

Tech in investment management reimagined with Paul Kay and Thomas Schneider

- Part 1

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BRADLEY HOWARD (BH): Hello and welcome to *Tech Reimagined*. I'm Bradley Howard, and joining me today are Paul Kay and Thomas Schneider, two prominent figures in the investment management industry. We'll be discussing how technology is helping to reimagine investment management by looking back over the last decade, and I'll be asking my guests to make some predictions about the future of the industry. Paul, would like to introduce yourself?

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PAUL KAY (PK): Hi, I'm Paul Kay. I'm Jupiter Asset Management's CTO. I've been at Jupiter three and a half years and prior to that I spent four years at Barclays Wealth and Investment Management, and then about 18, 19 years at HSBC.

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BH: Welcome to the show, Paul. And Thomas?

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THOMAS SCHNEIDER (TS): Hi, Paul. Hi, Bradley. Thank you for having me at your podcast. My name is Thomas Schneider. I've been working the last five years at Quoniam Asset Management in Frankfurt. We are a quantitative investment manager. And I've 28 years' experience in the industry working in Germany, two years abroad in Switzerland. I've always worked in the investment management industry. Only for two years I switched sides and worked as a product manager at a software development company.

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BH: Thank you both and welcome to the show. Let's discuss a bit more about your business models. Both of your firms have got quite different investment approaches at their philosophical core. How would you describe the differences between each of your firms? Paul, do you want to begin?

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PK: Yeah, Bradley, so Jupiter is what we call a high-conviction active management asset manager. So, what that means is our fund managers select stocks through fundamental analysis and research versus – and Thomas will explain this better than me – but versus maybe a quant shop that does it very systematically.

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BH: And Thomas?

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TS: We describe ourselves as a fundamental active manager – quantitative manager. That means that we really use the data that you can collect from companies worldwide. And the fascinating part is that it is a mass of data, a huge amount of data. We start with 40,000 companies worldwide where we collect data and only if the data is good enough, long enough history, verify it. Companies enter in the investable universe, which is around 20,000 companies worldwide. And then the so-called optimiser comes into place and the portfolios are optimised and created, which ends up with portfolios with about 300 to 650 securities. And that, I think, is a difference to a

classical manager that we have this high number of companies that we analyse the high number of positions in a portfolio.

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PK: Yeah, Thomas, I'd completely agree. I would think if you look at Jupiter's funds, you're going to see anywhere from maybe 30 to 60 stocks in the portfolio. Around 40. Quite a common number. So, very different than the approach you described.

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TS: Yes, that is our experience and that is what we see. And it's obvious because when you visit CFOs, when you go to investor meetings, you cannot do this for hundreds of companies, so a portfolio manager can practically oversee in detail 50 to 60 companies.

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BH: How do these differences influence your technology strategies?

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TS: One part is what we call 'research'. But in recent discussions, we found that it might not be the right term. Maybe it's better to call it 'research and development' because it's not the research that we do and give the portfolio manager at hand that he might use it or not. Research creates the models, which are the basis for the optimisation. And so, that's in the process. And there we use a lot of data. So, there the technology strategy is to have all the systems, databases, servers to handle all this data. The other side is the implementation of the investment strategy. There we also use a lot of technology and have a very highly automated process.

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BH: Now we can't have a chat about technology in investment management without acknowledging the impact that the global pandemic caused by COVID-19 has had on the industry. So, Thomas, if you've got all this historical information from lots of different providers that's making decisions about which stocks to purchase and invest in, how did the systems cope with COVID-19?

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TS: Interestingly, very well. Mid of March, everybody went home, except for a small group that stayed in the office and even our traders traded from – are still trading from home. From my point of view, that was only possible because we had this highly automated process. So, after the optimiser creates the optimal portfolio there is a list of purchases and sales. And does this fit into auto management system and from the auto management system to a trading system, execution management system, and all of the confirmations downstream until settlement of the trades, everything runs through interfaces. And so, our teams could go to the home office and manage the portfolios as if they were in the office.

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BH: And Paul, how has the technology response been at Jupiter?

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PK: I think in some ways very similar to what Thomas said. I mean, we – in the middle of March, like many firms – sent all employees home. The challenge for us was that we're very much an office centric culture. So, you know, the technology and the architecture has been designed for someone who's actually coming in and sitting at a desk. So, whether it be someone like me or someone like a dealer who's got a very specific setup. So, replicating that literally over overnight

was our first challenge. We got a little bit lucky, I'd say, with our dealers and traders in that we had set them all up to work from home in a MFA-compliant way about a year ago to cover US market hours. So, if we hadn't done that, the challenge might have been really great in terms of their ability to sort of trade and execute and support the fund managers, but also to be compliant with the regulation. And then, you know, firm wide, similar challenges. What I keep saying, you know, loud as I can, if you like, is that from a support perspective we essentially support one central office in London and then a few small sort of satellite offices, if you like, in different parts of the world. And we literally overnight had to support 500 offices. And what I mean by that is, you know, there's 500 employees working from home and each home is slightly different. That support was a bit of a challenge. And then sort of last thing that is, you know, we had to rapidly introduce some new tools. And I think like a lot of firms, you know, the introduction of things like Teams and Zoom, if you weren't using that to any great extent was an immediate challenge and something that was absolutely necessary to ensure that you could collaborate internally properly, but also you could reach out to your clients and, you know, other stakeholders as needed in a way beyond just a telephone.

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BH: So, your software heavily reliant on technology already, how do you think that's fundamentally changed the attitude and the culture of the organisation since COVID-19?

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PK: Bradley, you mean towards like technology?

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BH: Yes.

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PK: Yeah. I think for me, the great thing about this is things sort of technologists or CTOs or CIOs have wanted to do – and have been struggling – have now become obvious to the boards and the executive committees. And I often say to people that I don't think there's any company on the planet that can be successful without technology. And clearly you can debate that point. But I think what's happened now in the crisis is that statement I've just made has become very, very clear to the boards and the executive committees if it wasn't clear already. And so, I see kind of a great acceleration of you know, technology – you know, spend, investment, acceleration of deployment. So, whether it be the collaboration tools that I've just mentioned or maybe digital marketing in our case. But again, just a continued acceleration of that. I think that's a fundamental change.

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TS: That's also what I see. However, regarding the connectivity, video calls, virtual meetings, but that is not specific to the investment management industry. That concerns every company. And there I see the huge progress. Regarding the investment management industry, I'm a bit concerned that people might wait that COVID-19 is over and we can use the old processes and the old technology again. So, there I don't see this momentum for the specific technology.

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PK: Yeah, Thomas, I think that's an interesting point, because I would think if I look at any one of our fund managers and think about their investment decision making process – and again, we're not a quant shop – but I don't think that process has changed very much through the crisis. And I don't think it changes very much going forward. Or if it does change, I don't attribute the change to the crisis.

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TS: Yes. Well, but maybe it has to change when you look in the future. Maybe there will be other operating models and other ways to manage portfolios. So, I mean, one standpoint is here that there will be passive mandates and investment managers like us, because there you have really digitalisation. And for the others there might be not much room. That's a question for the future.

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PK: Yeah, Thomas, I mean, actually what's interesting about that from my perspective is you kind of get into the debate, you know, the passive/active, you get kind of into the human machine. And I don't know about you, but I kind of think the winners are the ones that combine the human and machine to the best of their ability and to the best extent.

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BH: So, you both talked about automation and human and machine as a trend in the market. What other main technology trends do you see? And what do you consider to be hype versus delivering real, tangible value?

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PK: I would kind of say cloud, cloud, cloud, cloud, cloud. And I've been saying that for a couple of years now. It might sound quite simplistic, but if I think if – let's say the three of us, if we started a business tomorrow, there's no way we're going to go and lease some space in a data centre, buy some servers, rack them, you know, configure them, etc. We're just going to go provision services. And then if I look at Zoom, right? If you kind of think about Zoom from the standpoint of the company itself – overnight, the demand for their product and service, you know, skyrocketed and they're able to scale their business because they're in the cloud. And then if you look at it in terms of, you know, people adopting it – so, our company, maybe Thomas' company, other companies – we don't have to deploy that into our data centre on premise, right? We can just stand it up immediately. Very, very little time to do so. Maybe a little bit complexity if you want to integrate it into your own platform, maybe with, you know, Microsoft AD. But basically, you're up and running. So, I think it's cloud, cloud, cloud, cloud, cloud. If I answer the hype one – and this one might be a little bit controversial – but for me, 5G has possibly had a bit too much hype. I say that for two reasons. So, one is I don't think the evolution stops here. So, there's going to be a 6G and 7G, and I'm not sure if 5G is the one that's going to, you know, be the game changer. So, it might be 6G, if I put it that way. But the other thing is a personal experience. So, at the beginning of the crisis I decided that I needed a second Wi-Fi network in my house. And so, I've got a fibre broadband network. You know, I've got my wife at home and two kids. And I wanted a bit of resiliency and I just wanted my own network, if you like, to protect what I'm doing from a work perspective. And I got a 5G hub. I was so excited about it, but ultimately disappointed. You know, you have to have it by a window, which I get. Technically it makes sense. Sometimes 5G's on, sometimes it drops down to 4G. Performance was good, but, you know, the download speeds were good, but the upload speeds were terrible. And it might have been that provider. And then who knows? Who knows what the trade wars do to 5G? So, a few thoughts from me there.

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BH: Yeah, definitely. And you probably didn't have massive contention ratio on the 5G network at this time with it being so early on.

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PK: Well, on the network itself, but certainly not from the perspective of my house, because it was my private network. So, no contention there whatsoever. [LAUGHTER]

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BH: And Thomas, do you have anything to add to the technology trends?

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TS: The cloud, I think there we are already. We use cloud services for our research team when they have a new idea and are trying to extract factors and need to analyse huge amounts of data. We rent extra cluster for a certain period of time where we need this processing power. And then we reduce it again to what we need to normal the time. So, there we are very flexible. And it's not only regarding business growth, as you described it, Paul, regarding Zoom, where you can expand your business. It's simply day to day business that you are flexible. You do not have to pay for a huge server farm that you only need every two or three months. That's really great and wouldn't have been possible in past times. Maybe regarding technology and hype, what I would like to see, but I don't know when it will happen is more – I always call it 'network and protocols'. Like, Swift is a network and a protocol. If it comes in a combination, you can make great things. And up to now, I think it is still too much variety, too much different things. You have a standard, but it is not followed. And that costs really a lot of time and money to set up automated processes to set up interfacing connectivity.

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BH: And Thomas, specifically on the quant side, do you think that quantum computing is going to be a reality in, say, the next 10 years?

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TS: There are different opinions in our company and me personally. Difficult to say. If it comes, it will change everything. And that is its capabilities to cracking encryption. So, that's really difficult to imagine what will change. I don't think that we will see it soon.

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BH: In such a package implementation dominated industry, where do you see the ability to differentiate through technology? Let's start with you, Paul.

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PK: If you think of something like our firm, Jupiter Asset Management, you know, we have to implement packages, right? There's no point in us building an OMS or an IMS. There's just no value-add. And so, we will be sort of package kind of dominated, if you like, just in terms of your words. For me, it comes down to the data. It's very similar to what Thomas said about the way they look at data, I think. And it will be making sense of the data, gaining insights from the data, whether that be for the investment management process or maybe that to look at the sales side of the business or the human side of the business. But for me, it'll be the data and what you do around the data. So, maybe in terms of skill sets we'll onboard in the future more people maybe with sort of Python skills, if you like, that can kind of crunch through that data. We're making quite a big investment into data science. So, our data science is looking at that data.

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BH: Interesting. And from your side, Thomas?

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TS: Our situation was different, though. The company was founded 20 years ago. And from the beginning, there was clear for the founders that we develop our systems in-house ourselves. So, we really did what nobody did – developed an in-house auto management system, position-keeping system, nearly everything. We have Windows system for investment compliance, but

everything else we developed in-house and that supported very good and very reliable our quantitative investment process. However, it has now reached the age where it is too expensive to maintain it and to develop it further. So, we are currently in a phase to redesign it and to focus on the core, where we say that is our expertise, that is our company value, knowing how to optimise portfolios. We will use packaged software for the area that starts off the executions or what we call 'post trade processing'. We are currently in middle of the project.

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BH: And how's that project going? When do you think that's likely to be finished?

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TS: The difficult part is here that we are still in the discussion how far we should go with Windows software and what we need to develop in-house also in the future to keep our uniqueness. But that is not the difficulty. I think that is necessary to have a successful project that we now have this discussion. That's very exciting. I think it's very important. But it will be the foundation for the next 10 to 15 years.

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BH: There's been an increased focus on ESG, which stands for environmental, social, and governance, and the wide-reaching implications of responsible investing. To both of you, is this currently on your technology roadmap? And if so, how are you looking at it?

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PK: We are taking a look at it and it is on our technology roadmap. And what we've done is we have a head of corporate governance and he's joined forces with our head of data science. And we've built what I think is actually quite unique. It's essentially a portal. And if you can imagine this, a fund manager can go in and his portfolio will load. So, let's say he's holding 40 stocks. He will get a graphical representation of that versus a set of ESG factors. So, let's say there is 10 ESG factors that he's going to look at and 40 stocks. It'll basically give him a grid that looks a bit like a heat map. And he'll be able to see, let's say, climate. He'll be able to see, you know, Company X is red, amber, green on climate, and you can kind of click on that and drill down and get some information on that. So, news stories or whatever analysis has been done. And the way we're tackling that is very much through data. And so, we're consuming what we would probably classify now as alternative datasets, bringing them into our organisation, correlating those to the holdings in the funds and then the fund manager has this very nice sort of real-time view of where he stands from an ESG perspective. And the great thing is the sort of chief investment officer – so, the CIO – he's got that in aggregate in terms of all of the Jupiter funds. And so, we're really, really pushing hard in that space. And I think it's a great example of where technology and data can surface, you know, the issues and the concerns that require attention to the people who are actually making the investments in the company.

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BH: When you talk about alternative datasets, do you mean previously you wouldn't have used those data providers in the financial industry? They might come from outside the financial industry?

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PK: I think we probably need to move away from that term, even though I've just used it. Essentially, certainly in our firm, but I think across sort of financial services at the moment and asset management in particular, when you think about datasets, you think about your traditional market datasets. Now, when you think about alternative datasets and you think about sort of, you

know, geolocation data, as an example, credit card receipts, you know, scraping websites, and in terms of a couple of vendors that we're using, we've kind of put them in that bucket. There's a couple of vendors that are pulling together ESG metrics – some on a lag, some with a leading indicator, etc., and we're just bringing it all together, kind of merging that. Internally, we call it sort of fast ESG and slow ESG indicators and they're just merging out together and presenting a view.

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BH: And Thomas, what are Quoniam doing around ESG?

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TS: That's interesting because ESG, I think was made for quant or quants were made for ESG. As Paul mentioned, that is based on data. And I would like to add that this is a multidimensional character of ESG is a reuse ESG ratings that run into our models to optimise a portfolio so we can not only create a portfolio whether we want to achieve a certain alpha, but also certain ESG score within the optimisation that we also use ESG metrics where we collect carbon dioxide scope one and scope two data. We collect data about the amount of recycled waste, discharged water, and things like that – a lot of ESG metrics that run into our databases and models. And we also use SDG goals to create portfolios and where we can calculate and demonstrate that we can achieve goals with our portfolios.

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BH: Definitely. Yes. Let's move on to a fun quickfire round. I'm looking for some very short answers from both of you. Let's start with Thomas. If you could invite one person to your dinner party, dead or alive, who would it be and why?

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TS: If I had to select one, it would be Simon Sinek, because I like very much his way of thinking. Obviously, we go to work because we want to earn money, but that's not the only or the main reason. And when you listen to him, he did – it was interesting ideas about what is really motivating us and inspiring and not in the way like a cookbook, but really an answer and great for listening.

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BH: Great. And Paul?

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PK: Can I give you two names, or do I only get one?

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BH: You can have two on this special occasion.

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PK: Aha. So, one that really just popped into my mind was Muhammad Ali, and my father was a boxing fan. I know boxing is not everybody's cup of tea, but I kind of grew up watching it, fascinated by him, read many of his biographies. Fascinating individual. I mean, you know, questions I have for him today would be, you know, what does he think of the recent movements around, you know, Black Lives Matter? I'd love some insight into his decisions around the Vietnam War. So, he'd be one. And I think the second one, as you've given me a second seat, would be Elon Musk. And again, he's probably not everybody's cup of tea, but I think what he's doing is quite extraordinary. And I'd just love to sit down and ask him what motivates him and just talk him

about some of his ideas and where he thinks technology's going to go in the future. And I think that just would be a fascinating conversation.

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BH: Yeah. Also, would be interesting to find out if he really thinks everything is real or not. But moving on. Moving on. [LAUGHTER] So, Thomas, what is the most innovative application of technology you've seen in the industry?

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TS: Actually, I don't know. It's not – I thought about this question, but I don't know. Currently, I don't see really fascinating, innovative – it's rather the other way around. I'm really excited about what things finally work. So, we talked about these things, yes? But now we come into a situation where we can say it really works in the investment industry. And when I compare it and I think about my personal technology, when I think 10 years ago, what a lot of time you spend to synchronise your contacts, your emails between your phone, your PC, your laptop, and that is all history. You use this and you do not think about it. And that is my impression. Looking at our industry, we have a lot of things that now finally work. So, I think, simply work and you do not have to think about it. But new innovative things I think will have to come.

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BH: Right. I do love that answer. That's the first time we've ever heard that it's 2020, and it's just nice when things actually work in technology. Paul, what do you think is the most innovative application of tech that you see?

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PK: A good friend of mine is the CTO of the International Committee of the Red Cross, and we get into some very interesting debates about, you know, whether what he is doing has more value than what I'm doing. And he always drops in sort of the killer line where the technology that he's delivering is saving people's lives, which is a very hard one to sort of defend in terms of, "Yeah, well, I'm a – I'm helping somebody get a little more alpha". What I've seen from him that really struck me as a great use of technology is the delivery of blood via drones in Africa. And so one of the problems the International Red Cross had is, well, how do you get blood from point A to point B through jungle, war torn countries, etc., in a timely manner where if you put it on, let's say, you know, an all-terrain vehicle with a couple of nurses in the vehicle, it may or may not get there safely and in a timely manner. They're delivering blood with drones, and I just think it's fascinating. You know, reading about maybe Domino's, you know, thinking about delivering pizzas with drones doesn't quite have the same impact. So, for me, this one is just a great use of technology that it's lifesaving.

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BH: Yeah, well, you can't argue with that. And Thomas, what's your favourite mobile app?

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TS: My favourite mobile app. It's not only the mobile app, it's available on all platforms. So, that is Evernote. There I collect all my research on my ideas, irrespectively whether I sit in front of my PC or I am commuting. I always have access to what I collected.

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BH: And Paul?

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PK: Mine's probably similar, actually. Maybe a bit sad. Mine's Google Keep, which is Google's version of sort of, you know, short lists and that sort of stuff. And I'm always tapping into it. I've probably got too many lists than I'll ever be able to manage my due. But same idea as Thomas, right? Just something that's readily available. Type a few thoughts into it and come back to it another day.

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BH: Right. I also use Google Keep. It's absolutely fantastic.

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PK: Yeah.

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BH: In part two, I'm going to take a closer look at how Paul and Thomas started their careers and we'll look back at how the industry has changed over the past two decades. Don't forget to like this podcast and subscribe to automatically get our new episodes directly on your device. Thank you.