Linc Jepson's 74ze leverages Russian and American engineering talent to persevere

Sean Murphy

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Sean Murphy sits down with entrepreneur Linc Jepson.

Linc Jepson studied Electrical Engineering at Tufts and after he graduated with his BSEE he was drawn to Silicon Valley's technology boom in 1997. He worked as an RTL design engineer at several startups including Auravision, Broadlogic, and Believe and in 2002 he travelled to Eastern Europe for two years where he worked for a startup microprocessor company). He returned to Silicon Valley in 2004 to co-found 74ze, a design services firm that leverages Eastern European engineering talent. I sat down with him after a recent Bootstrappers Breakfast to learn more about his entrepreneurial journey; what follows is an edited transcript of our conversation with hyperlinks added for context.

Q: You have a broad base of experience, what kind of work do you enjoy?

I enjoy the fast-pace of small companies, where there is not only the opportunity but the necessity to do all kinds of work. And that work has an immediate and significant impact. Early in my career I was doing clean-slate development, performance research, upgrading and debugging modules of long-gone developers, verification, 3rd-party IP integration, you name it. I didn't realize it at the time but it was great training for consulting.

Q: Why did you pick Eastern Europe when you left the Valley?

During the 2001 downturn in Silicon Valley I decided to indulge my wanderlust a bit and to get a better feel for the foreign labor market. I had previously worked with a team of engineers in India. I had studied Russian for about four years in high school and college and had a seedling of an idea in mind about starting a services company that would have a portion of its team abroad.

In 2002 I moved over to Minsk and then Moscow for about two years. I brushed up on--OK I greatly improved on--my Russian and found a job doing RTL design in Zelenograd, Russia. Interestingly, the company had been founded by Chinese/Malay investors. I created a CompactFlash controller and a touchscreen interface. I was also making contacts and continuing to think about an outsourcing team.

I had confirmed that there is some exceptional talent there.

Q: How did you decide on outsource engineering as a business model?

We consider 74ze (pronounced 74 Zee) a services firm, first and foremost. We happen to use remote experts when it benefits a project. About a third of our projects never utilize our remote team. In school I studied International Relations as well, for a BA. Working with remote teams

allows me to pursue another passion.

While I wasn't keen on the mercenary perception that many folks have of contract engineers, I knew that there could be improvements made in the outsourcing model. Specifically, most engineers tend to shy-away from verbal or face-to-face communication. It seems easier to be non-confrontational and swap a few emails instead of picking the phone or Skype, but you can delude yourself into thinking that all will be okay. This can be particularly dangerous when you are an outsider of a company. These communication issues are often compounded by cultural issues. Merge a few factors such as a contractor being foreign and also more junior than the client's counterpart, as is often the case with remote teams, and you often find someone who too often will dodge asking a short, potentially embarrassing question, and try to compensate by putting in more hours.

The fallout from labor globalization can be overcome with stronger communication and more global management experience. It's not achievable in all stages of development, but someone who work effectively not only with other engineers in the same building but also with engineers in Krakow or Kiev is growing in value.

Q: How did you get started?

In 2004 I moved back to the US. We incorporated 74ze in Delaware, and then in Russia a few years later, after we had traction. One of our first two jobs was a local one. We had 2-3 people, all US citizens, on site. We only did minor work abroad, such as some analog modeling. The other early job was for a company in Europe. The job was a referral from an existing relationship. That job was done completely remotely. We only met the technical people from the client at a trade show, a few months later, where they demonstrated with our product.

Q: If you are doing RTL design and verification what EDA tools do you use?

An immediate obstacle that we ran in to when we started was the high cost of EDA tools. Right off the bat, this started knocking us out of the running for various contracts. When I was living in Zelenograd, I had used [Aldec's](#) HDL verification tools and had a very good experience with them. After not using them for a few years, because we were using customer tools in the US, one of the guys on our team proposed that we incorporate Aldec's tools into our next bid.

Over the years, we've built up a relationship with Aldec and have grown to rely on their tools quite a bit. It's unfortunate that we didn't get much traction in conversations with the other EDA vendors, but I think that we have found a good solution with Aldec Riviera-PRO and a solid partner for moving forward.

Q: Can you give me a brief overview of where the company is today?

We've shifted more towards verification in the last few years, both in terms of the jobs we've taken and also in terms of a conscious decision to solidify our roots in that space. While most of our early jobs were in or involved some design, and we continue to work in this field, we see that the continuing abstraction of testing is creating a very large opportunity. We've been honing our SystemVerilog skills in the last few years and have been doing more verification than anything else, lately.

While we are still a mix of full-time and contract-based engineers, we are a pure engineering team with next to no marketing or sales overhead. This means less overhead cost for the client, but also that we don't have the sheen of the larger companies. When we meet with a prospective client, they meet the lead engineer in the first meeting.

The economy interfered with our plan to cycle a few younger engineers into our team. Our team has a minimum of 12 years of experience, but I expect that we'll have an internal project running as a testing ground for some junior engineers later this year.

Q: What are the two or three things that you have been able to accomplish that you take the most pride in or satisfaction from?

We increased our role significantly with two clients over a 2-3 year relationship. With one of those companies, we joined to develop a few blocks from spec and ultimately took on a much larger amount of design work as well as key roles in integration and top-level verification. We helped carry them through full chip functional sign-off and final timing closure. The chip worked the first time. The CTO of one of those companies, [Mark Indovina](), became an advisor.

We nailed the deadline to get a prototype RTL processor core developed for another client, enabling them to meet the deadline for a multi-day meeting with one of their key clients in Japan. We had to make two flavors, optimizing for power and performance constraints.

I am happy that we have grown to the point where it made sense to incorporate in Russia; growing our team there was a significant milestone.

Q: What has been the biggest surprise? What was one key assumption you made, perhaps even unconsciously, that has caused the most grief?

Sales. Selling is tough. I came back from Eastern Europe and a bit arrogantly thought that as a skilled group of engineers, we would break into the contractor market easily. I have learned that selling is a process. I am not a salesperson in the least. My father was and I didn't have much respect for the field, until I tried it.

Q: What development, event, or new understanding since you started has had the most impact on your original plan? How has your plan changed in response?

I thought that I would be spending a lot more time in Eastern Europe than I have been. We have a senior team there that runs smoothly. The last time I was there I was trying to hire another engineer for a project and was unsuccessful. Salaries were skyrocketing.

We are more local and on-site and less offshore-centric today than I initially envisioned.

Q: What suggestions do you have for entrepreneurs?

Be willing to deviate from your plan; not necessarily from your objective. I think we can (I did) envision the future too much or too specifically, such that you have a hardened mold in your mind and of how something will turn out and then work like hell to fill that mold with your progress. Sometimes there is less resistance to your goal down a parallel path.

Q: Thanks for your time.

Sean Murphy is CEO of SKMurphy, Inc, a consulting firm that offers customer development services for entrepreneurs with a focus on early customers and early revenue.