.

Even two and a half years ago our gross margins were still in the low 20's – 21%, 22%. The last two and a half years we have taken our margins from that level to our last quarter, when they were 38.8%.

So, the net result of it is when the crash occurred our gross margins went from 50 something percent to less than 20%. Even two and a half years ago our gross margins were still in the low 20's – 21%, 22%. The last two and a half years we have taken our margins from that level to our last quarter, when they were 38.8%. We have virtually doubled our gross margins.

We have, over that time, reduced our operating expenses also. Because we moved a lot of functions to Malaysia – jobs that used to be here in Sunnyvale –

which was a very painful thing for us to do, but it was part of – if you're going to succeed, if you are going to survive, you have to change not only your cost structure but your expense structure.

Sramana Mitra: Were these people you moved fromSilicon Valley, or did you hire in Malaysia?

Jerry Rawls: We hired in Malaysia and had major layoffs in the US. We reduced US employment by a third.

Sramana Mitra: That must have been very painful.

Jerry Rawls: It was unpleasant, it was painful. There is nothing I can say about it that was positive other than the net result was positive. It was what we had to do to transform the company, but as a result of all of that we have had six profitable quarters in a row. We are on a track of growth and profitability. In our industry, we were the first company to become profitable again and I think we have an enviable track record as a company at this point.

Sramana Mitra: And your stock went from under a dollar to quite a bit higher now?

Jerry Rawls: Our stock is quite volatile, and always has been. It went from less than a dollar to, I think the low was .40, .46 maybe, and then it went up to $4 or $5, and it's dropped down and then gone back up and now is in the range of $3. So we have a market cap today of about a billion dollars.

Sramana Mitra: How do you go from where you are today to the next level of growth, shareholder value creation, and all those other achievements you experienced once in your previous incarnation? How do you reinvent that history?

Jerry Rawls: Well, it is a little different now, as you can tell from the story I told. In the early days of Finisar we were building a company, and then we were growing at this explosive rate. It was an amazing thing trying to pedal as fast as you could and hire people as fast as you could and maintain your culture and get new suppliers; just trying to grow that fast without exploding.

Then with the downturn it was a totally different job of rebuilding the company. Just changing everything, challenging everything we had done before. Was it optimal? Could we optimize? Now, we have made a lot of changes, and now yes we will continue to challenge every decision we have made and we will try to continue to improve, but we are on a track now where we are growing, increasing our level of profitability, and now it is a matter of trying to do some expansion in terms of the markets and products that we serve. Trying to do R&D in an intelligent and effective way. We are back in a growth mode.

Sramana Mitra: It seems the optics market is coming alive again – the acquisitions, IPOs are all returning. Online Video is putting some juice back into the bandwidth demands.

Jerry Rawls: Absolutely.

Sramana Mitra: What markets are you entering next?

Jerry Rawls: The biggest new thing for us is our exposure in the Telecommunications market. I explained in the early days we did not want to enter that market because it was dominated by AT&T, Lucent, Nortel, but none of those companies make Optical Components anymore. They all went out of business. Some of their facilities are now operated by smaller companies.

Nevertheless, one of the things we have done, is we've taken the successes we had where we built a business as the number one supplier of optics in

computer networking, and are starting to go elsewhere with it. Those networks we powered began to expand across the campus and the city and we started making longer distance Optical Devices to support that. It turns out that we quickly ran into a central office in the phone company, and the next thing you know, we're making devices we can sell to Telecom Equipment companies.

Whereas right after the bubble, maybe 2002, we might have had two Telecom Equipment companies as customers, in our last quarter we had 28 telecommunications companies to whom we shipped more than $100K of product in the quarter, each. The telecommunication equipment area is one in which we now have our nose under the tent. We are supplying products, our business is growing faster than our overall industry, developing new products and new relationships, and we have really high hopes that Telecom is sort of the next market for us.

Sramana Mitra: And the Telecom infrastructure buildup has also resumed.

Jerry Rawls: Yes it has. You know internet traffic has started to grow, and grow rapidly – the contribution of YouTube and Google– that means that the investment in optical infrastructure is now absolutely resumed.

Sramana Mitra: This is a great, great story. Personally, what is your philosophical analysis of this experience? You have gone up and down, hit highs and lows, what is your take away?

Jerry Rawls: I think there are a few principles that serve you well as a company. I think, for us it has been sort of the foundation, and it is all about culture.

culture eats strategy for breakfast.

I heard a guy a few years ago give a talk and somewhere in his talk he threw out a line that said, "culture eats strategy for breakfast". I thought about that for a little while, and kicked it around in my head over time, and I absolutely agree with that. The answer is we have a culture that we are focused on the customer first. We are focused on delivering value to customers.

We have a culture where we accept nothing, there are no sacred cows. We want to continually improve every part of our operation. We have a culture that says we are going to hire bright people, and we are going to hire bright people who have good interpersonal skills and can work well in small groups. We are going to treat each other really well and we are going to preserve each other's self-esteem and we are going to have a fun and a pleasant experience working together.

I read an article last year, that AT&T had once spent several hundred million dollars in one year on consultants. They were the largest consulting firms, and it was unbelievable, all those guys and their strategies. And what happened to AT&T? They are out of business. They are actually Southwestern Bell Telephone Company in San Antonio, Texas now, and they sold Bell Labs, and they sold Lucent and their manufacturing. Lucent is still there, but it is owned by Alcatel now. There is nothing left of the original AT&T which was such a glorious institution.

Sramana Mitra: Yes, it became a shadow of its previous glory.

Jerry Rawls: One of the things is we didn't spend money on consultants, but we had developed a company with culture that I think could see us through difficult times, and our focus on customers led to all the successes that we have had.

Sramana Mitra: Yes, part of the problem with the consulting business model, especially the way Bain, BCG, McKinsey are set up, is that they are incentivized to stay on, rather than solve the problem and get out. Personally, I prefer charging a lot for solving a problem, and then getting out, rather than staying on as a permanent fixture in the office.

Jerry Rawls: Somehow if you go through all of what we have gone through, a lot of the focus on customers and our willingness to continually challenge, change and improve everything we do, that is fundamentally what we have done. You can argue that that is strategy, but I think it is our DNA.

Sramana Mitra: Great story – congratulations for being able to navigate your ship through all of these storms. I am sure you are tired!

Jerry Rawls: Actually, I appreciate your kind words, but it has been interesting and there were parts of it that were very unpleasant. But overall it was a difficult problem and I am an engineer by training, so solving hard problems is fun for engineers.

I didn't get tired during the period, I was invigorated by it. Sure I had some frustrations along the way, but this was all about making long term changes. One of the challenges for me, frankly, was to make sure everyone understood that this is a very long term process.

It took five years to get all this put together. There were clearly demands from a lot of people who said, "Tomorrow you have to lay off a lot of people. You have to lay off your engineering department, you have to quit spending operating expenses, and you have to get profitable next quarter."

… this company would not be worth having, this is not a place anybody would want to work, and nobody would want to own our shares if we achieved

profitability next quarter because we would have no company in three years.

My reply was that this company would not be worth having, this is not a place anybody would want to work, and nobody would want to own our shares if we achieved profitability next quarter because we would have no company in three years. So, being able to convince people to stay the course, to convince our board of directors – it was a challenge. In the end I was able to drag them along and convince them that yes, we are able to raise enough cash through convertible bond issues, and that we could support ourselves through the period. And we have now been generating cash for several quarters, with profitable operations, and we have $130 million cash in the bank. That part has worked out.

In terms of whether I am tired? No, I don't feel tired at all; I am on to the next front which is, you know, we now have a goal to improve our operating costs and our level of profitability and I think we can do that over the next year.

Sramana Mitra: Congratulations and best wishes for your next level of growth. Thank you for taking the time.

Jerry Rawls: I have enjoyed it.

Sramana Mitra: And to conclude, a little story. Jerry Rawls is 6ft 4in tall. Stoops going through some doorways. And, he is worth several hundred million dollars. But because he has made it a company policy that everybody travels Economy, Jerry himself also travels Economy. This may not be something you appreciate the significance of, but if you are a very tall man, and you have to sit through a 14-16 hour flight to Malaysia, Singapore or Shanghai, it is quite unpleasant. But Jerry walks the talk.

Interview with Mark Lancaster, CEO of SDL

Very few technology companies have been built from the UK. ARM and Autonomy come to mind. Here's the story of a lesser-known company called SDL. This interview was conducted in September 2014.

Sramana Mitra: Mark, let's start with the beginning of your personal story. Where are you from? What is the backstory of the SDL story?

Mark Lancaster: I was born and raised in the UK. I studied engineering and computer science at the university. I started my career as a software design engineer at Satchwell Control Systems and Lotus Development Company. Fairly early on, one of the biggest issues I saw at companies was the need for coders or programmers to engage effectively with management.

I decided to move into management and I took a position with Aston-Tate where I was the International Development Director. They did a lot of database work and were based out of California. I started spending a lot of time in California. I also worked for Lotus, which had one of the first spreadsheet applications Lotus 1-2-3. They were an American company and I worked for them from Cambridge. I was fortunate to get into both of those companies in my early years and also fortunate to get involved with a lot of project management activities.

All of that occurred well before the Internet. Around 1990, I decided that with the world being global and the complexities involved made language a big requirement. To my surprise, a couple of the VPs that I worked with at

Ashton-Tate told me they would put some money into the company. They were my angel investors. They put in what I felt were very large sums of money, but by today's standards, their contributions were very small. I think we started the company off with about $70,000 of investment from two people.

Sramana Mitra: Were you still based in the UK when you were starting this?

Mark Lancaster: Yes. I was about 25 miles outside London in Maidenhead.

Sramana Mitra: So you raised $70,000 from two VPs whom you had worked with previously. What did you want to do when you started the company?

Mark Lancaster: We started off as a language company. We wanted to take small and medium-sized enterprises in the US to global markets. Before you can go into global markets, one of the first things you have to do is adapt your products as per the native languages of those markets. This was in the days of the disk operating systems before Windows. There was quite a lot of work to enable all the code to receive all of the foreign characters. There were a lot of technical complexities around it. We started off with a few people working out of my house. For the first few years, things were pretty lean.

Sramana Mitra: What year was that? When did you start the company?

Mark Lancaster: We started the company in 1992.

Sramana Mitra: How did you get your first few clients once you started this new company?

Mark Lancaster: Most of my contacts were at large companies. I knew people in Microsoft, Computer Associates, and a company called Contact Software in

Dallas. I was lucky because I am not really a salesman. We got our first big contract from Contact Software in Dallas. We worked with them for many years. We also got a sizeable contract with Microsoft and we still work with them to this day. We really built the business from there. As the company got larger, we started moving from language services, which we did until 1996, toward creating software to help businesses and the people in the language ecosystem. We created software that allowed them to be more effective. We essentially started building a language software business in 1996.

Sramana Mitra: You started the company in 1992 by helping companies globalize their software products. How long did that aspect of the business last?

Mark Lancaster: We still do that work. About half of our revenues are derived from globalizing and localizing products. We essentially translate an English product into multiple languages.

Sramana Mitra: Somewhere along the way, you also started developing language software products. When did you introduce that second line of business and why?

Mark Lancaster: We did that in 1996. We started creating translation productivity software.

Sramana Mitra: What was your revenue level at that point? You had a services business from 1992 to 1996 that really provided the foundation for your product business later. How far did the services business take you?

Mark Lancaster: The business probably grew by 200% per year. When you are a small business and start with no revenues, it's easy to grow fast. In 1996, we were doing about $4 million in revenues.

Sramana Mitra: That gave you profitable services revenue in the market and you decided to introduce productivity tools. Were those tools meant to make your services team more profitable and efficient, or were they tools intended to be sold to the outside world?

Mark Lancaster: The company was pretty much profitable from day one. We were profitable in our first year, and we have continued that trend. We started the small software team using the profits of our services work. If you look at our first products, you will see that we sold them for about $150. In my view, you can't really develop good software just for your own use. You won't make the appropriate investments or have the right style to innovate and drive proper products. Initially, we did use the products to increase productivity, but we did sell the products to the language industry. That has been an issue ever since. We sell to our competitors and they don't like to buy from their competitors; however, that has not done us too much damage.

The majority of the business income was still derived from services at that point. To this day, the services side of the business has remained profitable. It has remained at a similar level of profitability for many years. We run at about 15% to 18% EBT on the services side. Today, we are by far the largest provider of language products so that business is very important to our future as well.

Sramana Mitra: Can you give us an example of the types of products that would be labeled as language technology products?

Mark Lancaster: There are a lot of products that fit in this space. We started out by building products that would make translators more productive as they translate. We have gone on to create many more enterprise translation technologies.

Sramana Mitra: What does it entail to take a software package and convert it into a different language? Aside from pure natural language translation, what other nuances and intricacies are involved?

Mark Lancaster: It's a very big topic. What people like to think about is automatic translation. That is machine translation and we have been investing in that technology for about 15 years. That is a very specialized area. There are three companies in the world that have the best scientists working in this space: ourselves, Google, and Microsoft. We all invest in statistics machine translation. We own FreeTranslation.com, for example, but we don't make money from that.

We use our automated translation technology in all of our language products. When a translator is translating, they can get a rough translation from a machine and then, review it to make it perfect. It is difficult to get perfect translation in a machine because of all the linguistic challenges. However, it is very valuable in the translation space. I think people are fairly unimpressed with that kind of stuff. Google and Microsoft technologies are very good, but it's just a message within the ecosystem. It plugs in and translators can work with the automated translations in their world. It's not really that useful. People use Google and FreeTranslator when they want a quick translation. That will give a rough translation with a few words wrong. Users look at that and think the translation is not that good when in fact it can be very effective. We translate billions of words and provide the technology to 70 of the top 100 brands in the

world. Any large company will be using our technology or services in some shape or form.

There is also technology to help translators work more effectively. When you need multiple formats, we can allow them to work with all of those. They can save everything they have translated, apply automated translations, etc. That technology plugs into very big workflows. If you are someone like HP or Microsoft, then you are translating upwards of 60 languages and millions of words per day. Does not matter if that is software text that lives in a product or if it's content on a website or user manual, it's content that has to be translated. There is an awful lot of content and it has to go through the appropriate workflow. If it's high quality marketing, it goes through human translators. If you are reviewing website feedback, it can go through an automated format. The large system integrators have predefined workflows and we plug into probably 10 or 15 different content feeds which automatically get dispersed around the world.

Sramana Mitra: What is the composition of your business? Are you selling these products to software companies who do translation work themselves, or are you selling it to competing services companies who compete with you using your own products?

Mark Lancaster: About 50% of our revenue is derived from technology. Since that very early translation technology, we now have leading web content management technology, campaign management technology, document management, social insights technology, and personalization. We wrap all of that into what we call a customer experience platform.

We sell that customer experience platform. Typically, larger companies are our customers because they have more data and they tend to have more

complexities. Typical customers come from retail, banking, agriculture, and similar verticals.

Sramana Mitra: Would that compete in the same space as someone like Salesforce?

Mark Lancaster: Yes, exactly. Our biggest competitors are people like IBM, Adobe, Oracle and a few smaller firms. All businesses are realizing that in order for them to be successful, they have to embrace the world. We try to identify what business problems companies are going to have and then we develop software to address those business problems. We started investing in web content management technology in 2006.

We typically find it easier to buy a smaller business that has really good IP. We can then build on that business. In the case of web content management, we acquired a Dutch company that had leading web content management technology. We then built that out.

Sramana Mitra: In 1996, you introduced the first product which was the language translation product. What were some of the next few important milestones?

Mark Lancaster: We received some VC investment around 1996. At the same time, we started investing in products.

Sramana Mitra: Was that a UK VC?

Mark Lancaster: I think I talked to four or five VCs and we did get one from the UK. The thing about VCs is they have a time horizon of five or so years. We were very lucky and found a UK VC who wanted to invest in us. VCs tend to create preference shares and ordinary shares. The preference share equates

to the amount that they invest and they get first pickings. The ordinary shares are actually what everybody else gets. I did not allow that to happen in this case, the VCs were required to buy ordinary shares. Everything was equal, which meant the company was not set up in a financially complicated way. We had a very good investor.

Sramana Mitra: You said you had interest from a number of VCs and you had a requirement that all shares be common shares. When you put that requirement on the table, how many of your investors walked away?

Mark Lancaster: We did not have anyone walk away. They were not okay with the terms per se, but they were okay with the company. It's easy to get money from a bank when you have a lot of money, but when you really need it, then they won't give you any. We were in a situation where we were in a very strong negotiating position.

Sramana Mitra: The other side of that coin is that the UK does not have a lot of technology companies. VCs who want to invest in the UK are looking for strong companies and don't have as many opportunities.

Mark Lancaster: At that particular time, the company was all services and was just starting to develop the product.

Sramana Mitra: How did you negotiate valuation if the company was primarily services and the product side of the business was just starting?

Mark Lancaster: I think the value they saw in us was our services business. The VCs got a very good deal because it was done on a services valuation. We also picked a very good VC who has been very supportive. I am generally not a fan of VCs because I think they can be very destructive. Typically, entrepreneurs are not just money people. There is a lot more to their

background. They are driven by different things. You only go with VCs that you can relate to and trust. We were very lucky with whom we picked. We have had support.

Sramana Mitra: We encourage entrepreneurs to use services to bootstrap. This is a common strategy that a lot of entrepreneurs have used successfully. I think it is important for entrepreneurs to understand how to calculate valuation in that situation. How much credit can you get for the services business? I would imagine the product gets valued like any other product business.

Mark Lancaster: I have been in this office for 13 years and we have made upwards of 30 acquisitions, so I have a bit of experience on the valuation side. The only truth I can tell you about valuations is that they are completely random. You can use discounted cash flow, you can use multi-year revenue, multiples of profit, or any other metric. All of that depends on how hot the market is and what the buyer is willing to pay. They will pay what they see the value to be at that point and time. Generally, they look at what has been done with companies of a similar nature. In the UK, they will always look at a PE ration. In the US, they will look at some form of multiples, such as multiples of sales.

Sramana Mitra: What did you get on your services valuation? Did you get a 2x on that?

Mark Lancaster: I honestly can't remember, but I probably did not do a good job. We did not have preferences in our stock, we just had the common stock, whatever the valuation was likely was in that range. The numbers were small then.

Sramana Mitra: A product company that goes into a market that does not have a lot going on will find an $8 million valuation a good deal. You likely got a $10 million or so valuation overall, but I may be off. Activity level in a smaller geography like London, especially in 1996, was likely pretty low.

Mark Lancaster: I was happy with our overall valuation, and the product has some play there.

Sramana Mitra: Let's move our discussion forward to the product era of your company. What were some of the milestones in building that phase of the business?

Mark Lancaster: We probably started very slowly on the software side. Over the first three years, in the 1999 timeframe, we were doing less than $3 million in software revenues. We then took the decision to float the company. Remember, we are on the London Stock Exchange. When you said there was not a lot of technology in the UK, I would reclassify that to say there is no technology in the UK. There are a few very good technology companies, but they are all specialized and mature. There is nothing like what you are going to find in Silicon Valley. We definitely consider ourselves cutting edge. We are leaders in innovation. However, analysts don't understand us; the understanding of our business just does not exist. Generally speaking, it is not a good idea to start a tech company in the UK.

One of the reasons that I have been successful is that I spent most of my career prior to starting this business working with American software companies. In many ways, I consider myself an American because I have spent so much time in Silicon Valley as well as some time on the East Coast. That has

given me a completely different perspective and experience in understanding opportunity and risk.

Sramana Mitra: In 1999, you decided to go public on the London Stock Exchange with a few million in product revenue and some services revenue?

Mark Lancaster: We probably had about £10 million of services revenue at that time.

Sramana Mitra: So the company was doing about £12 million in revenue?

Mark Lancaster: That's about right. That's probably about $17 million.

Sramana Mitra: That is a relatively small company relative to what goes public here. It sounds like the London Stock Exchange was okay with those numbers.

Mark Lancaster: I'll tell you the story on that. It was not all that great. There are two lists in the UK, one for small companies known as AIM and one for the main list. I did not want to go on AIM because it does not attract the really big investment houses. You don't have high quality investment there. We tried to go on the main list and approached a few brokers and they told us to go away.

Then the dot-com boom came around the corner. We changed our company name to STL.com and the brokers suddenly welcomed us. We turned the company into making a small loss, which is crucial if you are going to float a dot-com company. We got an enormous valuation for the time. We showed £12 million at a small loss and the company was placed at £45 million. The first

day we priced the shares at £1.34 per share and they went to £3.89 on the first day.

Sramana Mitra: How much did you raise at the IPO?

Mark Lancaster: I think we only raised about £7 million. There were still an awful lot of shares in our own hands. That also gave the VCs a vehicle to exit, which they loved.

Sramana Mitra: You have made a lot of acquisitions building your business. When did your rollup strategy start?

Mark Lancaster: As soon as we floated. When you go public, you have to understand what the public wants. Most of our shares are held by large institutions. The London Stock Exchange is much different than NASDAQ. They don't want to see growth as much as they want profit. You need to make use of the money you raise.

We invested in technology by acquiring content businesses. We foresaw what would happen in the market. We started investing in web content management, campaign analytics, and software that would allow businesses really manage their customer experience. Companies produce a significant amount of content these days. Consumers are looking at PDAs and laptops all day. Whichever channel they are on, they expect to be able to get information. If you are on your cell phone, real estate is tight. Text is not as good as graphical information there.

We are now in the day of metrics-based marketing. Anything we do is tracked. If we can provide technology to companies and allow them to understand customer journeys and the profiles that individuals have, then we can provide them with the content they need. No customer journey is the same, but if

somebody is looking for a tent, then they will likely need a sleeping bag. There are links that can be made everywhere. If you gather the information over different user journeys, then you can profile people. That is far more likely to give users an enjoyable experience. Companies are interested in selling things, so it is all about providing a good customer experience, so the individual will buy more products from you.

As we have evolved our technology and integrated it together, we have found that we have been successful selling multiple pieces of our technology platform which they are able to plug together. It could be loyalty programs tied to information rendering programs.

Sramana Mitra: Is that all driven through the acquisitions that you have made?

Mark Lancaster: Yes, it is much more cost-effective.

Sramana Mitra: How many acquisitions have you made?

Mark Lancaster: We have probably made 20 or so acquisitions. We have developed some of the technology from scratch and some have been via acquisitions.

Sramana Mitra: Did you acquire UK companies or did you acquire companies from all over the world?

Mark Lancaster: They are from all over the world. We figured out what we need, and we look at the best companies in those sectors who can provide that need regardless of where they are located. We then target those companies.

Sramana Mitra: Fast forward to 2014. Where is the business? It sounds like you have a full customer engagement platform. You still do a large portion of the revenues via language services.

Mark Lancaster: We are doing about £280 million a year now. I left the business in late 2010 to retire and let someone else take the business to the next stage. That did not work so I returned to the business in late 2012. I had to completely rebuild the business after I came back. We are a year and a half through that rebuild. We are doing a lot of restructuring to align it with the markets. You need to drive a business through passion, vision, and care of the staff.

Sramana Mitra: This is an interesting story. I am happy to see a company like yours emerge in the UK. Congratulations!

Interview with Michael Siefert, CEO of Sitecore

European software companies seldom reach global scale. Sitecore has not only reached global scale, but is competing with Oracle, Adobe, IBM, and Salesforce.com. Read how they have navigated the market. This interview was conducted in June 2014.

Sramana Mitra: Michael, where are you from? What is the background to your story?

Michael Seifert: I was born in the Copenhagen area where I lived until first grade. I then moved to a little island in Denmark with a population of about fifty thousand people. I lived there with my mother and her brothers through high school. My father moved to the US when I was 8 or 9. I spent my summer vacations in the Bay area with my father. My first flight to the US was at age 11.

Sramana Mitra: Your father moved to the Bay area, so I am assuming that is where you got your early exposure to this culture?

Michael Seifert: Yes. He started a company called SunFlex. I enjoyed going to work with him and that is where I was exposed to my first computer.

Sramana Mitra: What year was that?

Michael Seifert: I was around 11 years old, so that would have been around 1980.

Sramana Mitra: Let's flash forward a bit. Did you stay in Denmark for college?

Michael Seifert: After high school, I went to the Bay area for a year and lived with my father. I worked as a personal assistant at his company. I moved back to Denmark and worked for a year to get into computer science studies. I then went to the Copenhagen University to do my studies in the laboratory of psychology in Human Computer Interaction.

Sramana Mitra: That was in the early 1990s?

Michael Seifert: Yes.

Sramana Mitra: What happens after that?

Michael Seifert: I moved back to the Bay area for two years. I worked in a game startup for a year. After that, I started my own company, an Internet casino. At the time that was a novel idea, but I ran into a lot of legislative problems. The law changed rapidly and it turned into something where anyone running an Internet casino would go to jail, so I decided I should do something different with my life.

In 1998, I decided to go back to Denmark. I called up some of my friends who had helped me start up the online casino business and asked them if they would like to help me start a system integration company. They agreed to it. I was the first employee, and about six months later, my friends started to join, one by one.

Sramana Mitra: What drove your decision to move back to Denmark as opposed to staying in Silicon Valley?

Michael Seifert: There were several factors that weighed in on that decision. Personal relationships and family relationships factored heavily in my decision. I like starting business with other people and I had a larger social network in

Denmark. I had a larger professional network in Denmark as well. When I look back, it does not seem like a bad decision.

Sramana Mitra: I don't think it is a question of a bad decision, I was just intrigued by that decision. When you moved back to Denmark in 1998, what was the next step?

Michael Seifert: When we started the systems integration company, I was the first employee. Over the next six months, my friends started to join one by one. I found work for everybody.

Sramana Mitra: Were you focused only on work in Denmark?

Michael Seifert: Yes. In the founding notes of our first meeting, we had an interesting note in the miscellaneous category. That note read that in the process of our services work, we should build a software product that we could sell globally. We did just that.

The main focus of the systems integration company was Microsoft technologies, although we were pretty horizontal in the beginning. We ended up doing work on websites for larger corporations. After fielding 11 of those sites, one of my co-founders invented Sitecore in that process.

Sramana Mitra: Your work was essentially system integration services. You managed to bootstrap the Sitecore product through these services. Is that correct?

Michael Seifert: Yes. The product was not initially a product. There is a difference between a kit that is helpful to systems integration companies and a real product. At the time, what had been created was super helpful in

developing websites faster and more smoothly. That was the foundation of the product.

Fast forward to 2001 and we decided to spin out our product into a separate company. We filed an application with the US PTO for the key differences in our product. I moved into the Sitecore business with two of the other co-founders and everyone else stayed at the systems integration company to run that business. That was really how Sitecore started in 2001 and 2002.

Sramana Mitra: When you spun out Sitecore with a half-ready product, what were the resources that you were spinning out with? Did you take cash from the parent company with you?

Michael Seifert: We spent the better part of nine months productizing what we had made. Sitecore was quite dependent on its sister company for the first year of its life even though Sitecore was profitable. Everything was a battle in the beginning.

Sramana Mitra: How long did the parent system integrator company have to subsidize Sitecore?

Michael Seifert: Sitecore as a company has always been profitable; however, we would not have made it without our sister company. If we had a cash flow crunch, they could help us out. I think that if we did not have our sister company, then we would have had to take angel investments at an early stage.

Sramana Mitra: You essentially bootstrapped using services, and the services were able to finance the development of the product. That is an effective and common model.

Michael Seifert: Yes, because you get some real world perspective and experience.

Sramana Mitra: It also allows you get perspective and visibility from customers, because the product you are building would essentially be in the same domain.

Michael Seifert: Exactly. The product itself rose out of our services business, so we had a great understanding of the market we were building the product to serve.

Sramana Mitra: What exactly does Sitecore do?

Michael Seifert: That is a journey as well. What we did back then is not the same as what we do today. In the beginning, the problem that we solved was called Content Management and Web Experience Management. Back when we started, there was a lot of competition. Most systems at that time were predicated on the concept that you created webpages and published them into static HTML files.

One of the key differences in what we had made is that our system was fully dynamic. Every page you saw was generated on the fly. That was a combination of advances in hardware since computers had gotten faster, as well as advances in Microsoft .NET and web technologies. We came in at an interesting time with the ability to create those dynamic pages.

We were founded with the heritage of creating dynamic experiences. At times, we lost to static systems because those systems were faster. However, today that heritage has proven to be a strength.

Sramana Mitra: What was the competitive landscape like when you entered the market?

Michael Seifert: What is very interesting is that initially we only sold our product in the Danish market. We did not come to the US until 2004. During the initial years, the competition was against Danish vendors and there were a lot of them. Competition was pretty fierce.

Sramana Mitra: What about the international market?

Michael Seifert: What has been very interesting is that for the first few years, every time we opened in a new country, we would see a new set of competitors. There was not a single global competitor. That has been true until about two years ago. There has not been a single system that has been present globally. Obviously, a lot has changed over the past years.

Sramana Mitra: What was your sweet spot? What type of website would you be brought in to build?

Michael Seifert: At the time, we were working with large Danish companies and some SMBs. Our business was very horizontal. We had a strong appeal to Microsoft customers.

Sramana Mitra: You said Sitecore was profitable from the very beginning. How long did it take you to reach $1 million in revenue?

Michael Seifert: I think we had about $500,000 our first year. We reached a million dollars the year after.

Sramana Mitra: Was Sitecore a pure product company, with services left to the sister company?

Michael Seifert: We are very religious about having a pure product company. Even today, 90% of our revenue comes from licensing and maintenance. The services component is really non-existent.

Sramana Mitra: When services are required, does your sister company do that?

Michael Seifert: No, we are really quite religious about that as well. The model was to get a partner network. It was difficult initially in Denmark. We had a sister company that was a systems integrator, so everyone suspected that we would hire our own company over other partners. What really happened is that we disfavored our sister company in favor of other partners, which created some internal problems with our sister company from time to time. We are very careful about treating all of our partners equally.

When you look at where we are today, we are still very rigid about the partner model. To make the model work, you really need to have a few things in order. You need to have training materials, so your partners can learn to use your product. You also need to have a quality product, so that when partners start to use it, you don't drown in problems.

Sramana Mitra: You have had a 12-year-run to date. What are some of the big milestones in that journey? What are some of the strategic moves you made in that timeframe?

Michael Seifert: One of the first key decisions arose from our decision not to take financing. We essentially created a franchise model. When the US site started, they could use the Sitecore brand, but they were really an independent subsidiary. That was a key decision to our internationalization strategy. If we had not done that, we would not be where we are today. It is unusual for

European companies to go straight to the US. Normally, you go to other geographies before you go to the US.

In 2007, I focused on the strategy of the company. I believed the long-term proposition of the traditional Web CMS would be challenged. Web content management was born around editing and publishing documents. The business value of text processing in CMS is very limited. In 2007, we began designing the web experience management product that we released in 2009.

We had a difficult time describing what we were doing back then because web experience management was not a category. We started to collect detailed information about the website visitors and we paired that with our ability to create dynamic experiences online. By pairing those two, we created our first web experience platform that also had capabilities beyond just serving websites.

Sramana Mitra: What is an example of a capability beyond building websites?

Michael Seifert: You can say that once you start gathering information about website visitors, you start to learn a lot about them. Crafting personal emails is a natural extension from that. At that time, we started to explore email marketing, mobile technologies, and many other things.

In 2009, we started our second generation of those tools. We added automation to further hone in on email marketing. I think 2007 was a breakout point for us. It was the offset for the experience platform that we have today.

Sramana Mitra: What are the components of the web experience platform that you have today?

Michael Seifert: You need to know every customer. Very few people know every customer, especially in real time. Next, you have to use the knowledge that you have about every customer to shape their experience on the website in real time. That is really the key.

Sramana Mitra: Are you saying that you have advanced personalization capabilities?

Michael Seifert: Absolutely. When you think back to our heritage, we began by building dynamic websites where pages were different for each visitor. Then in 2007, we developed the technology to allow us to know every customer. Advanced personalization capabilities was a natural evolution for us.

Today, when you look at the channels that we generate content for, we have web, mobile web, SDK for mobile apps, social media management, email marketing, and experience management; think about all the catalogs you receive in your mail every week. We are able to personalize content across all those channels.

Sramana Mitra: Personalization is a very hard problem. It is very hard to do it without context and a use case that is already built in. I would imagine that you have built this with specific use cases in mind?

Michael Seifert: Our solution is very horizontal. We have invented concepts about measuring quality.

Sramana Mitra: How can that be? If you are doing a publishing website then the experience flow will be very different than an e-commerce website. These are very different use cases.

Michael Seifert: That is a very good question. I think e-commerce is special. With an e-commerce site, that is typically all you have. There are limited interactions with the customer unless you are a large organization that has a physical presence with stores.

If you think about general use cases across automotive and healthcare and so on, we are talking about knowing every customer. We want that to go beyond just the web or mobile web, its understanding how every touch point in your company impacts the customer. Imagine a timeline where you record every interaction you have with the customer both from the marketing perspective such as email marketing and web experience through service calls and receiving invoices. If you have all of that on the timeline, then you can do very interesting analysis about the outcomes that are driving the best business.

Sramana Mitra: Could you give me an example of some of your customers?

Michael Seifert: One of the better examples is one of Europe's largest airlines, easyJet. When they went live on Sitecore a few years back, they had a huge launch strategy, which is normal for large enterprises. When you turn on the new site it is substantially different, so you let traffic in little by little. The important thing to remember about easyJet is that they only sell online.

They used Sitecore to build an experience platform that offered a very highly customized experience. There was a lot of effort targeting existing customers that they knew as well as anonymous customers, the best possible way that they could for each customer. They found that by doing so they were able to increase their conversion rates by double digit rates. That is a big deal when you only sell online.

They were so encouraged by those results that they ramped up the transition to the new site really fast. They have had amazing business success with the launch of the new site.

Sramana Mitra: How many customers are you catering to? Is your sweet spot with large enterprise customers?

Michael Seifert: We are growing very quickly in the enterprise segment as well as globally.

Sramana Mitra: How many customers are you catering to at this point?

Michael Seifert: We have about 3,500 customers at this point.

Sramana Mitra: What has been your customer acquisition strategy? Has it been through system integrators?

Michael Seifert: Our selling motion is to go to market together with and through our partners. We have partners who are both system integrators as well as partners who are digital agencies.

Avanade is one of our larger partners and you can go to the completely opposite end of the spectrum to find partners who have just 50 employees.

Sramana Mitra: So your primary go-to-market model is through system integration partners?

Michael Seifert: Yes. We are directly involved in the sales process itself as well.

Sramana Mitra: Do you maintain a global enterprise sales channel?

Michael Seifert: Yes.

Sramana Mitra: What has your financing strategy looked like? You started as a spinoff from a parent company. What has been happening since then?

Michael Seifert: We have always been growing organically and have been profitable. We have always had double digit growth rates. We have had niche markets to grow in. From that perspective, we have never been in the situation where we have needed financing. We are a self-financed, organically growing company.

Sramana Mitra: How well has the company grown?

Michael Seifert: We have roughly 10% of the global market share.

Sramana Mitra: How does the market share split up? Who is number 1?

Michael Seifert: There are many vendors in our market. I usually describe this as an oasis battlefield out there. The group at the top is Sitecore, Adobe, Oracle, IBM, and Salesforce. I have seen that group on top over the past two years.

Sramana Mitra: What percentage of that market do you think the other players have?

Michael Seifert: I wish I knew!

Sramana Mitra: Are those your main competitors when you are working to get a deal?

Michael Seifert: They are our main competitors. We definitely see other companies but they are definitely our main competition.

Sramana Mitra: What has it been like building this company from Denmark? What have been the pros and cons?

Michael Seifert: There is a clear obstacle when you start in Europe. In the US, you have a huge market. In Europe, you don't really have the European Union or European market. What you really have is a lot of different countries. Going from Denmark to Sweden is just as hard as going from Denmark to the United States. From that perspective, you need a bit more luck and timing when you are looking to start a global business.

On the positive side, coming from a smaller country like Denmark makes you think globally very early. Today, Sitecore is a global organization. That of course adds complexity as well.

Sramana Mitra: What does the future look like for your market?

Michael Seifert: There have been a lot of acquisitions in the marketing technology over the past 5 years. I believe that everybody is charting a path towards building their own experience platform to allow marketers to re-own the experience and build lifetime customers.

In order to accomplish that goal, there are some essentials you need to have. You need to understand every customer. You need to have the ability to shape their experiences. When that happens, CMOs will not only hold the key to excel in marketing, they will also hold the key to business transformation.

When you understand every touch point between a business and its customers affect the customer lifetime value, then you have a bigger say in customer service, sales, and other business processes. I think that marketing will be taking on a completely new role in the next decade. The sheer size of the

market opportunity is staggering. I can't put a number to it. It is way bigger than CRM has ever been.

Sramana Mitra: How do you position yourself? What do you call yourself?

Michael Seifert: We recently re-launched our product as an experience platform. We have the ability to shape the customer experience on so many channels, and we know the customer across email, mobile, apps, and off line channels.

Sramana Mitra: There is so much business specific logic in so many different verticals that I still struggle with your story a little bit. I have never been able to see user experience as a horizontal solution. We talk to entrepreneurs who delve into experience, and they dive very deep into a specific vertical. They gain very deep domain knowledge and I don't know that you can gain such a deep level of detail in a horizontal product.

Michael Seifert: Our path is to hold that level of domain knowledge.

Sramana Mitra: Very interesting, anyway. Thank you for taking the time to share your story. Congratulations on your success to date and best of luck as you continue building your company.

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. This interview was conducted in May 2014.

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 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. This interview was conducted in September 2014.

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 Gaurav Khandelwal, CEO of ChaiOne

This is an interesting strategy discussion about a company that is doing substantial revenue based on services, has productized a piece of its services business that is also generating over a million in revenue. Where next? This interview was conducted in March 2014.

Sramana Mitra: Gaurav, let's go to the beginning of your story. Where were you born? What kind of background were you raised in?

Gaurav Khandelwal: I was born in Kolkata, India. I came to the US for my undergrad. I grew up in a large city and I really wanted to experience something different, so I applied and went to school in a very small town in northern Indiana that was in an Amish community called Goshen College. Different universities come through India and interview students and applicants. That gives students a chance to meet with deans and hear about the schools. I met with several of them and this particular school was very interesting. They had a program that required every single student to spend a semester abroad to graduate. I had never heard of that before. I thought it was fantastic to know that every single student at that school had spent a semester in Indonesia, China, or some other country.

I felt that the culture and heritage at that school would be very rich. I really liked that, so I decided to go to school there and study computer science. My parents did not pay for school, so I had to be enterprising and start businesses

to pay for tuition. I did everything from selling kitchen knives to delivering pizza. Ultimately, I had a startup in my senior year of college, which I was able to sell when I graduated.

Sramana Mitra: What timeframe was this?

Gaurav Khandelwal: I was in school from 1997 to 2001.

Sramana Mitra: What kind of business did you start that you almost ended up selling in your senior year?

Gaurav Khandelwal: When we were applying for jobs in our senior year, we found that it was difficult and problematic to go to all of these different websites. There were a lot of job sites. Monster had just started, and HotJobs and CareerBuilder were out there as well. Then, when you had filled out information on all the sites, it would just be dropped into a database and you might get a phone call, but you probably would not. We built a recruiting social network where anybody that had an interview with someone at Microsoft or IBM would then upload the recruiter's name and in exchange they would get access to other recruiters' contact information. In this manner, all students who were job hunting could populate the database with recruiter information, and that allowed students to reach out to recruiters directly instead of going to job sites.

We did that for students on our campus and the site grew very rapidly. However, for me to stay in the US, I had to get a job and get a visa. I could not pursue the business because of this problem. I, therefore, had to sell the company. I made enough to pay off four years of debt.

Sramana Mitra: Paying off all of your college debt is not a bad exit from your first company!

Gaurav Khandelwal: I agree that it was very timely. It also gave me a taste for entrepreneurship. After I graduated, I went to work for a consulting firm in New York. I quickly found out that I could not survive with just one job; I had to be doing something else. I would do side jobs like building websites. I learned about building a business large enough to fulfill my ultimate dream, which was to build a legacy. I spent the next seven years working for the same firm doing business transformation consulting. I was working with clients like Johnson and Johnson, Boeing, and other firms of that size.

During that timeframe, I moved to Houston, which is where I live now. The cost of living here is fantastic. I did not see a reason to live in the New York area when I flew all over the country for work anyways. I learned a lot during my time at that consulting firm. I saw the politics that takes place in large companies. I was always waiting for the next big thing to appear.

When the Apple App Store launched in 2008, it was ground-breaking. I thought it was something that would change the world. For the first time, people could truly detach themselves from the desktop. Having seen the tremendous growth of mobile devices in India, I knew that more people in the world would have access to mobile devices than people who had access to clean water or education.

I quit my job within 30 days of the app store being launched and started ChaiOne. The idea was to build mobile applications for the stodgy corporate world. There are a lot of legacy processes, technology, and thinking in that space. I wanted to transform those businesses with mobile applications.

When I started the business, I did not have a large amount of money saved up, because I had been supporting my family back in India as well as my brother's education. A month after I quit my job to start ChaiOne, the 2008 economic

crash happened. It turned out to be a great thing because I could find talent at a much cheaper rate than I would have if the economy had been doing well. That turned out to be a good thing for us and we started building mobile apps and growing rapidly.

Initially, we started working with small and medium-sized businesses. Now, we are building apps for Fortune 50 and Fortune 100 companies. Most of them have personnel in the field using mobile devices. Of course, the demise of Blackberry also coincided with our success because more and more companies started buying iOS devices, which supported business transformation well. Some of the fastest growth occurred in board rooms, especially when the iPad came out. That gave us a window of opportunity to build applications for executives in board rooms.

Sramana Mitra: What specifically did you do when you launched ChaiOne? Who was your first customer?

Gaurav Khandelwal: I was dating a girl at that time who is now my wife. She was working at Microsoft and called me frantically on a Friday night. Her boss needed something done by Monday morning, and it was something the company was relying on. She knew I did stuff on the web and wanted to know if I could help them out. I got on a call with her boss at 10pm that Friday night and he showed me the problem he was having developing a survey application. He sent me a quote that a third party company had sent him.

I quickly realized that the quote was actually another company's pricing for a product, and that this company had just put their logos on top of it. When I googled the company I found that while they had been asking for $20,000 to do the project, I could get the same software online for $80. All I had to do was configure the software.

I spent the weekend configuring the software and I got it up and going by Monday morning. That was a big turning point for us, because that assured a manager at Microsoft that they could get what they needed from me. For the next 18 months, I received a lot of work from Windows Mobile. They came to me because that one manager was very vocal about how well we had done for him. They also drove a lot of other customers my way.

Sramana Mitra: Did you port over a survey application to Windows Mobile?

Gaurav Khandelwal: No, Microsoft was launching the Windows 7 devices. I still had my full-time job at this time as well. I did not want to quit my job until I had some revenue coming in. When the Windows 7 phones were coming out, they were sold through carrier stores like Verizon and AT&T. Microsoft needed a way to survey the customer and the sales rep to receive customer feedback about those devices.

They needed a sophisticated way of measuring the analytics of those responses. They wanted a survey application that would allow the customers and store reps to rate the experience of the Windows 7 devices. We customized and branded some commercial software so that it could be used in that environment. This was the big customer that allowed me to leave my full-time job when the app store launched.

Sramana Mitra: How much income were you generating by the time you quit your full-time job?

Gaurav Khandelwal: I probably had a run rate of around $85,000.

Sramana Mitra: Did you have confidence to hire an employee based on that side income or did you run your business solo for a while?

Gaurav Khandelwal: After I quit, I decided to start using contractors as opposed to hiring employees. I had been doing that for three to four years, so I knew how to sustain and manage a business in that manner. That is what I did as a consultant. Now that I had time on my hand, I was able to go out and sell. In my first year, I did about $250,000 in business, which was sufficient to pay contractors and hire a couple of guys. That was in 2009.

Sramana Mitra: Who were you going after in terms of clientele?

Gaurav Khandelwal: In the beginning, I was going after companies that had an appetite for innovation. Primarily, they were small and medium businesses. I often ran into entrepreneurs who were looking to build their ideas into the next big thing. This was happening in 2008 when large companies were not buying and the markets were in turmoil. I found that Houston was insulated from the recession. There was still a lot of healthy demand for technology products and web applications. I worked through incubators who had funded companies. The incubators were great at sending leads. That was the basis for us to get steady revenue.

Sramana Mitra: Was there a particular technical concentration for your projects?

Gaurav Khandelwal: Initially, about 75% of our business was attributed to web applications. About 10% of our business was mobile apps. In 2010, the numbers shifted and iPhone applications represented 20% of our revenues. In 2011, there was an even more dramatic shift. We started to see a lot of mobile application requests coming in. Most of those requests were from young entrepreneurs who had seen the overnight success that other applications had. They had a vision of spending $10,000 and making $1 million. That is when we

started to get a lot more selective with our customer base. We turned away business that we felt would not have a long life cycle.

At that time, we also started recruiting experts. Up to that point, I had primarily used contractors to get our projects done. We did not have rock stars that were thought leaders. I started looking for people who had written books or who were speakers at conferences. I hired three people in sales, design, and development. These guys had massive followers and brought a rather large network with them. It resulted in a lot of buzz about ChaiOne in and around Houston.

Sramana Mitra: Why did they come to ChaiOne? What was the motivation?

Gaurav Khandelwal: We had a good connection, and I offered a lot of autonomy. They were all working for large corporations and they were not all that happy. I offered them equity in the company. If you give a very smart person freedom and you respect what they do, then they can really blossom.

Sramana Mitra: If you had done that in Silicon Valley, you would have had a much more difficult time with it.

Gaurav Khandelwal: Exactly. There is talent outside of Silicon Valley. When I hired those guys, a lot of VCs came and told me that I was in the wrong city, and that I should have been located in Austin or Silicon Valley. I disagreed. There are a lot of customers in Houston and I would rather be next to my customers, especially since I was not building a product company.

Sramana Mitra: When did you start hiring people? What year?

Gaurav Khandelwal: I hired the first three in February of 2010. That year, we hired 22 people, all in Houston.

Sramana Mitra: Where were you at in terms of revenue in 2010?

Gaurav Khandelwal: In 2009, we doubled our revenue from 2008, and in 2010, we tripled our revenue from 2009.

Sramana Mitra: What happened in 2011?

Gaurav Khandelwal: That was an interesting year. The business was bootstrapped and profits were all reinvested into the business. I have a philosophy of making $3 for every $1 we spend. We ran the shop pretty tight that way, but we were very attentive to people's needs from a cultural standpoint. That helped a lot, because they would tell the story of the company to their friends.

Sramana Mitra: What was your primary challenge during that period?

Gaurav Khandelwal: Recruiting. My brother and I were selling. Winning business by that time had become reasonably easier because my competition primarily consisted of application developers. They did not have the business acumen that I had gained as a consultant. When I spoke to owners about their challenges, they could resonate with what I was saying because I could speak their language.

We started to host meet-ups to look for talent. It allowed us to get familiar with Houston's developer community fairly rapidly. They started to recognize us as a top brand. They would hear stories about our culture and they gravitated towards us. A lot of developers were doing mobile apps on their own during the weekends and they wanted a full-time job doing that.

By the beginning of 2012, we started to form a good relationship with Apple. We were Apple fan boys and they recognized that and sent us some small deals. In 2012, we did a project for Jeremy Lin. The Houston Rockets were courting him and they called Apple looking for a developer to build a video app for him. Apple called us and recommended us to the Rockets. We came up with the idea of creating a personalized app just for Jeremy that talked about the benefits of Houston, its fans, and its history. We built the app and Jeremy was ecstatic. That feedback made its way back to Apple and they were pretty pleased with the outcome. We then started to get a good stream of business from Apple.

During that time, we had a lot of growth but we struggled on the management side. We did not have performance reviews, one-on-one interviews, or anything else. In 2012, we decided to slow down a little bit so that we could get all those things in place. It was a year where we went through some attrition. We let some people go who were not the right fit culturally. It was a very important year for us to mature as a company.

Last year was our most interesting year. That is when we started working with Fortune 100 companies. Apple introduced us to some of the largest companies out there. We are yet to disappoint them in terms of the work that we have been putting out. That has resulted in the ChaiOne brand getting stronger.

Sramana Mitra: Are you still a services company or have you developed a product now?

Gaurav Khandelwal: We have 55 developers in Houston. We did develop products over the years. Only one product is still active among the products that we have produced in the past four years. Last year, we felt we had learned our lesson in terms of developing products. A lot of the products that we had developed were opportunities that we saw in the market and on which we had

our developers work on whenever they had downtime. We realized that is not the right way to develop a product. We are going to keep trying to develop successful products. Today, we have a separate path for the product team.

Sramana Mitra: Do you have an active product in the market right now?

Gaurav Khandelwal: We have one product called Game Plan. It is a sales enablement product. It is used by sales people to help close the gap between sales and marketing. Marketing will produce a lot of sales collateral and they don't know if the sales team is even using it. We give marketing a view into the collateral that sales are actually using in the field.

Sramana Mitra: How many customers does this product have?

Gaurav Khandelwal: It has six customers with combined revenues of a billion dollars a year. We charge our clients a couple of hundred thousand dollars for the product.

Sramana Mitra: Did the idea for this product bubble up from your services work?

Gaurav Khandelwal: Yes. We found ourselves solving the same problem over and over again. We realized that if several customers had that problem, then there were likely to be a lot of companies that had that problem. We built something fairly quickly and took it to market. The sales cycle on the product side is very slow, it takes about six months.

When we initially took the product to the marketplace, we did not have a lot of initial success. We realized that our sales team consisted of solution sellers, not product sellers. We also realized that the market we sold our services to comprised of large corporations, and the market that we wanted to sell our

product to was the SMBs. We were trying to sell based on a per-user model without understanding that market.

We decided that we could switch our product model to enterprise software, and when we tried that out, we found that it worked. That has resulted in a very different sales model.

Sramana Mitra: What industry verticals are you finding your customers in?

Gaurav Khandelwal: They are pretty much all in oil and gas. Our clients are all billion dollar revenue companies. As markets mature, the lower end market will become commoditized. I don't want to compete on price at the lower end of that market. We have been developing design and research capabilities and that puts us in a different market. We are now talking about transforming business processes for large corporations. We still see ourselves looking at the billion dollar market. We are looking to create an arsenal of several different product capabilities within mobility that we can take to our customers.

Sramana Mitra: Let's talk about oil and gas as an industry and how it consumes IT. You have talked about the application you are now taking to this industry. What other use cases can you see in that space?

Gaurav Khandelwal: First of all, it is very difficult to get into these companies. The older workforce is retiring and a younger force is coming into play. They are not going to work for a firm that does not have more advanced technologies. As you look at the cross-section of needs, a lot of them have business processes that were built in the 1980's and 1990's. They have processes in place that were developed in that era. A lot of companies will come in and mobilize those existing processes. We re-engineer the process into

a streamlined process. That is where my experience in consulting comes into play. We send designers out into the field and they come back with an experience map. Our team then engineers a solution that is streamlined for the customer.

Sramana Mitra: I imagine that there must be more product opportunities coming up. If you engineer a solution for one client, then there are likely others in the industry that will also be interested in the same type of solution.

Gaurav Khandelwal: You are exactly right. That is where we have to pick and choose what we want to work on. It is not necessarily easy to find the perfect intersection point. We have to invest a lot of time and money to find opportunities where we can develop a product that will go deep into the market and not just skim the surface.

Sramana Mitra: It seems like you would want to construct building blocks and essentially create a modular toolkit.

Gaurav Khandelwal: That is exactly what we have done. We have built a platform and we are piloting that platform internally with a few customers. We can focus on three of four key areas. We want that platform to be common enough to be used across other verticals, and then we can put building blocks on top of that platform, that allows us to focus on market verticals. We have even had discussions about splitting that platform off into its own company that could make a very broad market play. The other option, of course, is to go very deep into this one market vertical.

One of the key things that we have to remember is that what we have built integrates very well with the sensors in the field. In the consumer space, there

are things like NEST, which are gaining a lot of traction. There are similar sensors in the oil and gas space for industrial controls. We are calling our platform a context aware platform.

Sramana Mitra: In my opinion, it seems that you have an opportunity to build out your work in the oil and gas market and use that as a chance to refine your platform. From there, could you open another vertical and then go very deep into that vertical as well? I would go sector-by-sector as opposed to going horizontal as a platform. That is a very competitive market right now.

Gaurav Khandelwal: We have identified four verticals. Oil and gas, logistics, retail, and healthcare. We have some contracts with large logistics companies right now. Those are all industries that have very specific needs for mobile business processes. We can go very deep in each of those verticals.

Sramana Mitra: This has been a very interesting discussion. Great work so far and good luck as you continue!

Interview with Robin Wiener, CEO of Get Real Health

Robin has built an excellent company with large, international clients in the healthcare domain and has used the bootstrapping using services technique that we espouse in 1M/1M. This interview was conducted in December 2014.

Sramana Mitra: Let's go to the beginning of your story. Where are you from? Where were you born and raised, and in what kind of circumstances?

Robin Wiener: I'm from Connecticut. I was born in Bristol, the home of ESPN. I went to the University of Connecticut for college. Early on, I had a major speech problem. I couldn't really pronounce things. Along with that, I had a major learning disability. I had two sisters and a brother. The teachers told my parents that I just wasn't as smart as my brothers and sisters. Maybe I could get married and that would be a good thing for me to do.

I was lucky enough to have a mother who thought they were crazy. She had me tested and figured out that I had dyslexia. I had a smart cookie as a mother and father. They figured it out. They got me into different things and made me show my worth. I was in plays and musicals. To help me with my speech, they got me into singing and helped improve my diction. I have such a fantastic family. Everybody supported me all the way through.

I went to the University of Connecticut. I did all right in college but it wasn't great because of my disabilities. I worked in retail for many years. I wanted to

be an entrepreneur. I always thought about it. I felt like I could do it my way and use the skills that I have found.

Sramana Mitra: When did you come out of college?

Robin Wiener: I went to college in 1982 and came out of college in 1987. The economy fell out. My best friend and I decided to come and move to Maryland. I'm never scared of trying something new. We came down to Maryland and got jobs down here and worked in retail for a long time.

Sramana Mitra: What kind of retail?

Robin Wiener: I ran different retail stores inside the mall. That's what I went to school for—Fashion Merchandising. Through that, I realized that one thing I enjoyed doing was hiring people. I transitioned out of retail into recruiting. Through recruiting, I found my passion of trying to find the right person for the right job. I got into recruiting for IT people. This is where I started to look at technology as something that is really cool. At one company, I hired 200 people in a year. That was during the dot-com boom.

I think the one thing about being an entrepreneur is that you always try to find what you like to do and see if you can make a career out of it. That's what happened with recruiting for me. I found something I was passionate about and started following that. That took me to the IT world. All of a sudden, I'm recruiting for developers, project managers, and solution architects. With that, I'm learning about how technology can change people's lives and what you can do with it.

Sramana Mitra: What year did you start this business?

Robin Wiener: I was the HR Director for USWeb from 1997 to 1999.

Sramana Mitra: I remember USWeb.

Robin Wiener: I ran the HR department. As the dot-com crashed, USWeb was bought by a company called Whittman-Hart out of Chicago. When they merged, they just imploded. They did a bunch of stuff that was pretty awful for the staff. Mark Heaney and Jason Harmon were my colleagues at that time. We all had the entrepreneurial spirit. This is when we decided to take our destiny in our own hands. We never wanted to be in a situation where we didn't know what was coming down the path. We felt that we wanted to go out and try to do something ourselves. In 2001, we started Get Real Health.

Jason Harmon is a phenomenal developer and Mark Heaney was an engineer, while I know people. That was my piece. We wanted to make sure that we work with people we really like. Wouldn't it be cool to be able to build something that can actually help people? That was the mission statement for us. That's how Get Real Health started.

Sramana Mitra: What was the concept? What problem were you going to solve?

Robin Wiener: We first started just because it was the dot-com time. We were just getting out there and getting work.

Sramana Mitra: Are we talking about 1999?

Robin Wiener: Right after 1999, around 2001. We bootstrapped. We didn't go out and get money. We lived in our basements and did it the old-fashioned way. We went out and pounded for business. We did a lot of development work and professional services. Eventually, we wanted to be a product

company. We had seen what the venture capital world had done with the dot-com breakdown. We had a lot of friends who went out and got money and blew their businesses in a year.

Our next step was working with Maryland. They had an incubator program. Instead of going out and getting an office, we moved into their incubator program. Honestly, it was a small room with three desks. But they gave us some advantages. As an entrepreneur, I feel that you have to look around at state and government and see if there is anything they can do. If you do have to spend a bunch of money in the beginning, better hold on to your equity. We had access to lawyers for free, conference facilities, and printing at cheap rates. It was a good way for us to get started and move along. We did that for many years while figuring out where we can go and finding key employees to work with us. 2007 was when the 'Aha' moment happened for us.

We were lucky enough to do a project. I had gone out and recruited a company that wanted to do wellness. We built a wellness platform for them.

Sramana Mitra: You were basically doing contract software work at this point. Out of those three desks at the incubator, you were taking projects and building software for people.

Robin Wiener: Exactly. One of the software we built was for a wellness company. Microsoft approached them and said, "We're starting this brand new platform called HealthVault." Are you familiar with HealthVault?

Sramana Mitra: No.

Robin Wiener: We had our moment at a big kick-off conference down in DC where they talked about why they would want to build something like HealthVault. It was right after Katrina. What's interesting to think about is

healthcare. What happens then? People's homes are flooded, so all your records are gone. Even the hospitals were affected and all the servers blew up. Now, you have people leaving New Orleans and going to Dallas or Houston. Let's say they have cancer. The doctors ask them, "What is your chemo regimen?" The patient doesn't know because all the records are gone.

The concept for HealthVault is to take that information and put it in the cloud so it can follow you anywhere you need to go. That was our 'Aha' moment. Everybody has situations where you wish you had your records on you. That's really where we got into working with personal health records. We were ahead of the game than what it is now. We started that in 2007. We were passionate about it. It felt like something we've been waiting for. We went after it. That's the way we started. This is where we were changing from a professional services company to a products company.

Sramana Mitra: That's actually the transition that I want to understand a bit better. This company gave you a project and you built this project and put IP on it.

Robin Wiener: No, they did that. Now we realized that we sit on top of the cloud but it's just a database. How does the patient access that data? We decided to build a product called InstantPHR. One of the things we realized is, as we were building things for people, everybody wanted the same thing but slightly different. We used to do a lot of work with SharePoint too. We were like, "What can we build that's not just an application, but also a platform that can be adjusted to meet many clients' needs?" That's how we started to build InstantPHR. It has over 200 different widgets or pieces that you can build on any kind of application you want. Instead of people having to engage

professional services, we can take those pieces and go ahead and build that form. It's not just a set of applications.

Sramana Mitra: You built a toolkit that would help you build in a modular way.

Robin Wiener: Absolutely. Being in professional services, you learn things. One of the biggest things we learned is to make sure that this platform can be localized. Everybody forgets about that until the first client comes in and says, "I'd like that in Spanish too." It's been a huge advantage for us. It can be in any language in the world. We have it in Arabic, Chinese, French, and Polish. We're able to pull out the files, change the language, and push it back in. That's something we learned by having to do so many different projects before. We architected a solution that can be flexible, not just for the US, but for countries all over the world. I think that's our secret sauce.

Sramana Mitra: It sounds like the business you built is this flexible toolkit with which you can put together health applications. What kind of clients did you go after with that basic concept?

Robin Wiener: We're small and we have some big partners. We do the personal health records. We work with the patient. The patient needs to get that information, so we need to integrate into larger EMR systems of hospitals. We can actually put our platform on top of any data source. Otherwise, it wouldn't mean much for the patient. You want to know if your doctor has your records or if your pharmacy has your record. You want to have your complete checkup.

What we did as we went to market was to engage with partners like Microsoft, GE, and Orion Health. That's how we went out and with them, went in some

of the largest hospitals in the world. Our systems are in New City Health and Hospital Corporation, which has nine hospitals, Catholic Health Initiative, which has 89 hospitals and many others. There are other small ones like American Diabetes Association.

Sramana Mitra: What kind of applications are you building?

Robin Wiener: In the hospital systems, there are new laws coming out in our government. The first law came out and said that every hospital system should have an electronic health record. They gave incentives to the hospitals and doctors to get there. The second piece of that is they have to push that information down to the patients. That's the next piece. That's where we come into play.

What's interesting with us is we are not connected to one EMR. We're connected to many. When you go into large hospital systems like Catholic Health Initiative, they have 89 hospitals and 124 EMRs. All of those EMRs might have a patient portal but that's not really a good experience for the patient. They're logging into different things. What we play really well with is, all that information is being brought up to a large database like the HIE from Orion Health. We sit off Orion. Now, all 89 hospitals have one patient engagement tool. They have to get 5% of their population on a tool like ours for them to get these huge incentives. Right now, five hospitals have already made their numbers. Catholic Health is just starting. We've been lucky enough to be in the right place at the right time.

Sramana Mitra: You are working with hospitals that have EMR systems and you're building applications around the EMR systems, which are patient engagement applications that help the hospitals meet the regulatory requirements from the government.

Robin Wiener: Absolutely. The next phase, which is very exciting, is to push that patient information back into the hospital so that they can get better care. We have an alert system. Let's say your blood sugar gets out of whack, an alert is sent out to let the doctor know what's going on with you. If your blood pressure is slowly creeping up, they can see that and can get you to a doctor's appointment versus bringing you into the emergency room at an acute time. We're in the right place and the right time in the United States.

One of my first large clients is the province of Alberta, Canada, which had 3.2 million people. They're rolling out because their social medicine is totally different from the US. They want to pull down the cost of healthcare. How do you do that? It's by engaging those patients and making sure those patients know what's going on with their healthcare and making sure they're taking their medication. That's another one. It's a different model from the US but it's a large one. We will be working with another province in Canada too. We have a partner out there called Telus Health. Telus is the second largest telecommunications company in Canada. They started in the healthcare area. We are their patient engagement tool for all of Canada. That's the Canadian market.

Then I go over to our friends over at Microsoft who brought in two deals. I have two households in England. One is focusing the application on mental illness. It's interesting that outside the US, they have a better view of mental health than we do. They're more likely to work with you. I was really surprised because I thought everybody is going to do heart disease or diabetes. It's been extremely fascinating how that has worked. We're connected to their EMR.

Then down by the shores, Southampton University started with IBS but now they've spanned it out in the hospitals. In England, one of the biggest problems

is the high cost for gas and parking. They're trying to catch people when they're sick before they have to come in so they can do telehealth with them. The patients are not going to come in because they can't afford to pay for the parking.

Sramana Mitra: You have the telehealth modules in your toolkit?

Robin Wiener: No. We have secure messaging. We have something that we call health journals. With the health journals, we have a lot of engines. For IBS, a patient gets a reminder everyday on their phone to fill out a little survey. How are you feeling today? Have you had any flare-ups? How many times have you gone to the bathroom? They can be answered very quickly. That goes in and if they start to see a trend of a problem, they can pick up the phone and call them, "It looks like you are about to have an attack. I want you to take this medicine and do this." It's preventive health. We're seeing that a lot across the world.

US is also starting to think about that a little bit. The other place where we've launched is Australia. It's the same model of telehealth. We've partnered with Telstra Health, which is the largest telecommunications company in Australia. We're rolling out our first application there. A new region that is very interesting is the Middle East. The population is getting sick. They're very interested in trying to work with their population to keep them healthy. Since we can do the product in Arabic, they're very interested in what we can do.

You see, that one decision we made about localization way back then is now, all of a sudden, paying dividends. I have somebody that is literally on Capitol Hill all the time learning all these new laws and regulations. We work very closely with the Department of Commerce and we met last week. In each of the countries, they have somebody that sits in the embassy. Their job is to get US

companies in their markets. A lot of the countries out there are watching and are interested in rolling out in their own countries. These countries are asking us to come in and speak to them and administrate their health.

Sramana Mitra: What percentage of the deals that you're in comes through one of your major partnerships like a Microsoft HealthVault?

Robin Weiner: I would say 25%. We are seeing a trend now. Now that we're in these large hospitals, people are getting to know who we are.

Sramana Mitra: You sound like you have a very effective lead generation working with Microsoft.

Robin Wiener: Microsoft is somewhat effective. The biggest ones are my telecom partners. KPMG brought us into Australia. A company called Cap Gemini is our partner in Sweden. We have been selected as the patient engagement tool for Sweden. In some areas, Microsoft or GE might be good. We realized that in certain areas, we need to get different partners. We're in five different hospital systems of Orion. We're deepening that partnership right now because it works really well when you have that health exchange as we sit on the outside of it. It's really interesting that we work with a bunch of large companies, but in each one of the markets, it might be a different lead. Just because of our reputation, we're getting phone calls.

Sramana Mitra: You have enough reputation that you're getting inbound.

Robin Wiener: We work direct with New York Presbyterian, which is one of the best.

Sramana Mitra: When you started doing this, which partner was your biggest?

Robin Wiener: Microsoft.

Sramana Mitra: This methodology of working with a major company who has all the channel is very helpful for a small bootstrapped company to get into because you can't really invest.

Robin Wiener: We worked with Microsoft Health. Now, we've switched to Microsoft Health and Life Sciences. They're really great. I would highly recommend finding a partner where you will enhance what they're selling. If you do that, they're going to get more deals because of you, then that's good. We were literally sitting with the executive leadership there. You have to work yourself in there but it's worth it.

Sramana Mitra: What about the team? Tell me a bit about the three desks at the Maryland Incubator. How did that all play out?

Robin Wiener: We started out with three people. One of the guys we worked with early on was Raj. He is kind of our fourth partner and a phenomenal one. He moved back to Bangalore where he started our Indian office, which is not the typical Indian office. They're part of our company. He has built a phenomenal team. We have two offices. We've 34 people in India. Here in Maryland, we've 33. Then we've three people in Texas.

My Vice President came out of our first client, American Heart Association. She really wanted to try something different. She lives in Dallas and wanted to stay in Dallas. If you're talented, I want you to work on my team, but you don't have to sit next to me. You can work wherever you want. Then, we also have

two people in England. We're about 71 right now. We went from four or five of us to this. I have the most phenomenal team. They're just really fantastic.

Sramana Mitra: You're doing about $5 million in revenue now?

Robin Wiener: We're going to be between $6 million and $7 million this year. There are some really interesting things I'm hoping to close at the end of the quarter. We haven't had anybody leave us in four years.

Sramana Mitra: I'm going to ask you a question about when we started this interview—with your kid running into the office. Tell me about your life, if you wish.

Robin Wiener: I'm a mom of two boys—12 and 7 years old, who are a lot of fun and crazy. The one thing I've done to keep my life somewhat sane is to have my office overlook our house and their school. I want to be a mom that is involved. I've been able to do that.

Sramana Mitra: You're close by, so if something comes up, you can go in.

Robin Wiener: My kids go to a small private Catholic school. I have a phenomenal community there. I travel a lot. My husband is supportive. I do have a group of friends that help me out all the time. It takes a community and a team to raise children nowadays.

Sramana Mitra: What happens when you travel a lot for business? How do the kids get taken care of? Does your husband take the lead at that point?

Robin Wiener: Yes, my husband takes the lead. I get him set up as fast as I can before I leave. My staff is fantastic. My girlfriends also help. In the

morning, my husband gets them out the door. They go to school and after care. He picks them up and gets them to basketball practice. I'm just coming off three weeks of travel. I'm going to let him do whatever he wants to do this weekend. We balance it. My husband is also in IT. He understands the world and he believes in what I do. I'm blessed with that because a lot of women entrepreneurs run up against that. He believes that I can do it.

Sramana Mitra: Great! I'm so happy to hear your story and to tell your story. I thoroughly enjoyed listening to you.

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.

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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

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