EPISODE 879

[INTRODUCTION]

[00:00:00] JM: Software companies such as Slack, Zoom and Uber have recently gone public. When a company goes public, they issue a document called an S1. Within the S1, there is a wealth of information about the company providing a detailed story about the company's business model, economics and future prospects. The S1 defines the operating model and the philosophy of the newly public company.

Going public serves several purposes. Being public allows a company to gain access to the public capital markets. It allows previous investors to have a liquidity event by selling the shares that they purchased from the company and private markets. Being public also put some constraints and visibility on a company, which can be useful for a company that's trying to develop internal discipline.

In the software industry, it is useful for most people to understand the dynamics of going public. A technology worker who is earning equity at a private company needs to understand the roadmap to their company going public or potentially getting acquired. Anyone who invests in public company stocks is evaluating the different available options for investment. This includes many software companies. So it's important to find the best software companies to place a bet on.

Tom Tunguz is a venture investor at RedPoint and the author of a popular blog at tomtunguz.com. In a recent series of posts, Tom has evaluated the S1's of recently public software companies and compared the growth dynamics between a variety of these newer public companies. Tom joins the show to discuss his writing and offer reflections on what can be learned about company building from the recent series of IPOs and direct listings.

We've done many interviews in the past with investors and you can find all of these interviews, including another one with Tom that we did in the past, on the Software Engineering Daily apps for iOS and Android. These apps have recently been refactored. We've spent a ton of time on them and they are a great listening experience for Software Engineering Daily. You can find all

of our episodes by categories. You can have comments and social features, and I will be commenting on each episode for the foreseeable future.

If you want to jump into the discussion, check out the apps or go to softwaredaily.com and share your thoughts. I'd love to hear your perspective on these different subjects. You can also become a paid subscriber to get ad-free episodes at softwareengineeringdaily.com/subscribe.

Also, the company I'm building is FindCollabs. FindCollabs is a place to find collaborators and build projects. Whether you're building an open source project, or a music project, or a company, you can go on FindCollabs and find collaborators that share your interests and your vision. I'd love to see what you build on findcollabs.com.

With that, let's get on to today's show.

[SPONSOR MESSAGE]

[00:03:13] JM: Apache Kafka has changed the world of data infrastructure, and Kafka Summit is the place to learn about new design patterns and engineering practices in the world of Kafka. Kafka Summit returns to San Francisco September 30th through October 1st, 2019. Kafka Summit has sold out in New York and London, and the San Francisco event is likely to be just as popular.

Listeners of Software Engineering Daily can get 25% off their ticket to Kafka Summit by entering promo code SED. With the promo code, Kafka Summit is only about $900 to attend, and if that's still too expensive, you can consider asking your company or your manager to pay for your ticket.

Kafka Summit is an educational experience with top engineers from places like Netflix, Microsoft, Lyft and Tesla. At Kafka Summit, you can meet with experts who will help you address your toughest Apache Kafka and event streaming questions, or you can start to learn the basics of how to deploy and operate Apache Kafka. There are also hands-on beginner and advanced training courses available, as well as certification.

Join the Kafka Summit September 30th through October 1st, 2019 and get 25% off your ticket by using promo code SED. I plan on attending Kafka Summit, and I hope to see you there.

[INTERVIEW]

[00:04:52] JM: Tom, welcome back to Software Engineering Daily.

[00:04:53] TT: Thrilled to be here. Thank you so much.

[00:04:55] JM: You started working at RedPoint 11 years ago. What have you learned about IPOs since that time, since you've started working as a venture capitalist?

[00:05:05] TT: That's a deep question. There's a bunch of things that I've learned about the IPO. I think the first thing that struck me was that the number of publicly traded companies in the U.S. has fallen by 50% in the last 15 years. I think that's a problem, and it's a problem because – Both a problem and an opportunity. It's a problem for the retail investor, but it's an opportunity for the private equity investor, the venture capital investor.

So, it used to be like if you look at Microsoft, Microsoft went public when it was worth a couple of hundred million at the most. I think like 20 to 50 million in trailing revenues. But today, the median software IPO has 200 million in training. So, who benefits from that? It's private investors as supposed to public investors, and that's really been driven in my view by the SEC. The SEC is an organization that's focused on protecting an individual shareholder.

You could argue that maybe they've gone too far in terms of compliance. Let me give you sense. If you're a hundred million dollar revenue business and you've grown at 70% a year, you can go public, and you've got two different choices. The first choice is you can raise capital in the private markets and it will cost you something like maximum million dollars to get an audit to raise another 150 to 200 million in the private markets.

The other alternative, if you go raise that capital in the public markets, and in the public markets it's going to cost you $10 million in the first year, because of all the IR stuff, investor relations stuff, and all the compliance.

So you basically on a cash basis, your costs going public is about 10X relative to in the private markets. So that's why we're seeing fewer IPOs. I wish we would see more. I think what's really exciting is we've seen two or three different innovations on the funding model in the last five or six years. We've seen crowd funding, which is a really big deal, kind of came and has gone the second with the initial coin offering that kind of came and went and we had a period of a year where we saw a thousand ICOs. Now you see to direct listings in two years. So that's why we kind of changed lot with Slack and Spotify.

So startups are looking for different ways to innovate on raising capital, and I think what I'm really excited about is continuing to see that and I'd really love to see the SEC kind of change some of the policies to allow retail investors to participate in the upside of some of these business.

[00:07:18] JM: Describe the difference between an IPO and a direct listing and how different companies might use those to fundraising mechanisms differently.

[00:07:28] TT: Yeah. Basically, the main difference is – So I'm going to use two words. I'm going to use a word primary. A primary around the capital and a secondary around a capital. A primary around of capital is when a company creates shares. They sell those shares to an investor and they take money. They put on their balance sheet may use it to grow the business.

A secondary is the company sells existing shares to investors. That means that if you're the founder of a business and you own 10% of the company, you can sell 2.5% of the company and you as an individual get the money and there are no more shares created. [inaudible 00:07:58] a primary and a secondary.

An IPO is predominantly a primary. So when you raise $100 million in the IPO, you create and you share, sell to investors. You take that cap. You put on the balance sheet of the business, and the business invest that hundred million over sometime.

A direct listing is a secondary. You're only selling existing shares. There's no more money that goes into the business. So the reasons to do a direct listing are, one, you have enough capital

on the company's balance sheet to be able to continue to grow. Two, you have enough of an awareness within the ecosystem that you can get people to want to buy $100 million, $200 million, $$500 million worth of secondary.

I think these things are going to become more common, because there is a vibrant secondary market in late stage privates already, and a lot of like hedge funds are buying in and you've got three or four different marketplaces that do this. The direct listing is basically an extension of that.

[00:08:48] JM: So a company that is later on in its lifecycle and its having some financial success. It can sell shares in a private secondary market, or it can issue a direct listing in the public markets?

[00:09:07] TT: So a private company typically considers secondary sales for two reasons. The first is a company is getting to be later in later stage, and some of the early employees want to sell their shares. Actually, that's the only reason. Some of the times, that happens with like a series E, where a business might raise 100 million in series E and do like a 10 million in secondary. So the executives are able to sell or some fraction of the early employees are able to sell.

The other time a company might want to sell shares in the secondary market is if you are a late stage company and you want to offer liquidity to all your employees. So, some later stage companies, some of them that we work with and some of them and the rest of the valley have these programs, like Palantir and Cloudera have done this where every year, you as an employee can sell a certain fraction of your shares to get some cash and get some liquidity.

So those are two of the reasons why you would do a secondary in the private market. Then there's the employees just deciding to sell whatever shares and options they've exercised independent of the company through some of these marketplaces, and there's [inaudible 00:10:07] of dynamics, and then there's the direct listing, which is the company deciding to basically go public. List all the shares and then have a trade and be a public company.

The main difference between doing it in the private markets and the public markets is in the public markets you have way more compliance overhead, right? You've got to go through the SEC. You've got to file an S1. You've got to start filing 10K's. You got to start doing different kinds of audits [inaudible 00:10:31] compliance, those kinds of things where you don't have that in the private.

[00:10:35] JM: In the public market, would the advantage be that the public market investors might bid up the price of the asset more aggressively?

[00:10:45] TT: Yeah, that raises the question of whether the valuations in the private markets are higher than the public markets. That is hard – It's changing so fast that it's hard to answer. At the very late stage, I would guess that they're probably the same.

There are a couple reasons companies go public. I think the Zendesk CEO, Mikkel, said it best, which is at some point you have to move out of your parents basement, which is like there's kind of a status associated with being a publicly traded company. So that's a really important part. There's a discipline. There's an operational discipline that becomes associated with it. At some point, access to really large sums of capital might be super attractive. It also forestalls an acquisition.

[00:11:24] JM: There have been many companies going public or doing direct listings recently. Companies that are software companies. These are companies that have been kind of in the startup news for a long time and all of a sudden a lot of them are going public. Why are so many companies going public around the same time?

[00:11:43] TT: Well, there is something that's called the IPO window. The IPO window is this loose concept of when is it a good time to go public and when is it not a good time to go public? There are certain times in the stock market when investors want to buy IPOs and there are other times when they don't.

Like in 2008, right after the financial crisis was a terrible time to go public and very difficult. Today, it's a really great time to go public, and the best measure of that is the valuation multiples that investors use to value companies. In software, the metric that most investors use for high-

growth companies, companies growing more than 30% a year, is the forward revenue, the EV multiple. So forward revenue divided by the enterprise value. The forward revenue is the sum of the next 12 months of revenue, and the EV's, the enterprise value, which is the market cap, plus that minus cash.

Just to kind of paint you a picture. Over the last 15 years, that multiple has been 5.5X, and we've hit a bunch of different highs and lows and it moves quite a bit. So, at the height in 2016, it was about 7.7 times. Td then in one day it fell 60%. On February 2016, it fell 60% to 3.3 times.

So the day before, it'd have been a great IPO windows open. Great time to go public. The day after, kind of questionable. The market moves a lot. There's a lot of volatility, and we've even sees that in the last two years. Today, we're at, what I would argue, like 15 year highs. We're like 9.6 times forward. So, it's a really great time to go public because investors are willing to pay high valuations. The implication in a large forward multiple is that investors believe the company is going to continue to grow at its same growth rate for a long period of time.

[00:13:27] JM: When a company goes public, they file a form with the SEC called an S1. You've been doing analyses of these S1's as they've been coming out, as these companies have gone public. An S1 is a very long document. It contains a ton of information. When you're analyzing these S1s, how does that process of analysis differ from when you're analyzing a startup pitch?

[00:13:56] TT: They're very different. They certainly couldn't be more different. An S1 is all retrospective. That's the main difference, and that a company has been operating for a really long time is typically 7 to 10 years before they file an S1. So you have lots of data about that company. You have the revenues and how they've grown and customer expansion, and the metrics are the same with a series A company, maybe. But you've got just a much longer track record in understanding what those patterns are going to be.

There's also a lot of – Within an S1, there's a whole section on like risk disclosures. So companies force to disclose how does our business fail. What are the major risks? So that's probably the second thing that's probably the most different. So, as an investor looking at an S1, what you do is – And you might do it at the series A too is you benchmark it relative to other companies, and that's what I do in some of these analyses. So I compare App Dynamics to New

Relic, or compare Zoom to Slack and see who's stronger in which dimension, and that's really interesting.

I got interested in S1, because I was working with a guy who had come from Goldman Sachs and he was telling me about all the data that was contained in these companies. One of the things that I'd really longed for as an investor was an encyclopedia of businesses. There's no history of business. There're history of countries. There are history of religions. There're histories of philosophy, but there's no book where I can be like, "Hey, how did IBM start and who are all the different CEOs and what were the major product initiatives and directions and strategic bets that they made that succeeds or didn't succeed?"
I would love to read a book. We have bits and pieces of them, right? Like the CEOs of like Nike, Shoe Dog, or creating happiness, delivering happiness, as Tony at Zappos. So we have bits and pieces, but we don't have like a compendium.

Even then, it's not that every business actually ends up writing a book. The closest thing you have is an S1. So you can kind of see, you can get some flavor of the business and the history of the business and the philosophy of the business. So if you were going to put together that Wikipedia of business, the easiest way to do it was just to literally put every single S1 in there.

[00:16:08] JM: Totally. Why the comparative analysis though? Because these companies are so different. Even if you take Slack and Zoom, you can say, "Okay. These are both communications companies. They form the backbone of the companies that adopt them as products."

But when you compare their metrics, like their sales efficiency or whatever other metrics you want to compare them on, isn't this like kind of contrived? Because they're so different even when they're very similar companies.

[00:16:39] TT: Yeah, a lot of businesses end up looking like other businesses. One of the first thing I'll say is you can create a business in any number of different ways, and I think the thing that's the most awesome thing about start a plan is that every time you think a business can't be created in a particular way, a founder goes and creates it that way.

So let me give you an example. There's been a mantra in Silicon Valley for a while that you really can't build a business, a software company with an average price point or an average contract value, an ACV of less than 20K. Well, it turns out that that's just wrong.

So, Slack and Zoom are two of the most highly valued companies. Their ACVs are 5K. The trade that you make is you might have a lower average contract value, but your net dollar expansion, your NDR are off the charts, like 140% to 260%.

What is NDR? The NDR is basically the interest rate on a customer. So if a customer pays me $1,000 last year. If I have 140% NDR, they pay me a $1,400 this year. If I have a hundred of those customers or thousands of customers, if I don't do anything to my business, they're going to grow 40% compounding a year. So that's sensational, right? It turns out that the highest NDRs are typically found within price points of 5K.

So comparing Slack and Zoom, like maybe if I'm a public market investor, I might buy one and not buy another based upon different comparables. I think both those businesses are excellent businesses. The reason I do it is it helps me understand where I have faulty assumptions when looking at companies. That data point about 5K ACVs, now I can go and say like, "Hey, when I look at a company with a 5K ACV, what I'm going to be looking for is a really sensational net dollar attention.

[00:18:26] JM: Some of your blog posts are looking at a single company in a vacuum and other ones are this kind of comparative analysis. What pulls you towards the kinds of theses that are built around comparing a couple companies or maybe more than two companies versus when you just want to look at a company in a vacuum?

[00:18:47] TT: Yeah. I think it's whatever I'm interested in at the time. I mean, I think – Like give me you an example. So, there was a period in time where I was going through kind of the big companies at the first .com era in software. I was one of them. I had met a founder and he had asked me which of the most successful companies that have transitioned from on-premises software, so software running in customers' environments to cloud.

It turned out there aren't that many of them, and one of the companies that I looked at was Concur. So we were – For my time, we were the first investors in Concur, and Concur actually did something that I don't think any other publicly traded software company has done. They started in CD-ROM. They transitioned to on-prem software and then they transitioned to SaaS.

Each of those is a very different business. I mean if you think about building CD-ROM, you've got a lot of inventory. You're selling through a channel. You've got physical inventory. You've got cash that's tied up and all that stuff. Then you've got to transition to being a licensing business. Then you transition again to being a SaaS business. At each point in time, there is a different set of accounting rules that apply. In each transition, you need a different management team with different strengths. So those are very difficult times for a business.

So here's a company that actually went through them. Went through two very difficult transitions to enormous success, right? SAP ultimately ended up buying them for like 8 billion. So that was an example, right?

Then we were interested in next generation enterprise resource planning or ERP. Big company there is Ariba, and that was a company that I was fortunate enough to meet one of the founders of. He'd kind of told me the story firsthand. This company went from being worth zero to like 40 billion in four years in the public markets in .com era. Then it fell after the market fell, but they ultimately ended up building a multibillion-dollar business. Again, SAP actually ended up acquiring them.

Then like the Slack, the Zoom example. Actually, the more interesting example is App Dynamics, New Relic. Two companies, both go public in a similar timeframe. Classic debate within startup land. Do you sell top down, or do you go bottoms up?

New Relic, 5K ACVs. App Dynamics, 9K ACVs. So clearly New Relics bottoms up. Great account expansion. App Dynamics comes in at the top. They ultimately end up meeting in the middle. So the question is who builds a more valuable business more capital efficient business? It turns out that those businesses end up looking pretty similar even though they started with very different points, and it's because they kind of end of meeting in the middle, and both have been sensational outcomes.

[00:21:19] JM: Fascinating. Why is any of this useful to you as a venture investor? I mean, at least in your day job, you're not a public markets investor. You're a private markets investor. Why is this useful?

[00:21:33] TT: I think it's really important because it opens your eyes. I think it's the reason why you study any field. The more that you study it, the more you realize that you know less and less and less and less.

There's this great book that just came out called *Range.* Anyways –

[00:21:51] JM: I heard a couple of podcasts.

[00:21:52] TT: Yeah. Whatever, I'd rather listen to the podcast, and the first thing he does is he debunks the 10,000 hour rule.

[00:21:58] JM: Right.

[00:21:58] TT: Yeah. Cool. Great. Awesome. I think everybody's happier for it. The second thing that he talks a lot about is he talks about how the longer you do something and the more you consider yourself an expert in a field, the greater your degree of confidence in your decisions, which is good, but the bad thing is the quality of your decision-making stays the same.

So you become more and more overconfident about your same level of accuracy, which is a very dangerous thing. He talks about there's this one example of this doctor in New York I think around the turn-of-the-century who had a basically 100% rate predicting whether or not you're going to get tuberculosis two weeks before you did. These people would walk in and they would have no symptoms and then two weeks later every time they would have TB, and it turns he was giving it to them, which is awful. I'm sorry for the black humor.

But anyway, I think he ties it into a book that was written by this guy named Philip Tatlock, who wrote a book called *Super Forecasters* that kind of talks about human's ability to predict different kinds of things. And an investor, that's why we try to do. We try to make a process that tries to

get to probabilities of success and we build a portfolio that try to generate great returns. So, bringing it all back, the reason why I really want to learn about all these different businesses is that I'm trying to defeat that overconfidence bias.

[00:23:22] JM: I suppose the way that you're looking at is it's not that you're studying these companies because they went public. It's that you're studying them because they released an S1, which contains a ton of information. That information could just as easily be produced by a private company. Just public disclosures of information that might've been private in the past.

[00:23:44] TT: Yeah. So we have access to some of those companies data when we meet them, and we meet them at the early stage, and we might see them in the growth stage in the B and the C and the D. So we'll see them. So we can do our own internal analysis and try to figure out where we were wrong, where we were right. The benefit of the S1 is I can share that analysis with other people.

[SPONSOR MESSAGE]

[00:24:11] JM: You probably do not enjoy searching for a job. Engineers don't like sacrificing their time to do phone screens, and we don't like doing whiteboard problems and working on tedious take home projects. Everyone knows the software hiring process is not perfect. But what's the alternative? Triplebyte is the alternative.

Triplebyte is a platform for finding a great software job faster. Triplebyte works with 400+ tech companies, including Dropbox, Adobe, Coursera and Cruise Automation. Triplebyte improves the hiring process by saving you time and fast-tracking you to final interviews. At triplebyte.com/sedaily, you can start your process by taking a quiz, and after the quiz you get interviewed by Triplebyte if you pass that quiz. If you pass that interview, you make it straight to multiple onsite interviews. If you take a job, you get an additional $1,000 signing bonus from Triplebyte because you use the link triplebyte.com/sedaily.

That $1,000 is nice, but you might be making much more since those multiple onsite interviews would put you in a great position to potentially get multiple offers, and then you could figure out what your salary actually should be. Triplebyte does not look at candidate's backgrounds, like

resumes and where they've worked and where they went to school. Triplebyte only cares about whether someone can code. So I'm a huge fan of that aspect of their model. This means that they work with lots of people from nontraditional and unusual backgrounds.

To get started, just go to triplebyte.com/sedaily and take a quiz to get started. There's very little risk and you might find yourself in a great position getting multiple onsite interviews from just one quiz and a Triplebyte interview. Go to triplebyte.com/sedaily to try it out.

Thank you to Triplebyte.

[INTERVIEW CONTINUED]

[00:26:31] JM: So let's try this mapping exercise. So you've seen the Slack S1 at this point. You're an investor in Mattermost, which is an open source similar to Slack in many ways. What lessons have you drawn from the Slack S1 that you can share with the Mattermost team?

[00:26:50] TT: Well, they're actually very different businesses. So one of the mistakes, one of the fallacies that I made before is that if you have three companies in the same space, they all compete directly with each other, and that's not exactly right. If you look at GitHub versus GitLab, in some sense they compete with each other. But I would argue they're actually going after very different segments with very different value proposition. GitHub is a point solution. GitLab is a platform, and there's a good analogy with Slack and Mattermost.

So Slack is a 5K ACV. Mattermost is significantly higher than that. Then I think they both have bottoms up adaption. So Mattermost can take a look at Slack's metrics and understand exactly the kind of business that they're building and figure out what lessons to apply to their own business. But there's going to be significant amount of difference.

There are a couple of things that we can pick up from this from the Slack S1 that are relevant to Mattermost. The first is more than 40% of Slack's business is in accounts greater than 100K, and I think it's about – If I remember correctly, it's about 500 customers represent that 40% of that business, which means that there's a power law that governs the total addressable market.

So, if we want to grow really big really quickly, then we should go and address the enterprise market, and that actually is a good match with the product that we have, because we're open source and highly secure. So, you can run a database yourself and you can subject that database to all the different compliance requirements that you need. So, that was one lesson that we took away.

The second thing that we can take away is we now have a publicly disclosed benchmark for account expansion. So, we can understand whether or not we're similar. Conceivably, we should be pretty similar. So we can benchmark ourselves to that. I think the third is we can kind of get a sense looking through the risk disclosures of where Slack views weaknesses in their business. Ideally, find where we can carve out a niche for ourselves.

[00:28:46] JM: In your work at RedPoint, several companies at RedPoint that RedPoint has invest in have gone public. Take me inside the pre-IPO conversations of one of those companies. How does the decision to go public materialize?

[00:29:08] TT: well, there's a certain threshold you have to get to. So it takes 100 million and trailing. So, as a company approaches that benchmark, there comes a conversation in the board which is do we continue to raise private capital or do we decide to go public? The company decides for all the pros and cons that we laid out before.

If the company decides that they want to go public, then there's about 12 to 18 months of preparation to do before you go public. You have to hire a team. You've got to get your books in order. You've got to develop investor relations. You got to come over the pitch deck. You start meeting institutional investors. Those are the investors who ultimately end up buying these shares that you issue at IPO, and then you pick a group of bankers who then will orchestrate the IPO. There will price it, and then they will create a syndicates. So a group of investors who are going to buy the $150 million worth of shares that you'll offer.

Then you will do a road show of about two weeks where you'll go and pitch those institutional investors and answer a bunch of questions just like you would a private round. Then you file an S1 and then you wait for the comments to come back from the SEC if they want you to add any additional information.

Then there's one day where you go and you take the company public. There's a day that you price the company and then the equity capital market's team ultimately ends up figuring out what the price is, and after a certain number of share is clear at a particular price, you're public.

[00:30:38] JM: So, what are the subjective – I mean, you could just say, "Okay. Every time we reach 100 million, we go public," but that's not really how people think about it that rigidly, right? So what are the subjective decisions? Does it come down to timing? The IPO window thing or are there other elements that factor into like maybe we shouldn't IPO or maybe we should IPO.

[00:31:00] TT: Yeah, the first is the IPO window. Is the IPO window open? That's certainly a driver. I think a lot of companies are going public now because there's a lot of volatility in the stock market, and with the election coming next year, people wonder if the IPO market is going to be open next year. So if you've got a market that is really high multiples and you've got a lot of risk and the election-year. In fact, if you talk about going public, one of the things you talk about is is there going to be an election next year? Because it could have a potentially material impact. You kind of take a look at what the Fed is doing to the extent that you can. So that's a really big driver.

I think the second thing is the company ready for it? So some businesses might be – We were involved in a business that was at 150 to 160 million in revenue and growing superfast. But it just wasn't ready. It hadn't filled out the management team to go public, because one of the big differences between being a public and a private company is you have to forecast your revenue and your earnings and you have to do it in such a way that you instill confidence in investors, because if you don't, they will sell your shares and your stock price will fall.

So, you need a certain amount of skill to be able to do that in a way, as a business. Give yourself enough margin, because there's going to be variances in the way that you execute in a given quarter, but while instilling confidence. So that's pretty important.

[00:32:17] JM: Your portfolio company, Looker, was just acquired. How does the strategy when preparing for an acquisition differ from the strategy when preparing for an IPO?

[00:32:31] TT: Well, you never prepare for an acquisition. You definitely prepare for an IPO. An acquisition, particularly for companies like Looker at the late stage, to typically come inbound. So someone expresses interest and then you might hire an investment banker who helps you figure out who else might be interested and then they guide you that process.

So the similarities are in both cases, you hire a banker to help you navigate the process. The differences are an IPO has 12 to 18 months' worth of prep, and an M&A can happen at any time. So if you get a realistic offer, the CEO comes to the board and says, "It's my responsibility to present to you this offer. Should be pursued it or should we not?" Then we go look at what's going on in the public markets. How does the acquisition offer compared and multiples, all that kind of stuff.

[00:33:20] JM: . There were acquisitions of Tableau, Looker and Periscope Data in a matter of weeks. Why did the business intelligence sector consolidate so suddenly?

[00:33:33] TT: Well, I think what happens is one company in a space is in play, gets into play. So, what they do is they go and start telling other potential acquirers about their business. Then the acquirers become educated and then they ask, "Is this the right company?" and the buyer, "Should we buy another business? Let's take a week and think about what our priorities are. If we are interested in this space potentially, then we should go and look at every company in this space before we make a decision."

Then pretty soon people come up to a point of view and they're like, "You know what? I like this one, or I don't like this one. I want the other one." Then you have a wave. It happens quite a bit –

[00:34:15] JM: What are some other examples? Because this is the first time – I mean, I guess I haven't been following the news closely enough historically, but it was kind of humorous for me. Because you just these like, "Boom! Boom! Boom!"

[00:34:24] TT: Yeah, like the corp dev and the executives are all of a sudden like, "Hey, this is a much bigger market than we initially thought," or, "There's been a fundamental transition. We need to be here," or "If someone is going to buy this – We cannot allow one of our competitors

to buy this company. We either by this company or we have to buy competitive company in order to have either story to the street or true product story that differentiates us."

So where does it happen? Are there ways – The ESP, email service provider space? There was a raft of acquisitions within 12 to 18 months where you had the four biggest ones. You had Marketo and Pardot and Constant Contact and Exact Target basically all taken out within the span of a couple of years. I have to go back and look.

I think it happens quite a bit in security, because you have these big security platforms like Palo Alto or now you have Crowd Strike, and they're competing on a set of different features. So if somebody buys the next-generation vulnerability company, then everybody wants that thing. Yeah, I have to go back and look for some more concrete examples, but that's the reason why. Ultimately, it's an education of the buyer.

[00:35:28] JM: Is it a rational situation that develops there, where when you have this simultaneous kind of race to acquire the similar sector companies or is it some kind of irrational, like human exuberance kind of thing that causes the consolidation?

[00:35:43] TT: Well, you're trying to create that irrational exuberance as the seller. If you're trying to sell your business, you're trying to create an auction. What is an auction, but an irrational, and attempt to create a rational fervor around an asset? If you have a fancy car, let's say you have a Porsche. Let's say you've got a Ferrari GTO and there are only 25 of them in the world, or whatever. Even a rare car, let's say there are only three of them and you're going to have one chance to sell that car. What do you want to do you? You want to get people to be frothing at their mouth when buying it, right? That's why you hire an investment banker. So, you're trying to kind of stoke this notion of a fear of missing out that if you don't participate in this auction, then you will miss out on a strategic asset you'll miss away for the next 10 years.

[00:36:26] JM: I mean, in Looker's case, you're dealing with like the Google Cloud corp dev team. Aren't they sophisticated enough?

[00:36:32] TT: Yeah. I mean, they're looking at multiples. They're looking at comps the same numbers that we are. So it's not necessarily – The other thing in some of these public

disclosures is if like a really big company buys another really big company, you can actually see how the negotiations go and like who bid, what price per share? So if you go back and you read the – Microsoft, as a disclosure, when they acquired LinkedIn. So there is literally a blow-by-blow. There were initially four bidders, company A, B, C, D. I think Google was one of the, it's all speculation, because it's all confidential.

Yeah, and you can see like this was company A's initial business. This was company's B return. Then two of the four actually dropped out. Then within the span of like two or three days, the price per share increases by like 10% or 15%.

[00:37:17] JM: Wow! So this is like a formal process. It's not like person just calls the other and just says, "Hey! I'm thinking about this," and it's a range of price. It's like people are actually throwing out literal bids.

[00:37:27] TT: Later in their process, for sure. They're like, "Okay. It is going to be 32, whatever?" The CEO of the company that's selling says, "The floor might be $32." I'm just making up these numbers, "$32 a share." Then the initial bid comes in that $30 a share, because the initial buyer wants to get bid up. Everybody wants to feel like they got a deal. So no one's going to take the first price.

If you have one bidder, then it's just the CEO saying, "The board won't sell at a price below this," and it's the buyer only saying, "Hey, our board will only go to this price," and they kind of figure out whether or not that transaction will happen. But if you have multiple bidders, you've created an auction.

So what you do is you go to each one and you say, "Our best price that we can get from the market is this. Are you interested enough to beat it?" They say, "Yes," they're going to go back and forth, back and forth.

If you go through the LinkedIn disclosure, you can see how many – I forget how many times, but they went from four bidders to two, and then I think it was Salesforce and Microsoft, and you can look. I mean, I think the Salesforce offer, and it's not disclosed that it Salesforce. I'm just extrapolating. But the salesforce offer was a combination of equity and debt. Sorry. Of cash and

equity, and then the Microsoft offer was all cash. So there was some conversation about, which offer was more attractive and what would happen to the price point, the share price at Salesforce if they did such a big acquisition, all that kind of stuff.

Again, going back this idea of an encyclopedia of history, like wouldn't you love to read the blow-by-blow of all these big acquisitions? In some cases, for the very largest acquisitions, you can, even though it is masked or anonymized.

[00:39:00] JM: Someday. When is that going to make it into the encyclopedia of business? Will it ever make it?

[00:39:04] TT: I have to look at the limitations on that confidentiality agreement.

[00:39:10] JM: Are there any lessons that you learned about how an acquisition target should optimize that process? How you optimize the bidding up?

[00:39:22] TT: Well, you want to get as many people interested as you possibly can. I think it's a lot like fundraising. You build relationships with people as early as you can. Ideally, you create go-to-market partnerships with them so they can understand the value.

Here's what goes on in a buyer's mind. First, there are two parties involved. There's somebody within the business. Typically, a product person or a CEO, and then there's the corp dev team. The corp dev team are the people who are responsible for executing the transaction. They have a responsibility to the company for making sure that it's a fair price and all the details associated with a transaction and the documents and all that stuff are solid.

But the acquisition is typically driven more from the business. At the end of the day, it's an individual within a company buying or talking to another individual within a company. So, the transaction actually happens between, like I said, the CEO of the startup and the VP of a product within some big company. Human dynamics are really important. Like the VP of product within that company, if they're going to buy a multi-hundred million dollar or a billion-dollar company, that's sort of bet your career move, because you're going to the board and you're

saying, "I believe that if we spend $700 million to buy this business, I can turn that $700 million in value into 1.4 billion in value over 3 to 5 years."

In order to have the courage to be able to do that, you need to go and build a business case and you need to come with a financial model with certain number of projections and you want to be conservative and you figure out, "If we were to buy this business, what does that mean for our business?"

So, you need to get that person to have enough confidence to be able to do that, and the more that they've worked with a potential acquisition and the more that they've seen how the go-to-markets can be complementary, the more confidence they're going to have in that business case. So, partnering early, figuring out how to go to market together. If you do want to sell your business, that's definitely. Then building the relationships more on the business side. The corp dev are important relationships, but they're secondary to the persons ultimately signing up for the business case.

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[INTERVIEW CONTINUED]

[00:43:23] JM: You've been at RedPoint 11 years. How has the investment thesis of the firm changed over that period of time?

[00:43:31] TT: Yeah, I think there have been a handful of changes. I think the first thing is we used to be 50% consumer, 50% enterprise and now we're probably closer to two-thirds enterprise, one-third consumer. That maps more to the industry as a whole. One of the stats that blew me away when I first joined our venture, when I was looking at it, is 80% of IT venture dollars going to software into B2B and 15% to 20% going to B2C, but the press is the other way around. So one of the things that we've done is we've become more consumer.

I think this second thing that we've done is that venture industry is way more competitive than it was, say, 10 years ago. Even at the series A, the dynamics – It used to be that – Let's use a war analogy. So when the British were fighting the Americans in the Revolutionary War, they fought in a very orderly fashion. They would line up in rows. They would take turns firing their muskets. The first row would fire the musket and then they'd fall down and reload and then the second row would fire. It was very orderly, right? The Americans won the Revolutionary War because they used guerrilla tactics.

I think there's an analogy to be painted in venture, where 10 years ago, a startup would say, would declare, "I am starting a process today." We would meet at startup. We would do two weeks of work or three weeks of work of diligence. At the end of it, they would have a bunch of offers and they would run a very formal process that way. So, that's like the redcoats. That's like the redcoat way of running a venture process.

What we're starting to see now is there so much competition for the companies that are perceived to be the winners that people are starting. Same thing, we're trying to build relationships much earlier on. So in the case of MatterMost, we knew that company for 14 months before we actually led the series A, and we pretend to be on – We help the company as if we were involved in the company even though we haven't confessed it already. So we help that company hire for advisors. We help them hire head of marketing. Introduced a handful of customers so that they understand way before the process starts, what is it like to work with RedPoint?

So then at that point in time, when Ian came to us and was raising the series A, part of the meeting, we were the first term sheet, and he knew exactly what he was getting, and we had a lot of trust. We can't do that in every process, but it's definitely been a really significant shift in the way that we invest.

[00:45:56] JM: That sounds hard, because if you're moving earlier in the process in a time when there are more deals and more companies than ever, that's like more work for more companies.

[00:46:12] TT: Yeah, I mean it's all a funnel. So, you know me, I'm metrics driven. I allocate like – I'll create thousand leads a year and probably invest in two to four. What you do is you meet a company and you decide, "Is their mutual fit and should we be spending more time together?" Then you say, "Let me introduce you to one person that might be interested in helping you," and you get positive feedback, and then you get more positive feedback with more instructions.

So pretty soon, you get this kind of distillation effect of, "Wow! This is a company that seems to be getting the most residents from the perspective customers or people in ecosystem I know who care about this space." Obviously along the way, there are some companies where you kind of pitch in to people in ecosystem like, "That's not that interesting." So pretty quickly you kind of get a sense for, "I should be spending more time with these businesses, less time with these businesses."

[00:46:58] JM: I guess what I was alluding to is I thought there was just like way more companies than ever and that it was really hard to sort through the high-volume of companies, and it's also very hard to scale a venture firm to be big.

[00:47:11] TT: But the number of series A investments hasn't increase that much. It's maybe increased like 30% to 40% of the last five years. So, it's a lot, but is not doubling or tripling. The seed market went from – It grew 7X in the last seven years.

[00:47:27] JM: I see, but the A –

[00:47:29] TT: The A probably – I'm thinking back to my numbers. You know what? I think you're right. I'd have to go back and look, but I think it grew 4X, indexed at 2010 and then fell a bit.

[00:47:39] JM: Is this that term series A crunch, or is that something else? I remember that term being used a lot a while ago.

[00:47:44] TT: The series A crunch was a hypothetical issue that people were talking about, because the number of seed investments was exploding, but the amount of capital in series A firms remain the same, and I wrote a blog post on this. It turned out it wasn't the A that was the issue. It's the B. There was a series B crunch, because it turned out that the amount of series A capital actually increased, but the amount of series B capital remained relatively constant.

So the follow-on rates, so if you take a look at if you will get the probability, assume I've raised the seed round. What is the probability that I raise in A? Assume I've raised an A round, what is probably the raise in B? It's actually the probability of the second one that decreased more.

[00:48:26] JM: But is that still the case or –

[00:48:28] TT: That's a good question. I ran the analysis like two or three years ago. Probably worth running again.

[00:48:32] JM: Are there any investing leaks that you've plugged in the last few years?

[00:48:37] TT: Investing leaks?

[00:48:38] JM: Yeah, like errors.

[00:48:39] TT: Like leaks of information?

[00:48:39] JM: No. Like errors, like things you used to chronically make. As you're constantly improving, what has changed in the last couple of years where you're like, "Gosh! I wish I wouldn't have been doing that the last 8 year."

[00:48:51] TT: Yeah. One of the things that we have done is that whenever we have a partner meeting with a company, we vote on whether or not we should invest in that business, and we vote on a bunch of different dimensions.

So about five years ago, one of our partners had a suspicion that we had a particular bias within the firm. So, we created this voting construct to see whether or not we were consistently passing for this particular reason. For years, we ran regressions and there's no evidence of it. But we do keep an eye out for systematic decision-making bias.

I mean, I think we try to forget. If you look at the first wave of – There is this great tweet yesterday or two days ago talking about what is the most laughed at company of the .com era? It's pets.com. That little sock puppet, right?

Okay. There is a company that went public last week called Chewy. Yeah. It's like roughly a $10 billion company. It's the same business. It's just the timing was different. So, I think one of the consistent errors that's very easy to make is thinking an idea doesn't work, when it's just the timing of the idea isn't right.

[00:50:03] JM: Yeah, although that can be hard to generalize, because like that's probably going to be the case to some degree with crypto. But it's like – Okay. So, like crypto 1.0 or crypto ICO era. It didn't really work, maybe, but even though we know it didn't really work or maybe – I don't. Maybe it's still working, but I think to some degree there was irrational exuberance. We know at this point there were some irrational exuberance. We still can't really

do anything with that quite yet. We just know that when the next wave comes around, that doesn't necessarily mean that there's going to be a subsequent crash, I guess.

[00:50:36] TT: Yeah. I mean, I think there is this book by Carlota Perez, which talks about boom and bust cycles of technology and how you need these bubbles in order to lay infrastructure, and we did that in the .com era by connecting every building to the internet. We did it in the railroad era by connecting all the cities. We did it with highways, with Eisenhower.

So, there's one school of thought which I agree with, which is the first wave the .com era and the first wave the crypto era was laying a whole bunch foundation, right? Now you and I, we can talk about a blockchain and understand what it means. I mean, I remember trying to wrap my mind around what a blockchain was. It was difficult, and you and I have spent a lot of time in software infrastructure and we've seen a bunch of different kinds of databases and architectures and infrastructures. But it was difficult to understand, "Okay. What is it mean for a truly trustless system, and which business cases justify the use of that architecture?"

So, I think we've become as a society far more sophisticated when it comes to that. We've also now got really great infrastructure so that if you do want to build a system that requires a totally trustless database, you have it like. You can go and use it on Amazon and you can go build something on Ether. So now the question is, now we're less in the infrastructure defining phase of crypto. We've got a certain base level of infrastructure that's good enough to get an application off the ground.

I think now we're more in an application searching phase. CryptoKitties would be a good example. You've got a handful of different big banks that are trying to figure out which pools, which markets that they can automate or build infrastructure around that use crypto.

You could argue that Bitcoin is digital gold and it's probably the dominant. We'll see what happens with Libra Facebook. I think we're kind of in an app searching phase. Then what will happen is there'll be a handful of really great applications that will force the infrastructure to change again, because the applications will hit a sufficient scale and will put certain demands on infrastructure that the infrastructure cannot provide. Then we'll go back and forth. That's what happened in the web, right?

All of a sudden bandwidth gets faster. Okay, you have interactive web applications, web 2.0. That creates the need for higher and higher switching, which creates the need for mobile networks, 4G, 3G, 4G, 5G, all that kind of stuff. Then it goes back to the application. Now that you can pass a lot of data back and forth, now you can do videogame streaming, like the Google project area, which allows you to stream a console game. All of a sudden that opens that up. Now the hardware has got to get better. But the applications can get better.

So there is this pendulum that goes back and forth between the application and the infrastructure tier. So just summing it all up, I think we're in the application. The pendulum in crypto is in application phase, not the infrastructure phase.

[00:53:18] JM: Coming back to your analyses of public SaaS companies, we can't really predict a lot of the upside. There's emerging markets. It's very hard to predict how emerging markets will consume SaaS. To some degree, it looks like they'll probably be consuming SaaS the same way that Americans consume SaaS, which is very good for the incumbents, the Slacks and Zooms, because they're probably going to expand into India and wherever else.

We also can't really predict other sources of potential upside. It's hard to know how Box, for example, would take advantage of new breakthroughs in cloud and integration and other SaaS things. So if I'm a public markets investor, I am thinking, "Okay. My thesis is I want to invest in these SaaS companies. I want to invest in all these cool new SaaS companies." But I have no idea how to balance my portfolio of these different things. What should I be looking at? How should I create a balanced portfolio of different public SaaS companies?

[00:54:29] TT: Yeah. So, this is not an investment advice.

[00:54:31] JM: This is not an investment advice. Theoretically.

[00:54:33] JM: I mean, I think there are a bunch of different ways. I think the simplest way of looking at it is IT infrastructure. IT and software spending in the U.S. is about 1 1/2 trillion in spend, and about 300 billion of it has moved to these next-generation platforms. So if you assume two-thirds of that spend conservatively will move to the cloud, there is an opportunity for

the existing markets to be three times as big as they currently are today. So you could just say, "Hey, I'm going to make a basket of all the next-generation software companies," and that's my index. Totally viable plan.

You go to the next step and say, "I want to get really deep into these companies and benchmark them against each other and then by individual stocks." Then the third thing we're going to do is – And I've read about hedge funds, but there's a notion in hedge – I've never worked in a hedge fund. The other thing to do would be to make very explicit trades about, "I'm going to buy this one and short this one."

So I could be long box or short Dropbox, or long box and short box, because I think one of them is going to win disproportionate share in that market. Or I could say – What would be a good example? I'm going to – I mean, you can't really do this, but like I'm long Slack, but short Microsoft teams.

[00:55:49] JM: Hortonworks and Cloudera.

[00:55:51] TT: Hortonworks and Cloudera. I'm going to long Cloudera. I'm going to short Hortonworks, then they ultimately merge. So, kind of messes up between – But those would be like even more sophisticated ideas.

[00:55:59] JM: Right. Yeah.

[00:56:00] TT: Then the last thing to do would be to make some projection about what the stock is going to be worth two or three years out, and then you buy options on or whatever two months from now.

[00:56:08] JM: Right. A few questions about writing. What can bloggers learn from Ernest Hemingway?

[00:56:14] TT: Oh man! There's this thing called hemingwayapp.com. So one of the most important things I've learned about writing and speaking, which I don't think I did well in this interview, is to simplify the message.

The beauty of – I went through a phrase where I read almost every one of Hemingway's books, and the beauty of Hemingway is the simplicity. There is this app called hemingwayapp.com that I put most of my blog posts through, which goes through your post and tells you what's the reading level, and then identifies for you when the sentence is too complicated. It identifies for you when you're using passive voice. It identifies for you when using adverbs. So if you read Hemingway, there's almost no adverbs.

The whole thing is – And I read a bunch of books about grammar. The whole thing is if you're using a verb and an adverb, you should just strike the adverb and change the verb to be a better verb. I want to get together is a week – Why don't you and I get together next week? It's a much better thing to say why don't we meet? So, there are all these kinds of constructs that we use in daily life and speech all the time that when you read it's just noise.

Anyway, so I spent a lot of time trying to figure how to make my writing concise, and I don't do it every time. But it's super important. If you going to write, it's probably one of the biggest infringers, and Hemingway is probably the most iconic writer who is a master of that style.

[00:57:30] JM: If you had a year to write a book and you wouldn't have to do anything else during this year, what would you write about?

[00:57:38] TT: I would write a history of business.

[00:57:41] JM: You answered that question early on.

[00:57:43] TT: I would write a history of business.

[00:57:44] JM: But a year is like not long enough to write –

[00:57:46] TT: It's not. You need three or four years to write that book, and it would be like a multi-tome thing. But I would go and interview all the – I would start in like the five largest software companies and talk to all the CEOs of different epics and ask them, "Tell me about the

history. Tell me about the history. Tell me about the history," and do it at a high-level, like a five-year period. Not just like a one year period.

There are these books like *The Long Tail* that Chris Anderson wrote about Google, or *Inside the Plex*, and there are there like moment snapshots, which are great in that moment in time.

[00:58:19] JM: They don't age well.

[00:58:21] TT: Maybe, maybe not. But I think what you really want to – I'm more interested in like let's take a look at – I want to know what was IBM like in the 30s, or the 40s, or the era during the 2nd World War when they were trying to come up with machines to decrypt the enigma. The German encryption codes, right? What do that that look like and what kinds of innovations they take out of the 2nd World War and then start to commercialize? What was it like during the space era? When the servers, the big mainframes came out, what did that mean? Then the microcomputer and then the PC? How did they navigators be trends, right?

One of the things that's always fascinated me is the parent company of Matsushita, which is Panasonic. Panasonic is the child company of Matsushita. They have a thousand year business plan. That's pretty bold, but can you imagine thinking about it or looking at a business on that kind of a timeframe or like even 1000-year timeframe? I think it'd be fascinating. That's the book I'd write.

[00:59:15] JM: Tom, thanks for coming back on the show.

[00:59:16] TT: Thanks so much for having me. This is a lot of fun.

[END OF INTERVIEW]

[00:59:22] JM: Commercial open source software businesses build their business model an open source software project. Software businesses built around open source software operate differently than those built around proprietary software.

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