



Capturing the Past, Inspiring the Future

Tom Ilube CBE

Interviewed by

Richard Sharpe

2nd March 2021

By Zoom

Copyright

Archives of IT

(Registered Charity 1164198)

Welcome to the Archives of Information Technology where we capture the past and inspire the future. It is Tuesday 2nd March June 2021. And I'm Richard Sharpe, I've been covering the IT industry since the 1970s. It is our objective to inspire people and I think you must be a piece of wood if you're not going to be inspired by the story of the man making his contribution to the archives today, Tom Ilube, CBE no less.

Tom, you were born near Richmond in Surrey, is that right?

That's right, yes, yes.

Tom, you were born near Richmond in Surrey, is that right?

That's right, yes, yes. My father was Nigerian. He came over from West Africa in 1956 or 57 with the army. He joined the then West African part of the British army and came over to be trained up in Harrogate in north Yorkshire, and then trained as an electrical engineer in the army and then subsequently ended up in London and that's where he met my mum and I was born.

Right. And this was in July 1963.

That's right, yes.

Correct?

That's correct.

You won't remember much about it, but that's the date that I've got anyway. 1963. Very interesting year for the IT industry, particularly the computer side of it. IBM launched the 360 range, range of compatible computers with peripherals that were compatible, there were several operating systems. The consolidation of the British computer industry was starting, ICT taking over Ferranti and English Electric merging with LEO, the famous LEO, out there from west London, Cadby Hall, Lyons Electronic Office. And later on ICL launched its own, ICT launched its own range.

And about this time there would be about 25,000 computers in the world. 25,000 computers. Things are a bit different now.

Absolutely.

Did you stay, did you go to school in England?

Yes, yes. So I went to school in, so we moved to Sunbury just down the road, and I went to school there till I was about seven. My dad had been working for the BBC, he was one of the first black engineers at the BBC, a fascinating time in the sixties, as you can imagine, and also for a white woman and a black man with a mixed race child and so forth, it was just a fascinating time. Anyway, he got asked to go to Uganda in East Africa to help establish Ugandan Television. So he went over there and I went with him, and this was in about 1969, so I would have been about sort of six or seven years old, and we lived in Uganda for three years, which was actually at the time that Idi Amin, the dictator, took over, so it was a very turbulent period. We ended up having to escape out of Uganda through Kenya and back to England again. So I arrived back in England, I think it must have been in 1971 or 72, something like that, and then carried on at school in Teddington. And then later on went to Nigeria.

This disruption of your schooling, did that affect you in any way?

Erm, I'm sure it did. I mean I often say that I never started and finished at the same school. I was constantly coming to a new school or leaving a school halfway through and being the new boy all over again. I think, you know, no doubt a psychiatrist, or psychologist would have a field day with it. I think for me, what it gave me was the ability to go into new environments, figure them out, establish myself, you know, get on with people and, you know, and I think that's been quite useful to me over the years.

So this adaptability that you have...

Yes.

... is part of it?

Yeah, absolutely. I think adaptability across different groups of people, across different cultures, you know, from Richmond to Uganda in East Africa, back to Richmond again, then off to Nigeria and then back to the UK, you just get used to moving in and out of different cultures.

[0:05:11]

May I suggest that you're also quite restless?

[laughs] I think that may well be the case, yes. So I think my career reflects that as well, yeah.

There's nothing wrong with that, that's good isn't it, that's energy.

Yeah. [laughs] Yeah, I mean I think, you know, it can work both ways. My younger brother, he joined Shell after he qualified as an accountant and has spent the last, I think, 25 years at Shell. So yeah, our upbringings were pretty similar, but I've jumped from company to company, from venture to venture and he's just solidly stayed in this one venture. I think what I do do is that my home life is very calm, very stable and, you know, now sort of exciting and crazy, and therefore I think having that sort of certainty in a way gives me permission to go out and do all sorts of different exciting things.

Are you working standing up?

I am. [laughs] I stand at my desk. Yes, yes, I almost always stand up working, yeah.

You and Donald Rumsfeld.

[laughs] I'm not sure that's the case. I must find someone who I'd like to be more associated with who stands up as well. [laughs]

It's very good for your back, I understand.

Yeah, yeah.

Did you enjoy school?

Yes, I did. I always enjoyed school, you know, at secondary school I was a rugby player, you know, part of that crowd in the seventies. I played at my local club as well, London Welsh in Richmond. And I used to ice skate. I loved science, my elder brother, sadly passed away now, was a chemist - a scientist - a chemist, I did physics. Yeah, I definitely enjoyed school, yeah.

And you moved from Nigeria with your parents – sorry – you moved to Nigeria with your parents from Richmond, yeah?

Yes, yes.

What was the move to Nigeria for?

Yeah, so my father, he was Nigerian and he had moved back to Nigeria and decided that that's where he was going to live the rest of his life, having spent 16 or 20 years abroad in different countries, and then he wanted us to go and stay with him. Yeah, I was 14 at the time and it was a difficult move for me, because I was sort of a typical London teenager in the mid-seventies, playing rugby and ice skating and then there I was going off to Nigeria, so that was pretty hard for me. And I didn't like it at all to start off with, in fact at one point I tried to escape and get back to England, but that didn't work. But then I kind of settled down and said, okay, I'm here now, let's make the best of it. And actually, when I shifted my mindset and said okay, this is where I am, let's get into it, I made lots of friends, I had a tremendous time, learnt a lot. And then when I finished university when I was 21, I came back to England again.

You went to Edo College – E-D-O College – in Benin City.

Yes, that's right.

Which is in the south-west of Nigeria, near the coast, I understand?

Yes. Yes, that's correct, yeah. So Edo College, it was a good school, it would sort of be the premier school in the region at the time and my father was very proud that I was there. I didn't really appreciate how important it was to him, because he grew up very poor, you know, extremely, from an extremely poor background in the village and so forth, and Edo College and some of the other colleges were sort of modelled on the great British schools and it was the real sort of treat, you know, it was really special for people to get into them. So the fact that his son had got into this, this school with a great reputation was really important. Sadly, at the time, I didn't really appreciate that, I was annoyed about being there, I didn't want to be there, so it made no difference to me. But actually, over the years, you know, some of my closest friends over many years come from my Edo College days.

[0:09:58]

You had previously passed your eleven-plus had you, in England?

I had, actually no, I hadn't. I had done my, I'd done exams to try and get into a school called Hampton Grammar, a local school called Hampton Grammar, but they turned me down so I didn't get in there, so I went to a different school called Teddington Boys' School, which at the time - now is a really good school - at the time it was a pretty tough old school. It was a sort of 1970s comprehensive all-boys school and a tough place, but I was a tough young lad so I got on perfectly fine. [laughs]

You can look after yourself, as they say?

[laughs] Absolutely.

I can see the Englishness in it. I had a look at the website of Edo College and the fact that it calls itself 'College' of course means Eton and Edo College, and also the uniforms and with your academy – which I'll come on to later – you also have uniforms there.

Yes.

And houses.

Absolutely.

The old style houses. Let me just mention them. This will give you a flavour while you're watching this, the audience, of what type of academy it is. One house is called Berners-Lee, another one is called Gates, another one is called Lovelace and the fourth one is called Tesler. So we know what all that's about, I think, don't we?

[laughs]

You went on to university in Nigeria, yeah?

Yeah. Yeah, I did applied physics, which again, I really enjoyed, I've always been fascinated by science and physics. In fact for my honeymoon later on, my wife allowed me to choose where we would go on our honeymoon, so I chose for us to go to a science institute in New Mexico, which rather surprised her and wasn't [laughs], wasn't the choice she was thinking of. But we had a tremendous time in Santa Fe and we visited Los Alamos and we visited the Santa Fe Institute and so forth, so physics has always been part of my life and that's what I studied at university.

Did you go straight from secondary school to university?

Yes, yes. I went straight to university, yeah.

Okay. And what university was this? University of Benin?

University of Benin in Nigeria. There was – and in fact, that's where I first – this is 1980 to 1984 – and that's where I first came across a computer in the sense that there wasn't actually, well, I say I came across a computer, there was allegedly one computer in a building somewhere and we were told in that building is a computer, and we would write our programs and give them to the computer man and he would take them away and then he'd come back the next day and say, your program didn't

work. So that's as close as we got. And actually, a friend of mine, me and a friend of mine, we did sneak over one night to this building and sort of try and look in the window to see this thing, whatever it was, but we couldn't see anything, so we reckoned they sold the computer and were just pretending. So I never actually, I never actually saw a computer in Nigeria, it wasn't until I came back to England and bought myself a ZX Spectrum that I actually laid hands on a real computer.

What programming language were you using then?

Then, gosh, what were we using at...? I can't even remember what we were using at Edo, at University of Benin. No, I can't remember. I know we had the cards and we were writing out the programs on cards, but gosh, I can't remember what language we used. I'm going to check that.

What kind of application was it?

Oh, they were just simple, you know, how to make it do calculations, type of applications, nothing beyond that at that stage.

Right. Then did you come back to the UK? After graduating?

Yes. Yeah, so after graduating, 1984, I came back to the UK and decided and sort of got a feel for what was going on and there was a lot about computing and IT and so forth and I decided, right, that's the career I'm going to get into, and set about trying to get a job in the computer industry. Did odd jobs to start off with, but then I found a book, a directory called *The Computer User's Yearbook* which had all the company, the main companies that had computer departments in them across the country and I just thought oh, this is easy, I will simply just apply to all of them. So I started at the letter 'A' and I applied to every company in the UK in *The Computer User's Yearbook* that began with the letter 'A', and they all said no. And then I started on the 'Bs' and got to British Airways and they gave me a job. So that's... but I was ready to go all the way to Z and back again. [laughs] I applied to hundreds, hundreds and hundreds of them and I just knew that eventually there's going to be, I'm just going to come across a company that says yes, so that's all I need to do, just keep going until

one of them says yes. And I didn't even have to go past 'B', British Airways gave me a job and I learnt how to be an assembler programmer at British Airways.

[0:15:48]

What was the application?

It was airline reservation, airline reservation systems, yeah. And we were writing them on IBM mainframes, IBM 370 mainframes, so 370 assembler and it was its own operating system as well, so not exactly transferrable skills. You could basically transfer from one bit of British Airways to another bit of British Airways. It's astonishing to think that an airline would basically have its own operating system, but it had to operate extremely quickly and sometimes we would write, just write direct in machine code instead of assembler, because we wanted to make the programs go a bit faster. And they were completely unmaintainable. You know, you would look at someone's code who'd been there before you and it was just a mix of uncommented assembler with bits of machine code and you were supposed to figure out what on earth it was doing. It was astonishing.

Where were you based?

So we were based at Hatton Cross near Heathrow. I still lived in Richmond at the time so I just used to drive out there, and yeah, that's where we worked, which was great.

A big programming operation, was it?

Yeah, yeah, a big programming operation. British Airways at the time had an amazing training scheme. You had to do an aptitude test to get in. I think I was really lucky, I was interviewed, I mean I did well, I believe, in the aptitude test, obviously, otherwise they wouldn't have taken me, but I wasn't a typical 1985/86 British Airways person and there was a woman called Cindy Perry [sp?] who I've lost contact with, I'd love to find her. But I think she was a team leader and she interviewed me and she, for whatever reason, just thought this is an interesting chap, let's give him a shot. And I think it really was one of those kind of sliding door moments that there

was something about me that she thought, actually, interesting, give him a go, and that set me off on my career, so I'd love to find her and thank her because I think I can trace everything I've done in my career back to getting into British Airways and that moment.

And you enjoyed it?

Yeah, yeah. I enjoyed it, I enjoyed the intellectual challenge. I mean programming in assembler on mainframes, trying to make sure, your programs had to fit in 1k of memory, otherwise they'd get kicked out, they had to be fast, etc, it was extremely intellectual stuff and you were right down at the operating system in the machine code and so forth. I wasn't - I was good at it, I could definitely do it - I wouldn't say I was brilliant at it, I wasn't the sort of absolutely amazing programmer and I thought to myself, at the time there was a lot going on in the City of London with the Big Bang and all the rest of it and a lot, you know, this is kind of mid, late eighties, sort of '86, that kind of era, and I was sort of drawn in that direction. So even though I enjoyed it and I really liked British Airways, there was the lure of the City and I wanted to get into the City and I ended up moving to the London Stock Exchange.

[0:19:28]

Where you were a system designer, not just a programmer.

Yes. Not just a programmer. So I'd gone up. Well, I don't know whether programmers these days, I'm not sure you would consider it going up the tree, but back then it sort of felt like the progression was from programmer to systems designer to systems analyst to project manager, etc. Now I think, you know, the sort of the rock star programmers you might stay in programming all your life. But yes, I moved to London Stock Exchange and I became a systems designer and then progressed from there.

You could have had a career in BA couldn't you?

Yes, I could have, I could have and I know people who...

But something in...

... I know people who spent the whole time there.

Something in this 20 or so year old Tom said, no, no, no, no, no thank you, and you moved again. So you moved into – there's a theme here you see, I'm warming – you moved to the Stock Exchange.

I moved to the Stock Exchange, so the restlessness and the, I mean I think, I remember there was an element, one of the big benefits of being at British Airways was that you got cheap flights and free flights. You could go anywhere in the world for 10%, I think it was, of the cost if there was a free seat on the plane, but I had spent a lot of my earlier life flying around to places I didn't really want to go to and feeling sad that I was leaving home and so forth, so I didn't want to go anywhere, I wanted to stay here. So that side of it wasn't an attraction and I was an ambitious young lad, so off I went to the Stock Exchange and yeah, that was a fascinating time, it was a real sort of change in the City, pinstripe suits, but the Americans and the other international companies coming in because the City was changing, a lot of excitement, a lot of energy in that kind of late eighties period.

Are you driven by money?

Not really. I do want to be comfortable and there was always an element of making sure that I was comfortable. I didn't want to be in a position where, you know, I was doing something I didn't want to do, but I just had to do it because I had to earn that monthly salary and pay those bills. I wanted to get myself out of that so that I didn't have a mortgage and I had money in the bank, and whether I kept my job or lost my job didn't really make any difference. Yeah, so I definitely wanted to get myself to that point, but then beyond that, you know, I don't really- my wife is continuously complaining about my scrappy clothes and why don't you buy a new suit, for goodness' sake, you can afford it, and so forth. And my broken-down old car and that sort of thing. [laughs] So that's my relationship with money really.

What systems were you designing at the London Stock Exchange?

They were settlement systems. So after the trade is done, how do you settle the transaction to make sure that the shares go in one direction and the money goes in the other direction and all the rest of it. We were working on a system called Talisman, which was the Stock Exchange system at the time, and there was a huge project called TAURUS that ended badly, that was all about moving to a different type of settlement system. There had been a sort of two-week settlement period and the whole world was moving towards rolling settlement and there was this big change going on. But it was a massive project, there were so many stakeholders in the City with so many different views and all the rest of it. It eventually, the whole programme got closed down eventually and the Bank of England stepped in and took things over and created a new platform called CREST and so forth. But that was the one...

Why did TAURUS fail?

[laughs] Oh, I think you'd have to ask some of the... I was just a little oik at the time. I think it probably comes down to continuous scope creep, you know, the Stock Exchange didn't have the authority and the power to tell its member firms what was going to be in and what wasn't going to be in, it was sort of getting pulled this way and that with new requirements and changes coming in. The Bank of England, when it stepped in, just had a whole different level of power and authority at the time. It simply just said, right, we're going to do these three things and that's what we're going to do, and then everyone sort of sat down and kept quiet and then they did them and it worked. Whereas the Stock Exchange had 30 or 50 things that it had promised different organisations were going to be in there and then they weren't going to be in there and so forth, it just kept going round and round, couldn't make progress, couldn't cut through.

Too many stakeholders?

Yeah, I think so. Or not having the ability to really manage those stakeholders, yeah.

[0:25:07]

How long did you stay at the Exchange?

[brief loss of connection]

Oh my internet connection is unstable! I think that's a comment on me. How long did you stay at the Exchange? [pause] No...

No, no, I've got you. Yes, yes...

How long did...

So I think you said how long did I spend at the Stock Exchange?

Yeah.

Yeah. I was actually there for two stints. So I spent a couple of years there and then I left to do an MBA, a Masters in Business Administration, at City University Business School. I was feeling that I didn't have a British academic qualification. I had my Nigerian science degree and that wasn't getting me into conversations that I wanted to get into and also I wanted to broaden out my business knowledge as I'd sort of determined that I wasn't going to be a sort of hands-on technical person, I was going to be a broader business person with technical skills. So I decided to go off and do the MBA, which I really enjoyed at City University in '87/88. And then I moved into the consulting world with a number of different companies, with Hoskins that became Capgemini, and then on to PricewaterhouseCoopers, at the time it was Coopers & Lybrand, or Coopers & Lybrand Deloitte, it's now PricewaterhouseCoopers. While I was at PricewaterhouseCoopers, I got on a project sent back to the London Stock Exchange to work there again. So I had two stints: one as a Stock Exchange employee and then again as a consultant back at the same place, in fact many of the same people that I worked with were still there when I went back as a consultant, so they teased me a lot that I was coming back in a shiny suit and trying to charge them large amounts of money. [laughs]

But basically doing the same thing.

Absolutely.

Did you enjoy consultancy?

Yes, I did. I learnt a lot through that period, you know, I got involved in a lot of different companies in different countries, both with Hoskins and with PwC, with Coopers & Lybrand as it was. I worked in the Middle East in Abu Dhabi, I went over to the States for the first time on projects over there, different parts of Europe, so it was, in all I think I was in the consulting world for seven years or something like that and, you know, I really learned a lot, I learnt how to get up to speed really quickly on a new project, become part of a new team, how to present, how to facilitate, manage projects, grow confidence really. I've always been quite confident as an individual and so it was sort of honing that and knowing that you could throw me into any situation, you know, a partner would say, Tom, we've won a project in United Arab Emirates, you need to go next week and you're going to work on cheque clearing systems. And I'd never been to the United Arab Emirates, I didn't know anyone there, I didn't know much about cheque clearing systems, but I would still say, righty-ho, get my passport and off I'd go and make it work. And that became incredibly useful to me further down the track when I started my entrepreneurial career.

Where were you based when you were here?

We were at, I was still living in Richmond, but we, the jobs were at, Hoskins was near Farringdon Station in the City and Coopers & Lybrand at the time was at Plumtree Court which was near Blackfriars, and then later on my group moved to Embankment Place.

The big building over Charing Cross?

Yeah, yeah, yeah, so that's where we were.

[0:29:39]

Okay, yeah. You worked for Goldman Sachs as well?

Yes. I left Coopers & Lybrand, I decided after about sort of seven years or so in the consulting side of things I felt like I knew a lot about how to get things done, but I didn't have a lot of content. I felt I was too much process and not enough content and I wanted to go back to working on the end user side of things to get a bit deeper into a sort of an industry area and become a bit more expert in that area. A couple of chaps I knew from Coopers had gone to Goldman's and asked if I was interested in going across. I applied, I had, I think 16 interviews, and then eventually they offered me a job and off I went and spent a bit of time there.

What was the job?

At the time, Goldman's had said that it was, it was spending quite a lot of money on external consultants and what it decided to do was essentially to build up an internal consulting capability, a group of people that would be able to go into different areas and do projects, the sort of projects that it might previously have had to go outside to the likes of PwC. So it had hired an ex-Coopers & Lybrand partner to come in and set up this division and he had hired a few people from a few different firms to come in and do that. So I was working on projects in the fixed income trading area where it was going through a transition of the way it used data. Previously on trading floors you had these little square boxes and you could see the numbers on the screen and you would have sort of eight, you know, four or eight boxes stacked up on your screen and the trader would be looking at the numbers and making decisions and so forth. We were moving away from that world to having a data feed that was coming in and where you would have software that could manipulate the data and the numbers rather than just looking at them on the screen. But that was a non-trivial thing, if you think about a trading floor of 400 traders with all their boxes and you're trying to move them all across to using data feeds and all the rest of it, and I was driving that project forwards internally.

Are you a good manager?

I think so. My management style has evolved a lot over the years. I used to be a very content-oriented manager, I would manage because I knew a lot about what we were

trying to do and therefore I was the expert that my team or my project team or the client would have to come to to say Tom, how do we do this, how do we do that. I was given a bit of feedback by one of my consulting partners who said, Tom, the problem with you – you know, in a development conversation – one of the problems with you is that you listen too aggressively. And I'd never heard that before, I didn't realise you could listen aggressively. But he said, what you do, because you know so much content, the person talking to you feels almost like they're being judged and you're going to jump on them at any moment and it just... and so the whole thing, everyone's slightly on edge because you know too much, kind of thing. And I thought, that's fascinating and so I changed my style as a result of that and I thought a lot more about process and about listening skills and the softer skills and I think I came out of that a much better manager and less reliant on knowing all the detail and more on having the personal skills and the inter-personal skills to be able to manage large and complex teams.

But you are quite comfortable with detail, yeah?

Oh yes, yes. I can, you know, I'm a physicist from university days and I've been an assembler programmer and so forth, so if I'm in a technical situation and people are saying right, now we want to talk about, you know, adversarial learning in AI, then I can say, okay, tell me about it, tell me about it, tell me about it, until I've either exhausted their knowledge and they have to start bluffing because [laughs] I now have gone down to a level of detail, or I've read about it quickly down to a level of detail that I actually understand it. You know, I grok it, as tech people say sometimes. I can get down to that level of detail when it's necessary.

[0:34:57]

And so how difficult was it to change your management style? Did you find it difficult?

It wasn't easy, but it was interesting and it was effective. I think that was the thing. I think that as I started to change my management style and I became more effective, it was slightly a, a slightly sort of light bulb moment, gosh, this really works. You know, if I listen differently and ask questions in a different way and am genuinely

open to whatever answers come at me, then I learn more. Who knew, sort of thing. So I think some of those management techniques, I embraced them because they were really effective, so it wasn't too hard to make that transition.

While you were there, something was beginning to come up in terms of the agenda, Y2K.

Yes.

The year 2000.

Yes, absolutely.

Now, Goldman Sachs and PwC and so on were just rubbing their hands at this coming up. What is your, now, take on that?

[laughs] Well, I mean gosh, what a project, what a project across the industry and so forth, it was astonishing. I pretty much know that code that we wrote in the eighties at British Airways would have fallen over. Yeah, I know that because I wrote some of that code and we had to fit everything in 1k blocks and therefore bytes mattered, and therefore if you were doing some date processing and you had the choice of putting it as, you know, '1988' or just '88', you could save yourself some memory right there by just using '88' instead of '1988'. So sometimes people say, ah well, was this going to be as big a problem as people thought and, you know, was there really, you know, code out there that used two digits instead of four digits and processed accordingly, and I know that there was because I wrote some of it, so I'm sure lots of other people did. So there was no doubt in my mind that the industry, yeah, had to work through it and sort it out. I don't know whether the industry as a whole has really got better at looking ahead at problems that will come down the track. You know, I think we're an industry that has a strong tendency to look at the here and now and believe that we're really clever and have got all those problems sorted and then we'll be taken by surprise again when it turns out that we haven't. And I think that's what happened there. You know, we as programmers in the eighties and nineties and so forth, we thought we were phenomenally clever and that whole Y2K thing was just

such a sort of schoolboy error on an industry scale, as it were. And I think as an industry, we have the capacity to do that again, because here we are again with AI and all the rest of it and again, we think we're phenomenally clever and I wouldn't be surprised if at some point down the track there was something – I don't know what shape it would take – but there was something where we all looked at ourselves in embarrassment and thought, whoops, we've done it again. [laughs]

But we don't know what it is?

But we don't know what it is yet. We might have some clues, but we don't know.

Back to Rumsfeld.

[laughs] The unknown unknowns.

Yes, the unknown unknowns. Around 1996 you moved to Lost Wax, did you not? You helped set it up didn't you?

[0:39:20]

Yes, yes. So I founded it and yeah, it was, we had... I'd been involved, after I left Goldman's – I didn't stay at Goldman's that long, I stayed there for about a year and a half, despite really wanting to work there and, you know, having 16 interviews to get in, actually it wasn't my sort of place. I realised quite early on this isn't the place for me and I felt by then I was ready to become an entrepreneur, I'd seen what other tech guys were doing, I just wanted to- and I'd done some entrepreneurial stuff while I was at university and so forth, so I thought okay, now I feel ready, I'm going to set up a company. So I set up Lost Wax in a converted church hall in Richmond, I went from commuting up to the City in my suit and tie to wearing my woolly jumper and sitting in a converted church hall and programming and stuff, so that was an exciting time and that was quite a change for me.

You're 33 now, yes?

About that, maybe a little bit young... oh yes, no, I'm 33, yeah. Gosh, I was getting old, wasn't I?

And this was about exploiting software agent technology, was it not?

Yes, yes. It sort of evolved into that. So we started off just doing, just doing sort of internet sites and that sort of thing, you know, things were in their early days and people were wanting websites and then they were wanting interactive websites. And then we became really interested in this emerging area of agent technology and multi-agent systems. There was a professor down at Southampton called Nick Jennings who was doing some really fascinating stuff in that area. So we started to develop multi-agent systems and eventually ended up developing a multi-agent platform that is still being used today actually.

Agents did not seem to have the impact I thought they would.

Yes. Yeah, yeah, and in a way I think, I think it's that thing of things get hyped up and then they don't have the impact, but then they don't completely go away and, you know, in some ways we're sort of back to versions of multi-agent systems today. Some of the AI systems today look a bit like the old multi-agent systems.

But how can you really have agents with appalling programming languages like C?

Yeah [laughs], exactly. Exactly, that's one of the challenges.

Were you using C?

We were, we were using C, C++, yeah, yeah.

And you did that for quite a few years?

Yeah. Yes, I did that for a number of years and then I was asked to get involved in helping to launch Egg, the internet bank. A friend of mine, Richard Duvall, sadly passed away now, had joined a team that was launching first Prudential Bank and then

it turned into Egg. And I got involved there and ended up moving from Lost Wax to Egg and ended up being the Chief Information Officer at Egg in its very early days.

Now the explosion of Egg was quite amazing.

Yeah.

It hit its five-year targets in a couple of months, did it not, in terms of deposits and users. So you had to design and assemble an IT system which the whole company was entirely dependent upon. So that's one critical process. And also do it in such a way that it could be scaled very very quickly. How did you solve those problems?

Well, I certainly didn't solve them alone, there was a whole really super team, all sorts of people, you know, Pete Marsden and others who were involved and we worked together on that and we pretty much reinvented the whole system multiple times as we went through. So I think it was, you couldn't really say that we sat down and managed to design a system from the start that scaled and scaled in order to support what ended up being something like four million users and grew at an incredible pace with a whole range of products. I think it was more that we had a team and a culture that was all about speed, flexibility, taking on big breakthrough problems and solving them, and that is what enabled us to cope with the level of change and speed. You know, there were nights when we would sit there, I remember one particular night when the systems were really creaking, there was a real problem and we were at the stage where it was just going to all break down and that could potentially end the bank. I was at home at the time in Richmond, the company was based up in Dudley in the Midlands and I was at home just having my dinner and I got a phone call from Richard Duvall saying, Tom, we need you to come and help us solve this problem, and I said, okay, yeah, no I can come. And he said, right, great, I'm sitting in a car outside your house. [laughs] I said, oh, alright. And I was with a friend, Ken Woghiren, and the two of us, he just came with me and we got in the car, drove up to the Midlands and got into an all-night problem solving session, you know, and everyone was there and it was the flipcharts and the stress and so forth, and eventually it was actually Ken, my friend, who just spotted something and said, that's it, that's the problem. And everyone went wow, and you know, that pretty much

saved the organisation that day when we solved that problem. But that was pretty typical during that period of Egg's growth. You know, every month, every week, there was a new problem caused by that rapid success that everyone had to pile in and solve. So in a sense the architecture that we devised in order to cope with that wasn't a technical architecture, it was a cultural architecture, it was a way of being and a way of wanting to solve those problems that allowed us to tackle them, rather than the beautiful technical architecture that solved them for us.

[0:46:44]

What was your hardware platform?

It started off as being Microsoft based and then we switched over to Sun, we had a whole bunch of, I think a number of Sun salesmen made a lot of money selling to [laughs] to Egg at the time, because we were buying, you know, obviously that was pre kind of cloud days, so we had datacentres and we opened the door and there were loads of Sun machines humming away and so forth. You just wouldn't do that now, you'd just go to the cloud, but then you physically bought all these machines. We used a lot of Microsoft stuff as well, I had the real privilege at one point, when Microsoft were launching a new operating system, they wanted to launch it in the UK and because we at Egg were one of their main clients and one of their most innovative clients, I was on the stage with Bill Gates presenting an application that we had created using this new operating system. And that was a fascinating process; meeting him, doing the pre-briefing and all the rest of it, really, really fascinating. He came up to me and he stuck out his hand and he said, hello, I'm Bill Gates, as if [laughs], as if I wouldn't know who he was. [laughs]

What was he like to work with?

He was, I mean I can't really say I worked with him closely, it's just we spent that time together preparing for the presentation and doing the presentation. He was, yeah, obviously incredibly intense and smart chap, mind dancing around everywhere. So if you'd said something that was of interest then suddenly all the focus was on you in order to listen to what you said, and then when he knew it, then his mind had gone

and you might as well shut up because he was thinking about 15 other things. But it just, you know, being in that presence, you know, was fascinating.

Rather like a younger you.

[laughs] I wouldn't go anywhere near comparing myself with...

Well, I've made the comparison, I'm allowed to. Aggressive listening.

We might have to stick to the Rumsfeld. [laughs]

So it was successful. And you launched as well a credit card?

Yes. Yeah, we launched a credit card, which was brilliant. You know, that went really, really well. And I enjoyed, yeah, I had a great time at Egg, was there for a number of years and then eventually left to go back to my sort of core entrepreneurial journey, set up the next company, which was called Garlic, and then off we went from there.

Tell me though, for a moment, why was it in Dudley? I've been to Dudley.

[laughs] It was... So we did the thing, Egg was, Pru Banking and then Egg was created under the Prudential's umbrella and so we started off in Chancery Lane in the big Pru building, the red gothic building on Chancery Lane. But we needed to set up our sort of operating centre and our tech teams and our call centre somewhere and the chaps looked around the country and what you do is, you look at the accents, what accents are trusted. And there's a soft, not the sort of really strong Dudley accent, but a soft Birmingham accent that is really trusted in financial services. It's a bit like the soft Edinburgh accent, you know, is really trusted as well. And then you look at where there's capacity and teams and all the rest of it, and we ended up deciding to base it there. Now I'm sure that that had nothing at all to do with the fact that the founder of Egg, Mike Harris, happened to have been born and brought up in Dudley.

No, no.

I reckon that was entirely coincidental, but we did end up [laughs] deciding Dudley was the best place to launch the UK's first major internet bank.

[0:51:29]

That's quite good, because it's so innovative and Dudley has this wonderful living museum, doesn't it, industrial museum. Have you been to it?

Yeah. Yeah, yeah.

It's a wonderful museum, absolutely wonderful. So the old and the new are together in Dudley, that's rather nice. So you then came out.

Yes.

And you co-founded Garlic.

Yes, yes.

What was Garlic about?

Garlic was an identity protection company. So we were wanting to help consumers look after their identity in the digital world. Around that time there was more and more, you know, people were doing more and more online activity and there were more and more incidents of identity theft and people losing control of their information and all the rest of it. And we thought that a company that helped individuals to understand their digital footprint, if you like, and then advised them on ways to look after that and minimise the risk of being a victim of identity theft would be a good and interesting company to create. So that's what we established. We raised venture money to set it up, we were backed by 3i and Doty Hanson Technology Ventures. We got some, we took a really interesting technology approach. We worked with Tim Berners-Lee and Nigel Shadbolt and Wendy Hall, who at the time were all down at University of Southampton in the electronic and computer science department. And they had been working on a very large research project that was

looking at the semantic web, which Tim envisaged as the next generation of the web. And we took those ideas and that technology platform approach and some of the team and built Garlic's technology platform based on the semantic web model and the semantic web ideas. And actually Tim was a senior adviser to the company for a number of years, which again was really great fun, fascinating. We would have meetings where, you know, as Chief Executive I would be saying, you know, I think things are going to go in this direction, and then Tim would say, well I think they're going to go in that direction, and then everyone would say, let's go with Tim on this.

[both laughing]

But he was, again, a really fascinating chap to work with. He laughed...

What's he like working with?

He loves the technology, so you know, he would prefer, when he'd come into our office in Richmond and our sort of software chaps were there working away, instead of coming to talk to me as the chief exec and talk about strategy and that sort of thing, he would go straight to sit with the software engineers and get them to show him stuff. And then they'd show him some stuff on the screen and he would say, no, no, no, I want to see the code, show me the code. And, you know, they'd go straight to lines of code and he would be looking through the lines of code and saying ah yes, this, that, this, that. It was just astonishing. I suppose it was like reading, just like reading a book to him, you know, he could just look at the lines of code on the screen and say, you know, this is beautiful, this is ugly, this is this, this is that. So that's what he really enjoyed doing. But I really enjoyed meeting him and spending time with him back in those days and when we do again from time to time.

[0:55:29]

The developers must have loved that.

Yeah. It was [laughs], it was really funny when he first came in. So we had some Polish software engineers who were part of the company who were working with us and they hadn't expected him that one of the first times that he came to visit and I

went to meet him downstairs, brought him up to the office, opened the door and said, you know, hey folks, this is Tim, Tim Berners-Lee. And they all leapt up to attention. [laughs] It was all we could do to just make them sit down again. [laughs] But it was really lovely.

Well, that's two of the houses in your academy that you've been able to work with. You weren't able to work with Tesler or with Ada Lovelace, unfortunately, but there you go. Then you moved on. Garlic was a success was it?

Yes. We eventually sold it to Experian, the credit reference agency, and then I'd moved on to, actually to another credit reference agency called CallCredit, which had just been through a management buyout and I took over as Managing Director of their consumer division, they wanted to build up something interesting on the consumer side. And I came up with an idea which we called Noddle, which was about giving people access to their credit reports for free and enabling them to use that information to find the right commercial deals, the right credit card deals, the right loans that suited their credit reference agency. And that was a real breakthrough moment in the credit reporting industry because until then the whole approach had been, amongst credit reference agencies, had been if you want a credit report you have to pay us for us, you pay Experian or Equifax or CallCredit £10 a month or whatever. And I said, no, no, I'm going to turn that on my head, I'm going to give consumers their credit reports and we'll generate money if they decide to use those credit reports in order to access products and services. And, you know, that grew very quickly. We launched it and it grew very quickly. The other credit reference agencies were puzzled as to how to respond to it, but eventually they got their minds round it and started to respond, by then we'd grown quite a substantial business on that side. I think Noddle may have grown to, certainly it grew to several million users before the whole of CallCredit was eventually sold on, sold on to another private equity firm and I moved on from the business. And then I think Noddle was sold to a US company called Credit Karma. So now in the UK it's called Credit Karma. So that again was a fascinating business and it really did change that bit of the industry, the idea that consumers should be able to get their credit reports for free rather than paying for them, I can definitely claim credit for coming up with that idea and launching it in the UK.

And that's not just about credit reports but about all types of other things. Now is a well-established business model, is it not?

Yeah, yeah, exactly.

You know, we're talking over Zoom for free. I'm not paying a penny to Zoom, are you?

Yeah. No, no, exactly. So yeah, that is a model that works now. I mean the model existed obviously before we did that with Noddle, but what we did manage to do was to bring it to bear on this bit of the industry that hadn't considered that it was even, you know, possible to use it in that way.

[0:59:38]

And now you're getting itchy again and you leave and you co-found another operation.

Yes, yes. So, so we leave and we set up Crossword, Crossword Cybersecurity. And we set that up in 2014 and what we were doing there was looking for, looking for interesting intellectual property in universities. Cybersecurity research in universities and thinking about how we could commercialise that research and bring it out of universities and into the commercial world and turn it into products and services, and to some extent it was building off the back of what I did for Garlic, because at Garlic we had taken some intellectual property and ideas and teams from Southampton University and that had worked really well. So I thought oh, we could do that again, we could do that in this field of cybersecurity, there must be huge amounts of cybersecurity intellectual property in British universities that's going unexploited, let's see if we can become an expert in finding it and commercialising it. And that's what we're doing and we've grown the company, we managed to get Sir Richard Dearlove to come along and be our chairman and we listed on the AIM market of the London Stock Exchange a couple of years ago. I'm still Chief Executive and it's going really well, I'm really enjoying it.

Why don't we in this country, why are we not able to build the likes of Microsoft, Oracle, Amazon, Facebook? Apart from Arm, we never get there, do we?

Yeah, yeah. I mean I think there are a number of reasons. One of them, well, two that I would probably point to maybe, possibly three. One is our relationship with failure. We don't really like and embrace failure in the way that the folk in the States do. You know, you talk to an entrepreneur in the States and you say, tell me about your businesses, and they'll say, oh yeah, no, I launched one and then it crashed and burnt, and then I launched another and then it crashed and burnt, but this third one is going really well. You talk to an entrepreneur in the UK, getting them to say, you know, I tried this and it didn't work, or whatever, or even in people's careers, getting people to say, you know, I joined a company and it didn't work out or, you know, we just don't like to talk about it. But you've got, as entrepreneurs, we know that the route to success is through a series of failures. The reason why I got my first job at British Airways was because I applied to 500 other companies and they all said get lost, we don't want you. You know, I once applied to the same company five times in a row until they eventually begged me to stop applying to them. [laughs] So that's one problem. I think another problem is that when we see something that's, when the US guys in particular see something that's working or appears to be working, they get behind it massively. You know, they'll do, they're very commercial, so they're not going to throw money at things that are just idiotic, but if something is starting to work, suddenly you'll hear that it's raised 50 million dollars and then you'll hear a year later that it's raised 200 million dollars. We don't do that in the UK, we will get to something that's starting to work, and then the next question you get asked as an entrepreneur is right, so when are you going to get to break even. And a lot of businesses, you can get them to break even if they're decent businesses at any point, but you're doing that, you're sacrificing the rapid growth, you know, because you sort of say right, okay, we're going to pull back a bit on growing, we're not going to take in any more money and we're going to focus our attention on getting this company to being break even or profitable. Meanwhile, the US guy is saying, now don't bother about that, we're going to go and raise 50 million and we're going to become the absolute dominant company and then we'll buy your little company that's at break even and we'll buy it for 20 million pounds and you'll feel really happy that you've walked away with a chunk of change, but we're not interested in building 20 million

pound companies, we're interested in building two billion pound companies. So I think that sort of mindset is quite different here.

Very different. But on the way, in 2011 you set up the Hammersmith Academy, did you not?

[1:04:53]

[laughs] Me and a bunch of other people, yeah, yeah. We started in 2005. I had been in an Apple store on Regent Street, I think it was the first, if not one of the first Apple stores to open in the UK, and I'd seen some young people playing around with the computers, and that wasn't how it worked in those days. If you went into a PC World or something, the computers were up on the shelves, they were behind glass and you could look at them, and if you could afford them then you could buy a laptop or whatever it was. You went into this Apple store and the Apple computers were just there on tables and kids were playing with them and messing around with them and so forth, and that was encouraged. And I thought wow, that's fascinating, I wonder if you could build a school that had that same sort of feel, that was just open, that was accessible from a technology point of view, that had such good equipment that the students wouldn't go home. The bell would go to go home and they wouldn't go because they were in the middle of doing something on an Apple or whatever it was. And so I put together a presentation and presented it to the Court of the WCIT and they didn't kill it, they were a bit sceptical, but they said, yeah okay, explore it. And then we started going from there. So 2005 we ended up setting ourselves a target initially of opening the doors of this academy by 2010, but we didn't quite get there, we weren't ready, so we ended up opening the doors in September 2011 and that was, you know, the birth of Hammersmith Academy. So it was a six-year project that I led before it finally opened its doors in 2011. But there were just loads of people involved, from our livery company, from the Mercers' Livery Company, from all sorts of other places, we pulled this whole thing together, but it was a fascinating journey.

You like this livery company approach?

Yes, yeah, yeah. I had decided, you know, way before that actually, I'd been on the governing body of Lilian Baylis School and on the governing body of a school up in Lancashire, the Darwen Aldridge Academy set up by Rod Aldridge who was also a liveryman. I had decided two things, when I decided I was going to start to give back and adopt more of a charity side alongside my commercial activity, I had decided, one, that I was going to be very focussed about how I did it, and two, that I was going to work with other people. I wasn't going to be a lone philanthropist trying to do everything on my own. And therefore being part of the livery company and essentially leveraging the power, experience and influence of being part of a livery company and the broader livery movement, that's what enabled Hammersmith Academy to come to life. It just wouldn't have happened by me as an individual on my own, never, never in a thousand years would it have happened.

You mentioned an American entrepreneur's open about their failures. Well, you be open about your failures, tell me what your failures have been.

[laughs] I've failed constantly. I, I've pitched for money from all sorts of people and been turned down over and over again. You know, whenever I pitch for money I assume that I need to pitch to 50 people in order for one to say yes, so 49 are going to say no, get lost. I've applied for jobs, as I said, I applied for the same company five times in a row and sometimes when you tell that sort of story to people, they assume that the story is going to end with, and on the fifth time they gave me the job. No they didn't, they just said stop applying to us, we will never give you a job, go away, and that was the end of it. You know, I've worked, I had 16 interviews, as I said, to get the job at Goldman Sachs. It was the job I always thought I wanted, with a company I always thought I wanted. A year later I was pretty much close to, you know, emotional breakdown and stepped away from it and said I can't work for this sort of company in corporate life any more. Now, what I've learnt over the years is that almost every time you fail, if you do keep going, something else comes up. And so many times you sort of look back and think, thank goodness I didn't get that thing because otherwise I'd have never have got this, you know. Thank goodness things didn't work out for me in the way that I wanted at Goldman's because I may never have become an entrepreneur and had the success that I've had as an entrepreneur. And I just see that over and over again, I can take the long view now that allows me to

see that, but boy, have I had a lot of failures. Even when I asked my wife to marry me the first time she said no. I was astonished! [laughs] It took another year before I could build up the courage to tentatively ask her again. Fortunately she said yes the second time.

[1:11:04]

Do you have any money in bitcoins?

No, I don't. Not because I have any problem at all with bitcoin, I think it's a fascinating whole area, it's just that the way I relate to my money is that I invest in things that I'm involved in. So actually I don't really, you know, I'm not an angel investor, for example, I don't invest in other people's companies, I invest in Crossword, I invested a lot of money into Crossword and I'm running it. And then, you know, at some stage in the future I'll sell it and – or sell my stake or whatever – and hopefully make a chunk of money. But what I don't do is invest my money in things that I have no direct control over. And where I do that it's sort of very cautious. So I just have a very cautious portfolio that looks after my money and then my entrepreneurial money is in things that I'm involved in. So I think that, you know, bitcoin and other cryptocurrencies, it's a whole fascinating area, it's not going anywhere, it's not going to suddenly disappear, but it's not something that I personally invest my money into.

Do you invest your money into blockchain technology?

We, at Crossword we've been working on a blockchain project. It came out of some ideas that we developed with University of Warwick and a university in Switzerland, EPFL, who are doing some really fascinating blockchain related stuff. So we are really interested in and quite expert in blockchain technology, so I think that's another fascinating area, yeah.

Now you're a noted champion for opportunities for minority people.

Mm-hm.

Are we making progress there?

Yes. Yes, we are. And again, you know, I think it's the long view, you know. When I started at the London Stock Exchange, so I'm a 24 year old boy, it's 1987 or something, '86/87, that sort of time, I go in and at the end of the first week we go out for a drink in the pub, in the City pub. I'm possibly the only, or maybe two black people working at the London Stock Exchange at the time, an organisation of 2,000 people, and I go to the pub and one of my colleagues, an old Stock Exchange chap who'd been there for, I don't know, 20, 30 years, comes over to me and says, Tom, so, there are friends of mine who would have you swinging from the nearest tree. Anyway, have a good evening. And then he walks away. Now, you know, you could not, that could not happen now and if it did happen now, if it did happen now, then I would know what to do. I would go straight to HR or straight to my manager and get it dealt with. But then, you keep your mouth shut about it because, you know, you didn't want to be seen to be playing the race card and, you know, and all the rest of it. So the climate has changed over the years. Sometimes you have to take the long view, so you know, if I think about the abuse and the problems that my father suffered being in London in the fifties and sixties, then the abuse and the problems that I suffered in the seventies, eighties, nineties and 2000s pale into insignificance compared to what he suffered. Whereas if I narrate the things that happened to me over the years to my children, they look in horror and say how on earth could you stand that stuff, because things have moved on again. And I relate to it a bit like a relay race, every generation is moving further and, you know, pushing things forward and from time to time you have setbacks and you have incidents and you have issues, but overall things are moving in the right direction. I mean it was announced yesterday that I had been appointed as the next chair of the RFU, the Rugby Football Union, and I'll take over that role in August in the RFU's 150th year. So, you know, there I am as a black man being appointed chair of the Rugby Football Union in its 150th year, you know, it's quite a big step forward. And in fact, I will be the first and only black chair of any national sporting body in the UK ever, which on the one hand is quite surprising and almost shocking, given the number of people, black people involved in sports and so forth, and on the other hand it's another step forward, another barrier broken, the next person who's appointed won't be the first, they'll be the second and the third and it'll become more normalised and so forth. So we keep

moving forward, we keep moving forward, that doesn't mean that there aren't sharp setbacks or trips or incidents along the way, but when you take the long view, we're moving forwards.

Do you ever talk to Ken Olisa?

Yes. Yeah, I spoke to him yesterday actually. Yeah, no he's a very good friend and a mentor and he's a lovely chap.

He looks good in a uniform, doesn't he?

Yes. [laughs] I don't think, if I had his role, I don't think I'd look nearly as... he just seems to have the right frame for it, it just sits well with him.

[1:17:43]

Now, lastly a controversial issue, controversy anyway, which you might or might not like – I don't know – to comment on. And it's connected to minorities and to race and to British history. You were awarded a CBE.

Yes.

A Companion of the British Empire, that's what it means, does it not?

Commander.

Commander, excuse me, not a Companion, a Commander. And well done and congratulations. But there are two words in there – one of them I got wrong – which is B, British and the other one is Empire. At a time when people are trying to take down the, well, certainly take down Carson in Bristol, take down the Rhodes monuments in Oxbridge, etc, etc. What are your feelings about that?

I think that, well, for one thing, I don't know if it was my sister or someone, someone said to me, what does CBE stand for? And I said, it's obvious isn't it? It's Cool, Black and Easy on the Eye, that's what it stands for. [laughs] So, but I think the issue

is, and that's sort of where that debate comes from, I was speaking to someone about it in some detail and I was saying it's about a real, a sense of not just belonging, but a sense of ownership. And I was using an analogy, I was saying, you know, imagine, you know how people say, you know, come and stay at my house and make yourself at home. Sometimes when they say make yourself at home, they sort of don't really absolutely mean make yourself at home, they mean, this isn't your home, you know, you should feel comfortable but it's not really your home. So if, for example, they said make yourself at home and you said, oh yeah, no thank you, and then you looked on the wall of their living room and there was a picture, a portrait of the person who'd killed their grandfather and they just went over to it and said, I think I'll take that portrait off the wall. And you said, hold on a second, I said make yourself at home, but I didn't say start rearranging the furniture and taking stuff off the wall. And you're saying, yeah, but I thought you said make yourself at home. Well, if this is my home, I'm not sure I want that guy staring at me every day, because d'you know what he did to my granddad, kind of thing. And I think there's sort of an element of, are black and minority and other people from the Empire and so forth, are they here and at home in a way that if they want to rearrange the furniture they can, just because it's their home as much as anyone else's home, or are they sort of at home but in that sort of make yourself at home sort of way. And I think there's sort of an element of that going on there. Now, for me personally, I look for things that I think where I can have an impact, and I think for me, where I can have an impact is by using my influence to try and move things forward, whether it's on my role as on the board of the BBC or my new role at the RFU or my position as a businessman, you know, I tend not to get distracted by things, I don't go running off after arguments that have nothing to do with me. I pick the things where I think I can have an impact and then I use my influence to try and make a difference, and that's mostly in areas of education, in areas of entrepreneurship and mentoring, and that's where I focus my attention.

[1:21:43]

And you also, interestingly, are really a child of Empire, are you not, or the back end of the British Empire? Uganda, Nigeria and Richmond.

Yes, yeah, exactly. No, I'm an interesting mix, because on the one side, you know, I'm mixed race, there's a white side and a black side to my family. The white side of

my family is a very Richmond middle class family, we've been here for five generations, you know, longer than most of everyone else in Richmond these days. Everyone else has come and gone, my family's been here since the 19th century. One of my grand-uncles was Mayor of Barnes, etc, etc, so we have roots...

What was your mother's married name?

Er...

Sorry, before she was married...

Maiden name?

Maiden name, yeah.

Maiden name. Her maiden name was Christian, Eileen Christian, yeah. And so we've, on that side we've been here for a long, long time and then on my dad's side he was born in a tiny, tiny village in Nigeria before it was even Nigeria and ended up as part of the army and ended up being shipped over to Harrogate in north Yorkshire to train on the Yorkshire Moors and so forth. So them coming together is part of, I suppose, what part of Britain is about really and I'm the product of that.

And you're a very fascinating product indeed. Thank you very much for your contribution to the Archives, Tom Ilube.

Thank you for having me.

[1:23:30 recording ends]