Capturing the Past, Inspiring the Future

Bill Halbert

Interviewed by

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20th May 2019

At the

WCIT Hall,

32a Bartholomew Close, London, EC1A 7JN

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Welcome to the Archives of Information Technology. It is Monday the 20th of May 2019, and we are in the City of London, in the Livery Hall of the Worshipful Company of Information Technologists. And we in the Archives capture the past and inspire the future. I'm Richard Sharpe, and I have been covering the IT industry since the early 1970s. And making his contribution today, with a very varied background, and a solid background as well in many of the areas that we've been looking at with other contributors to the Archives, is Bill Halbert.

[00:40]

Now Bill is, started off in Lincolnshire, was born in Lincolnshire I believe?

Correct.

What were your parents doing when you were born?

Oh, my mother was looking after the family. My father was a marine engineer. I was born actually pretty much on the coast in Lincolnshire. In those days the economics, both north and south of the Humber, were very much seafaring economics; changed somewhat since, but… So he was a marine engineer, at the time.

Right. So some form of engineering is in your background.

Oh indeed it is, yes.

Had he gone to university?

Had he gone?

Yes.

[hesitates] No. He was… Goodness me, now you're asking me something I'm not sure of. I should know this. He was a trained engineer. He was born way back, 1901, my father, and would have gone to some form of engineering college, not university.

So you were quite a late baby?

Yes I was.

Yes.

Yes I was.

Are there siblings?

Yes. I have two older brothers. I had a sister, sadly who died a couple of years ago, younger sister, who lived in Australia. My two brothers are still around, they're older than me.

[02:13]
What do you think you got from your parents?

[pause] From my father, a sense of, inquisitiveness and problem-solving. So, one of the things I remember about him was, always giving me riddles or puzzles or whatever to, to solve, but as an engineer also, it always involved me in whatever he was doing in that respect. He was very good with his hands. So, growing up I tended to… I remember having a steam engine for example. I tended to take things apart.

Right.

Really, partly in order to face the challenge of putting it back together again.

Could you do that?

[laughs] And… Yes, I, I seemed to have a, I don't know why, it obviously runs in the family, I, I seemed to have a, some kind of genetic inborn ability to, to do that, and understand, understand how things worked. And I enjoyed it. I also… My father was, well both my mother and father, but my father particularly, quite religious. Music was the other thing I gained from them both. Although she wasn't professional

in any sense, she was a very good singer, she had a very good voice. My father played piano and violin. So music was the other key thing that I, I took from that. But this inbuilt desire to understand how things worked, I think was part of the engineering background.

Right.

And indeed it does run through the family. My older brother was also in the industry, at IBM; retired a long time ago now. But, yes, it, it ran in the family.

[04:27]

OK. You went to a primary school. Did you enjoy school?

I think so, yes, by and large. I don't remember a huge amount about the primary school. It was a local primary school in the village where I was, where I was born, a village called Waltham. So I don't remember a massive amount about that. I, you know, I can picture the school; it's long since gone. Where it was has been developed into housing and what have you, but… But I remember, you know, going through, you know, the Eleven Plus and what have you. I went to a, one of these partially state-funded grammar schools, Humberstone Foundation School.

You passed your Eleven Plus?

Yes. Yes. I didn't… I have to say, I, I didn't particularly enjoy exams. I enjoyed school, and I enjoyed practical work, but exams, for some reason I didn't, I didn't enjoy. So I went to Humberstone Foundation School, which, interestingly, my older brother had been to before me.

This was a boys' school?

It was a boys' school, yes. Yes, the girls' equivalent was a little further down the road. And was founded by someone, I think his name was Matthew Humberstone. Going way back. Anyway. Did well at school.

O Levels?

Yup.

What was the balance, towards physics and maths, was it?

Well, A Levels were double maths and physics, and I took physics S Level as well. But it, it was a balance. I was always very good at, you know, I was good at languages for example. So it was, O Levels were balanced, so it wasn't all pure science or engineering based. It was, all subjects, well ten O Levels, it covered everything.

Yes.

I was probably, my grades were probably better, my top grade was probably French, but, my grades were, would be better probably, the more scientific-based subjects, maths, biology and what have you, physics. Hence, maths and physics at A Level. And then on to university to do electronics.

[07:16]
Why did you choose electronics?

[pause] I was part of a… In one of the… In one of the sixth form societies there was an electronics society, and I got interested in that. My brother had done electronics and went to IBM, so, there was an interest there. And I played around with electronics in… I say played around, in the, in the sixth form electronics society. I didn't know what I was going to do. I was, I guess I chose electronics, it was one of the disciplines that, in some of the courses, combined maths and physics and what have you. The first year at university was almost a repeat of my physics S Level. So, I, I did that, not knowing what kind of career. And I, like most kids I toyed with all sorts of ideas. I wanted to be a, a doctor, a pharmacist, or, whatever. But the one O Level subject that I didn't pursue, that I, I don't know why I didn't quite get along with, it might have been, it might have been just the relationship with the teacher at

the time, I don't know, was chemistry, which, if I had wanted to go into medicine, I would have needed to have done at A Level, and obviously didn't.

What did you build in the electronics society at school, anything? What did you build?

[laughs] Yes, I… Interestingly, I, one of my other interests was, my father being an engineer, we were always taking cars apart and putting them back together, and playing around with them, I got interested in motor racing quite early on. I was, I had already been quite a good, natural driver. And a friend, school friend, his father had a garage, and, we were rebuilding this old MGA to use. And, so one of the things I did in this electronics society was to, to build, to develop a, which, cars didn't have them in those days, a rev counter for this MGA, which, so that was one of the things that I, that I built. [laughs]

[09:47]
You went on to Salford?

Yes.

Why did you choose that?

In those days Salford, a relatively new university in those days, but, the reason for choosing it was that, around Europe it had, it had *the* reputation in electronics. So Salford was, if you wanted to study electronics, Salford was the place to go.

Right.

And of course, the, all of the, the universities in Manchester do tend to have a, a more scientific, engineering bent to them, even Manchester University itself, and of course, the company I joined, ICL, had a lot of its research facilities in Manchester, at West Gorton, at the time, development and research, manufacturing facilities. So there was a close relationship between all of the Manchester universities and ICL back then. So yes, it was the, it was the European number one for electronics. And it was a great course, because it, apart from the pure electronics itself, you, the range of subjects,

continuation maths, physics, material science. Had to study German. It was just a, a very challenging course, but, but a great course. I could see why it was, had that reputation.

[11:18]
When did you meet your first computer?

Then. So, I learnt to program at university, in, [laughs] languages that are not around today, ALGOL, FORTRAN. And, did a lot of work using those languages while I was at university.

What machine was it that you were programming?

It was a, I th- It was a Ferranti…

Pegasus?

Argus. Argus?

Argus, yes.

Yes, at the university at the time.

Because there's another Manchester company, Ferranti.

Well of course, ICL was created out of a merger of Ferranti, English Electric, International Computers and Tabulators.

Sure.

And later on, when I, after I joined ICL, there was another connection with what had been Ferranti computers also in Conway Berners-Lee.

[12:17]

So perhaps not those doing BA Honours in electronics, but in the period '66-'69, when they're at university, other students were occupying their universities, demonstrating against the Vietnam War, you know, et cetera et cetera.

Yup

Was that you, or not?

No.

It was not you?

No. No, it wasn't. I didn't… I have to say, back then, politics didn't really interest me, albeit again, to go back to my father, lots of discussions about, at home, about, before I left to go to university, about politics and the world generally, you know, he was very well-read.

What were his politics, do you know?

His politics would have been, slightly left, to, centre left, Labour politics of the day.

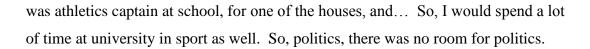*OK, yes. But, that didn't really transmit to you?*

No.

You weren't into politics during your student years?

Not… Not at, not as a student, no.

No.

No, not at all, no. No, I was interested… I mean I, I obviously was studying, but I was also interested in sport. I had been interested in sport, you know, a long time. I

was athletics captain at school, for one of the houses, and… So, I would spend a lot of time at university in sport as well. So, politics, there was no room for politics.

[13:50]

So, 1969 you have graduated.

Mhm.

You're BA Honours in electronics from Salford. And you, you already know of the existence of ICL, which has been formed the year before, from a merger…

'68, that's right, yes.

'68. From a merger of English Electric Leo Marconi and International Computers and Tabulators, to form ICL. State-owned, ICL, yes?

It was initially, yes.

Yes, state-owned. Obviously in battle with IBM.

Mhm.

And had medium range and top end processors, mainframes.

Yup.

The 1900 Series.

The 1900 Series, yes.

With pretty good, robust operating system.

I think one of the best.

In GEORGE 3.

GEORGE 3.

GEORGE 3.

In which I became, supposedly, as a young technical graduate, expert in GEORGE 3.

Right. And so this is… You joined… They are well spread across the countryside, ICL.

Yes.

But again, there's the Stevenage, there's West Gorton, there's Scotland, and, and so on and so forth.

And also London.

And you join as a graduate trainee.

A graduate trainee, yes, in London.

In London. So the idea is, let's go and find the brightest graduates and turn them into ICL-ers. And that's what they did. They found you, or you found them?

Um… Well I, I would have come across them on the then milk round. I had applied to a number of IT companies at the time. It, it came down to a choice between IBM and ICL. My brother was IBM, and that was the reason I didn't go to IBM. I just, I don't know, it just didn't feel… I didn't want to do that. I quite liked ICL, and indeed, I think the choice was, not, will never know, because I never joined IBM, but I think the choice was a, a good choice in the sense that, ICL, in those days ICL's graduate training schemes were, I think, really outstanding, and produced a lot of subsequent leaders of the IT industry. You know, I can think of many of them that

have been to ICL at some stage. So the training schemes were… And I remember the initial residential period in Moor Hall in Cookham.

Right.

An abiding memory. Principally because I wasn't, having left university, the idea of whatever it was, eight weeks' residential training, was kind of, I, I thought I had left institutional education. [laughs]

Right.

But it was fine.

It was good?

Yeah. It, it was very good. It was excellent. I, I really do think it was excellent.

[17:02]
Now you move south.

I move south.

Was it the first time you're south now?

First time south, yes. I, I had moved from home to Manchester obviously. And…
But then, moved south. It wasn't a, it wasn't a conscious decision to say, I need to go south. But, because I didn't want, I didn't want to join ICL as a development engineer, in which case I probably would have remained in Manchester, I wanted to join the, the stream that would ultimately lead me into sales and marketing, which meant moving south.

Why did you not want to be a development engineer?

I… I had spent a lot of time at university in the labs; clearly, there was a lot of coursework, and what have you. And I felt, by the time I left university, I, while technology was, and engineering is a significant part of me, I was more interested in what it could, what it could do, what the outcomes would be, rather than the technology itself. And I had seen enough oscilloscopes and benches and what have you, I, I took the decision, I don't want to do that any more. I do remember being interviewed on the milk rounds, and, there was one, I, I can't remember whether it was someone from Burroughs or somewhere like that, and I had said I wanted to go into sales and marketing. [laughs] And, this chap interviewing me put a cup in front of me, he said, 'Well, sell me that.' [laughs] Which kind of stunned me at the time, I have to say. But it was a really good question. It was a really good question. And, and yes, ultimately I did move into sales and marketing, after a, you know, after a period.

[19:11]
So to put this into context, by '69 there were probably about, mm, 2,700 computers in the UK,[BH laughs], the majority of them US made.

Yes.

ICL – I'm sorry, IBM, Burroughs.

Yes. UNIVAC.

UNIVAC, Honeywell…

Yes.

…were all, were all there.

And some CDC. Yes.

CDC. And something had happened in '69 which had great relevance to your life later on, but, and let's just mention it now to keep it in sequence, was that in '69 IBM unbundled its software from its hardware.

Yup. Mm.

And therefore, really gave the space for the creation of a, a software industry.

Correct. Absolutely.

And, you've been, you've played a, a significant part in…

Yes.

…various parts of that, that software industry.

Yes. Yup.

[20:00]
So, you are therefore identified as someone, by the personnel department, as someone who is likely to rise quite quickly.

Yes.

You were told that?

Yes, I was told that. Yes.

Right.

Yes.

And you were therefore expected to be moved about?

Yes.

And you knew that you would be. You provided technical support to begin with.

I provided technical support to begin with, yes, to sales teams, in, in London. Various based in a number of… ICL had a number of offices in London at that time, so, based in a number of the offices, a number of areas of the business if you like. And I enjoyed that. And as part of that, I was given the opportunity to, going back to the formation of ICL, because it had a, a mix of incompatible computer ranges, there was obviously the need to develop a single range, which was the 2900 Series. And as it happened, I had been involved, because of the relationship between the universities in Manchester and ICL, I had been involved in some of the work on what was called MU5, which was, which was a code name given by ICL to a lot of the work that went into developing the concept of the 2900 Series. And so, I was given the opportunity as a, a technical support graduate, probably because I had criticised [laughs] what I had seen of the upcoming launch material for the 2900 Series, and its presentation of what it was saying, I was given the opportunity to participate in that, and create some of the presentation material, which was, which was a great opportunity.

[22:01]
Right. And when you were in technical support, were you technical support for the old English Electric, RCA-based Spectrum, i.e. the 370 compatible?

1900.

You were on the 1900?

Yes, 1900. GEORGE 3. I was GEORGE… Probably because I had read the manual, [laughs], a GEORGE 3 expert, so-called.

Right. So you really had to know the guts of this machine.

Yes. Yes, and I did.

Users would get into trouble with something, and sales teams would say, 'Let's call Bill.'

That… That's right. I mean I was dedicated to certain sales teams, but I got called in as a, as a, because of supposed expertise in the operating system GEORGE 3. I can remember one particular organisation, and it's one of the most extraordinary things I think I have… This organisation was headed up by… I've got to be careful, because I don't know whether he's still alive. Someone, a lovely man, called Dr Peter Nutter, was, the Operational Analysis Establishment in Byfleet. His systems manager was Ken Hayter, and the… Or, his IT manager I think was Ken Hayter, and the systems manager, John Basher. So you had got Nutter, Hayter and Basher. And I've never forgotten that. [both laugh] But Peter Nutter was an extraordinary individual. So, he would challenge… My interaction with him… So I took on support for this account. My interaction with him, his, because of his role, he was particularly interested in, in penetration of the system, security, penetration of the system. So, you know, I used to engage with Peter Nutter in terms of breaking the system. So he'd sit with me and show me how he had broken it. I had to go back and look at what had happened, talk to the, talk to the developers and what have you, to find patches to fix this or whatever else. So, that was, that was a fascinating period dealing with people like Peter Nutter.

[24:21]
Primarily, at the moment, this implementation of computers was batch?

Yes.

Mostly tape, magnetic tapes. Some disk is coming in.

Mhm.

Yes? And these tend to be either large administrative systems, the classic being payroll…

Yes.

...or PERT, project evaluation review technique.

Mhm. Yup.

Those types of project management processes. Or scientific applications.

Yup.

Yes?

Yup.

That's, that's really what you were dealing with?

[hesitates] Yes. That's right. And, one of the challenges back then was, you were trying to, trying to… And I, when I joined ICL, I, I learnt to code in, only one step above machine language, a language called PLAN, which was the language used on the 1900 Series. So, you had got machine language, then you had PLAN, and then sort of, COBOL developed a little later, or was developing at the same time, but developed later, and using PLAN to try and squeeze software into machines that had, you know, 32K memory in those days. I mean, tiny, when you think about it, when you think about today's world. So quite often got drawn into, you know, this is, this not working. The performance is not there, and how do we optimise this. Which led me on to, when I was involved in the launch of the 2900 Series, and then supporting some of the, the very early, very large-scale sales, working, developed, in fact did develop, the, the sizing model for the 2900 Series mainframe systems. And that's where I worked with, I didn't know at the time, and obviously didn't realise the significance of who he was, or who his son became, worked with Conway Berners-Lee. Who had, who was a mathematician who had been one of the, worked on the development team for Ferranti computers. Actually, to the best of my knowledge, he's still alive today, I think he's 97 years old, still alive today. Incredible individual. So I worked with Conway Berners-Lee, as a mathematician, to, to try to develop this sizing system. You know, he had a lot of expertise in things like queuing theory, which, which I didn't. And, together we did that, and which was extraordinary. I

remember sizing…   One of the first major sales was RAOC Bicester. It was a huge system. And, getting the performance of that.

What does that stand for, RAOC?

Royal Army Ordnance Corps.

OK.

So it was to deal with all the ordinance.

Yes.

And it was a, a big administrative system, and, the biggest sale of the day at the time. But, but trying to get the configuration right, processing power, storage, the disk storage which was then coming in; the number of I/O channels, the seat mechanisms, and all the rest of it. Trying to get, model that and get the, you would get the system sizing right. So develop a model that then was, was then used by all of the various sales teams, who were trying to sell 2900 Series systems to customers, to use the sizing model to do that.

[28:12]
One of the problems that you had at that time was this constraint in hardware, and that hardware was, because of its price and because of, it wasn't always as reliable as it should have been, in terms of reliability, you really did have to squeeze things down, and, and one of the things you had to do was to shift bits of programs in and out.

Yes.

It's called paging process.

Paging, yes.

And it was a huge headache at the time, was it not?

Yup. It was. And that was… And that indeed was part of the sizing model. So, how much paging did you need to do, and what was the impact of paging? Because, if you look at, if you analyse any, any application, whether it's systems software or applications software, whatever it is, you have to make decisions about, you're going to have to recover this, having paged it. And…

You put it out to disk, to give yourself the core memory.

Correct.

Now you've got to bring it back in.

Now you've got to bring it back in.

You can often spend, 60, 70 per cent of your time bringing stuff in and taking it out again.

And that was part of the sizing model. That was absolutely part of the sizing model, working that out. And that's where I worked with Conway Berners-Lee. So you've then got to use queuing theory, decide, you know, how is it going to operate on a single server queue or multi servers. And it was a… We spent a lot of time doing that. It was, it was quite extraordinary.

And intellectually stimulating by the sounds of it.

Very. I, I thought it was… I mean I was in awe of Conway Berners-Lee, I have to say. I mean, clearly an incredibly bright individual. I couldn't have… There's no way I could have done that alone, not, not at all. You know, very, very challenging, very stimulating. And a great period. But the ability to turn that… I remember being part of those presentations, and standing up… I'd never given, never public speaking before. And standing up and giving presentations to customers which translated the technology into what it meant for them. And that was my frustration initially, when I

saw some of the development, it was all, some of the presentation material was all about the technology. It was about pipeline speeds and what have you. And I'm thinking, well, yeah, I get that, but, what does it mean, in the real world? And my obsession was, translating it into real world terms.

[30:46]
'73, four years after you joined, you then spent four, another four years, to '77, in technical support and implementation to sales, yes?

Well, yes, I moved into sales during that period. I… I was beginning to move towards sales in '73.

Right.

Yes, I, I was technical support on some of the largest implementations, RAOC for example. But then… I can't remember the year I moved into sales now.

Sometime in the later Seventies anyway.

Sometime… I would say mid… Yeah, mid-Seventies. Moved in sales.

Now this is a different kettle of fish.

Yup.

This is directly talking to customers.

Yes.

Not only with a technical hat on, but also a hat which asks you constantly, 'What can I do for you, Mr customer?'

Yup.

Or Mrs customer. And the two customers that you got major sales from were REME…

Yup.

Yes?

Yup.

Royal Electrical and Mechanical Engineers.

Absolutely, in Woolwich, yes.

And the Foreign and Commonwealth Office, FCO.

Yes.

So these are two public sector.

Two public sector, yes.

Classic ICL customers.

Yup.

What were their systems for then?

Their systems… So, REME was for repair and engineering, so… And that involved spares and spare holdings and, and what have you, in Woolwich. And funnily enough, the, the REME system that I sold, [laughs] was a, it was an interesting period, because, the system that they had, they already had an ICL system, but there was a major dispute. And that's when I moved, that was, that was my first sales, part of my first sales territory. There was a major dispute between REME and ICL over the performance of the system that they had been sold. It was on a, a lease or a rental

basis at the time. And, for all the world it looked as though, you know, it was going to get returned and, and ICL would lose the account. So my target was simply to hang onto the account. As luck would have it, because I had spent a lot of time when I was at university, and also, because I, because I had been in Manchester in the very early days in technical support, I knew all of the people in West Gorton and what have you very well, and I became aware of a system that had been sold to, a European university, I can't remember where it was, Netherlands I think somewhere, that… And, they get built, they get put on the floor, with a configuration, and there's a label, you can walk through the floor, you can see the labels on, this is 'Anderlecht' or this is going wherever. So I see this one, 'cancelled'. And it was cancelled at a time where, you know… There wasn't another customer for this. And I'm looking at this, and fortunately, because of my background, I was, as a sales, as a, my first sales territory, I was, even though I had a, I was allocated sales support, technical support people, I was probably better able to plug my own technical support, in those early days. Looking at this, I'm thinking, I think this would be a perfect fit for what REME really want. Long story short, I persuaded, I persuaded the company, because this had been cancelled, to do a special deal, if I could persuade REME to take it, instead of entering, you know, this dispute and litigation and God knows what. And I did that. [laughs] And I remember the discussion I had with the, the, I can't remember, was he the UK or worldwide sales director, Dr Peter Aylett, at the time. I remember Peter very well. I, I ended up making 1,000 per cent of my sales target in that first year. [laughs] And Peter, Peter said, 'We're not paying you all of the commission.' And he asked me, basically made a comment about me trying to make, trying to make them all look like fools. [laughs] Which I sort of understood. But that of course got me off onto, you know, a high-flying track in sales. So that was REME.

[35:48]

The Foreign and Commonwealth Office was interesting because, interestingly, I had provided technical support to the FCO, to the sales guy in FCO, previously, and the system there was to do with diplomatic messaging, support for diplomatic messaging, around all of the locations around the world. And, I remember when I was supporting the salesperson, who I still remember to this day, a great guy, as a technical support, I had gone in. And these are the days of flipcharts. We didn't have… [laughs] Yeah, right. I remember working with the people in FCO. And I drew up a, on a flipchart, a complete flow diagram of their existing manual, diplomatic messaging system. And I

have never forgotten, the presentation, and so, the salesman gave his presentation, and I was asked to talk about the system itself. So I showed this flipchart and explained how their current system worked. And, I think it was the under-secretary at the time got up, and he came over and looked at this, and said, 'This what we do today? Is this how it works?' [laughs] And he said to me, 'Can we have this?' [both laugh] So at that stage, you didn't make the sale; effectively, we sold the flipchart. But later on we, you know, FCO was made to turn that into a sale.

This is indicative of, of two things that I would like your comments on. One is that, in implementing computer systems, people often didn't know what they were, what they were still doing.

Absolutely.

And you were really playing a role of OR for them.

Yes.

Operational research.

Yes.

Which they hadn't actually engaged in.

Yes that's right.

Secondly, you were shipping them, this hardware stuff, an operating system.

Yup.

But where is the application coming from?

Well the application, in many cases, if you look at RAOC Bicester, the application, they would develop themselves, in-house.

Yes. OK.

Their own IT people doing that. And that would be the case at the time. I recall, quite rightly, you referred to the unbundling and then the development of system houses and then on to systems integrators, which is what I moved on to. And that's, and it was that that interested me, rather than the hardware platform itself, was… I wanted to get closer to the application, and go back to the Foreign and Commonwealth Office, understanding, well what do you do today? How do you do that? Why do you do that?

Mm.

Mapping it out and looking at it, and thinking, well how can we provide a system which will enhance that, which will make it much more efficient or do whatever. And that's what, that's what, going all the way back to, you not wanting to be a development engineer, it was that that, that really got me.

Yes. Did ICL have Dataskil then?

Not, not then. It, it did in the mid-Seventies, it did have, did have Dataskil, yes.

[39:07]
Yes. So, '77 you move into first line sales management.

Yes.

You are now managing other people.

Yes.

What was that like?

Scary. That was scary. I was young. The salesmen that I was then going to be responsible for were older than me, more experienced than me. And to be honest, I was really really nervous about it. I, I'm thinking to myself, well how, how on earth do I earn the respect of these people? How do I… I'm manager, I'm their boss. How do I… And it felt very very awkward for, for a little while, I have to say. But I, I… I just took to it, and, took the view that, I was there to help them succeed.

You're 29 by now.

Yup. They were, they were people in their, thirties, maybe getting on towards forty. I can remember some of them, and very very successful salespeople, and, yes, I'm a 29-year-old, I've just taken over this, this first area. Anyway, that was, that was, that was successful. I think I was able to help them with, you know, relationships with, with customers. I, I had also, while I was in sales, participated in… ICL's training was, in those days was always great. Helping develop sales training, and being a test bed for sales training. So I was able to help the sales people I was responsible for in that respect, and also, I still had that ability, you know, because of my background I still had that ability to understand, you know, the technology, the systems, the software, the operating systems, how it all worked. So if they were stuck with something, then I could, you know, I could usually help find a way through it. So it, it worked, and, and was successful, and indeed ultimately led to membership of what was called the Diamond Club, which was, you know, worldwide.

[41:33]
You became an Area General Manager.

Yes.

And, this area is, a fictional area really, the public sector.

It was civil, civil public sector.

Right.

Yup. Civil government, yup.

Non-military.

Non-military.

Yes. Now this is a huge market for ICL.

Yes.

And ICL is beginning to get a bit of a kicking in that market.

Mhm.

Because IBM is really coming after this, isn't it?

Yes.

We're into the, into the European Union, or EEC, by now.

Yup.

And rules say, you can't back ICL and just use ICL.

Correct. Preference policy, gone.

It must go.

Yes.

Must go.

Absolutely.

So, here's the whole of the public sector…

Correct.

…open up for IBM.

Yes.

With its 370 machines.

Correct.

Worldwide operations.

Yup.

Cost of sales, pf!, huge, but, cost of manufacturing, very small, because it's making many more…

Absolutely.

…than ICL is. ICL maybe make ten. IBM make at least 100, in comparison, yes?

Yup.

It's an order of magnitude isn't it.

Yup.

How do you compete?

Well bearing in mind that, a lot of these organisations already had ICL systems.

Absolutely.

So the big factor, one of the big factors that makes a difference is, is switching costs.

Uh-huh. Yes.

So when you look at… It isn't just simply the cost of the hardware platform and whatever else that goes with it, and a comparison. So you have to look at total cost of ownership, including the cost to switch. And when… And again, I had started to develop sales arguments about, and getting people to understand total cost of ownership, and switching costs. And in many cases that would win the day, as long as we could, we could commit to performing and performance. So as long as we could do that, as long as we could show that what we could deliver would achieve what was required, and IBM may compete on price, but then when you put in the cost to switch to that, as long as you could satisfy the customer, this will meet your requirements, and if you want to switch it's going to cost you this much more, over the lifetime, then you make the argument.

But you have a problem, do you not, because, the New Range, as it was called, launched in 1974, 2970, 2980, et cetera, is not hardware-reliable as IBM.

[hesitates] There were lots of issues with the 2900 Series initially, yes.

That's a wonderful euphemism Bill. [BH laughs] Yes.

Yes, there were. And, goodness me, I was involved in some of them. Backing store for example, the Bryant large fixed disks that ICL took on, were horrendous. I mean they were… It was awful, I have to say, as a technology, awful technology, and the seat mechanism was so unstable, the whole cabinet would rock with the seat/C card. So these things would, would break frequently. That actually ended up, again, dispute between ICL and Bryant. Eventually we got through that. So yes, there were lots of issues like that. And, not, not just that, not just hardware. The development of VME, the 2900 operating system, at one stage started to go in the wrong direction, and, ICL shipped in, actually, a number of people, ex-UNIVAC people, and software

developers from the States, to, to resolve that. And it was a, quite a difficult, quite a difficult period.

[45:35]
They resolved it by building another operating system, did they not, and there was a period in which IBM had three operating systems on the go at the very least.

Yup.

Madness.

Madness.

Mm.

Madness.

A drain on resources.

A drain on resources. And in the end, I mean back to your earlier point, if you fast-forward to when Peter Bonfield took over at ICL, and eventually it being acquired by Fujitsu, ICL had some fantastic technology. I mean I think about Google today, and if you think about Google, its search engine, I can remember ICL's Content Addressable File Store, back then. You were searching by content, which is what Google does today. So ICL had some fantastic technology. Its big problem in my opinion was several-fold. Its home market simply wasn't big enough to enable it to compete with competitors like IBM, who had a massive home market called the US, and support from, from the Department of Defence. It just… ICL just didn't have that. And I couldn't see any way that ICL would, long-term, be able to sustain competition on a global basis against those American manufacturers.

Because IBM had not only gone up of course in terms of size; also its own customers had alternatives, with IBM compatible processors…

Correct.

...and storage...

Yes.

...with Memorex.

Absolutely right.

And disk drives.

That's right.

And also, IBM came down lower into the marketplace...

Yup.

...with 3400, System/38. Which then, it was really spread, really spread.

It was really spread. And…

And you are, you are fighting a pinpoint action against somebody who can envelope you basically.

Yes.

Which is what IBM often did.

Yes. That's right. And that's, that's partly what caused ICL to introduce the 2903, which was the bottom end of the 2900 Series. But I felt that it was inevitable, I mean you will see, I left in about '79, just before Peter took over, it was inevitable I think that, that… I mean, it, being bought by Fujitsu was, whether it was Fujitsu or somebody else, was almost inevitable in my opinion.

[48:00]

Right. The thing that really did it probably for ICL was, in 1979 IBM launched a mid-range mainframe system called the 4300.

Yes.

Which just pulverised the price and boosted the performance.

Yes.

That was a direct attack on the Japanese, and basically, in the wash of that attack, ICL was, it sunk.

Yes, it was gone. It, it was gone. It couldn't, it couldn't compete on a global scale.

You smelt all that at the time, did you, you sensed that was coming?

I did. Well I, I did, and I, I also smelt, the other thing I smelt at the time was, in the late Seventies you started to see the birth of what became the PC, so the single board micro, CP/M and what have you.

Yes.

And, ICL was ignoring it. And I was fairly vocal, internally, at the time about, look, we ignore this at our peril. And, eventually, it was that that, that caused me to leave.
[48:58]
But, the other thing that I think hurt ICL was that preference policy that we talked about, that ended with, with Thatcher and the EU and what have you. So, that hurt it. And I, I later on engaged with the select committee for technology in terms of, thinking about the development of hardware platforms as opposed to the burgeoning systems industry in the UK, which, which actually could have been the best in the world. Now you think about, system designers, computer analysts and programmers, later Software Sciences, which I was responsible for, Logica.

Logica. Sure. Yes.

You think of all of them. If Government would be more, had been more focused, and this was an argument I had with, I've forgotten the name of the MP who I did battle with on that, if Government's focus had been more towards the systems and software industry as opposed to trying to compete on hardware platforms, and supporting ICL in that respect, we'd have done a better job in my opinion.

[50:33]
Right. So you took the opportunity, in 1980, after a decade at ICL, to move to Computer Sciences Centre. You were headhunted, to join up a subsidiary.

Yes, that's right.

And this was a time-sharing bureau company.

Yes. The main company, Computer Services Centre, was an ICL-based bureau company, mainframe time-sharing. And when I think about the development of cloud and what have you today, you can see its beginnings way back then.

Mhm.

So, you know, the bureau development around the world, large mainframes are expensive, small companies – or small*er* companies, couldn't afford, so, so the time-sharing movement developed. And, Computer Services Centre was one of them. And, what, what, the reason I was headhunted, what it had tried to do was, it had, you could already see at that point, with the development of the, the single board micro starting to move, you could start to see the erosion of the customer base of the bureau companies by this micro device, with, people believing that they could take their applications off the bureau company and, and maybe develop applications for these single board micro devices. Actually at that stage it didn't work, but that was… So you could start to see the erosion of the customer base, the smaller customer base, of these bureau companies. So what Computer Services Centre, CSC as, not the other

CSC, CSC it called itself then, had done, working with private equity and an insurance company, John Holt, who also was an ICL customer, was to set up a subsidiary to try and develop, using that micro technology, try and develop a system that it could sell to its end users, that was effectively a data capture and validation system, but also had both online and offline transmission. So you could transmit that validated data for mainframe processing, and then receive output back, either delivered printout in a van [laughs], or you could, there was some online batch capability at the time, and you could get output back. So, they had set up this subsidiary to do that. Unfortunately, it didn't succeed. I was making a bit of noise in ICL about ignoring the development of what became the PC, and also, then you had seen the development of minicomputers and those mid-ranges, Digital and all the rest of it starting to, starting to come on stream.

[53:41]

So, I was headhunted to go and take over this subsidiary, and also…

This was UK-based?

UK… UK based, yes, but, the intention was for it to be international.

Right.

UK based. Here in Acton. And, so, to, to run this, but also, be an investor in it.

Right.

So I invested in it, along with, CSC was the parent company, it invested, John Holt[sp?] invested, private equity invested. I invested, and, and took it over.

OK. When did you get your skills to now run a P&L? Because now you're running an operation, and you are…

OK.

…responsible for a whole P&L.

Yes. The, the area management job in ICL was, was a P&L.

OK.

It was a P&L. And, so, if I go back to… When I, when I moved into sales, ICL sales training was very much business training.

OK.

So I remember, for example, and it was excellent, it was really exceptional, I remember one occasion being given the *Financial Times*, and you, you're learning how to understand accounts, what appears in the *Financial Times*, all the rest of it, different ratios, be able to talk to customers about, about the financial aspects of what they're doing, and make sense of it, together with the training as an area manager in ICL. End to end P&L. Obviously I wasn't responsible for some of the corporate, the corporate stuff that was provided, but I would charge for it.

OK. So you had P&L experience.

So I… So I had an understanding and experience.

[55:29]
OK. How big was CSC then in the UK and this operation that you were managing director of?

Oh it was a, it was a, it was a start-up. Literally a start-up.

Yes.

So, it had, when I took it on, it had, three people in it.

OK. So you've gone from an organisation which is, bureaucratic perhaps in the best term of that word.

Yup.

Has bureaucracy within it. It's over, 50,000 people perhaps at its height.

Yes, that's right.

To one with three, including you.

Yes.

OK. So you've got to recruit, and you've got to build fast.

Correct. That's right.

Did it work? It didn't work technically, is that right?

Oh, well it, it was… It was working, but again, it was the, how do you sell this, that was not working.

Right.

So, when I… When I joined, and these, this small team demonstrated this to me, they were demonstrating…

What you had hoped. What you had been proposing.

Well, they weren't doing that. They were demonstrating the technology.

Yeah, OK.

They had developed some very smart… They had found some West Coast technology based on single board micro. They had developed, they had developed, using some existing IBM-based communications protocols, they had developed some

protocols that could operate both, both online and in batch, but they had also developed an offline mechanism whereby you could process whatever it was that captured the data, process it, validate it, and write it to a, a small tape, that could then be shipped to the main bureau, transported, you know, couriered to the main bureau. So developed that software. And what they were demonstrating to me was the technology. They were demonstrating how clever they were at having done this stuff. And, one of the simple things I did was say, 'OK, look, I'm a small business, I'm a customer, I understand what you're talking about.' So, you need to tell me what this is going to do for me. How does… So, we then started to develop demonstrations that took customer data, did the capture, did the validation, sent something for processing, got some results, showed the output. So we were talking to the customer then about the output, and the turnaround time, and, and what have you, and how much it would save them, against what they had previously been paying…

Yes, the bureau.

The bureau. So that started to work. That was the first time it took me to the States, the West Coast, Seattle was the original technology. Africa was a prime… Because communications, Africa's poor, so this device started to go down gangbusters in Africa, believe it or not, and in Europe. So, I started to get involved in, for the first time in import-export, documentation and what have you; fell foul of it a few times personally. I remember being arrested at the border in, coming back from France. It wasn't my fault, it was the customer's official's fault, made a mistake, but, stamped the wrong documentation but then didn't want to own his mistake.

[59:13]
Who were your first customers?

First customers were other bureau companies.

Oh OK.

So my idea was, look, this sells to small businesses.

Yup.

You know, it's small business will use this, not big businesses.
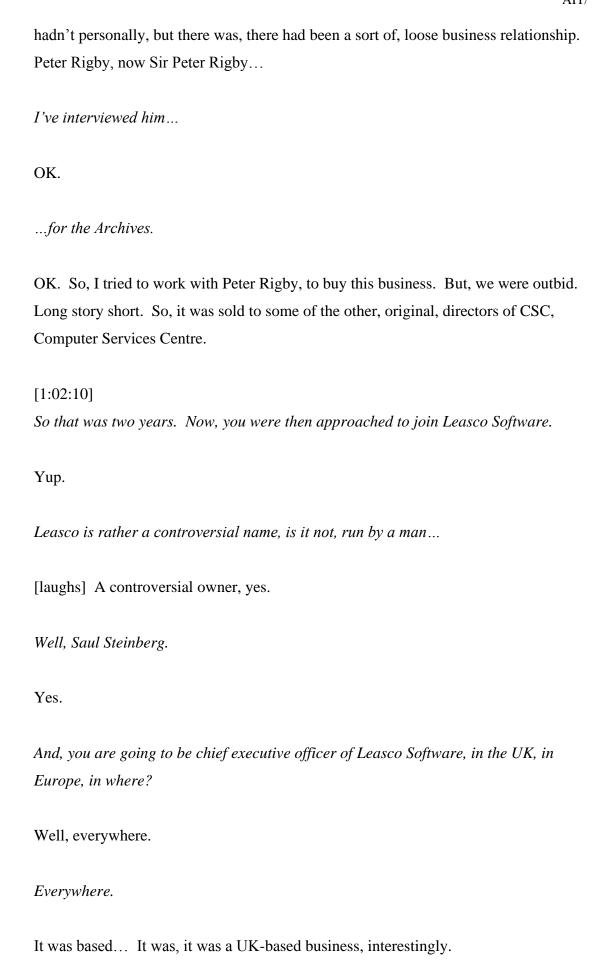
Yes.

We don't want to try and create a sales force around a world that does that. So, we need to, we need a distribution system, so, let's, let's identify all of the different independent bureau companies operating, initially in Europe. Put a team together. Put the stuff in the back of the car, drive to Europe, go and visit them, and demonstrate it, how this is going to protect their customer base. Rather than lose them, they're going to hang onto them. Leave demonstration systems with those bureau companies. And that's how we made sales. So we started to build up a distribution system, distribution network, in Europe, in Africa, because John Holt[sp?], one of the investors, had a base in Africa.

Did you get into the black?

Yup. But, having done that, unfortunately, CSC, who had the biggest share, went into trouble. And it did it unfortunately because of, regrettably because there was some fraudulent activity, on behalf of its founder, who to the best of my knowledge has never been, never been prosecuted for it. He disappeared off to the United States, and I've never heard of him since.

OK.

I remember being called back to a board meeting. The chairman was a very well-known Liverpool steam shipping company called Larrinaga, Rupert de Larrinaga was chairman of the, the whole business. Being called back to a board meeting. I was visiting distributor customers in Europe. Had to fly back for an emergency board meeting when this had happened. And, regrettably, what happened was, the decision was taken that, that Computer Services Centre would be, would therefore be sold. I tried, together with someone who you may have heard of, who was… We had a… I

hadn't personally, but there was, there had been a sort of, loose business relationship. Peter Rigby, now Sir Peter Rigby…

I've interviewed him…

OK.

…for the Archives.

OK. So, I tried to work with Peter Rigby, to buy this business. But, we were outbid. Long story short. So, it was sold to some of the other, original, directors of CSC, Computer Services Centre.

[1:02:10]
So that was two years. Now, you were then approached to join Leasco Software.

Yup.

Leasco is rather a controversial name, is it not, run by a man…

[laughs] A controversial owner, yes.

Well, Saul Steinberg.

Yes.

And, you are going to be chief executive officer of Leasco Software, in the UK, in Europe, in where?

Well, everywhere.

Everywhere.

It was based… It was, it was a UK-based business, interestingly.

Right.

Called Leasco because Steinberg… Steinberg of course pioneered the leasing of IBM mainframes in the Sixties.

Yes.

Hence Leasco. His original company was called Leasco.

Yes.

So, Leasco Software was an offshoot, based in the UK, but it was an international business.

Right. And, the objective was large-scale operational systems implementation.

Yes.

And, one of the people you had to deal with was Mirror Group Newspapers, dealing with…

Robert…

Here you are…

Robert Maxwell.

Yes. Steinberg on the one hand, [BH laughs], and Maxwell on the other hand.

Absolutely.

[laughs] Tell us about Robert Maxwell, and dealing with him as a customer.

Well, when he took over Mirror Group Newspapers in 1983 I think it was, we, Leasco, we had all of their… We ran the backup systems for all of their titles, so *Racing Post*, *Mirror* and what have you, all of the titles. Had the backup system offsite, OK. And, maintained those systems, kept them up-to-date, maintained those systems, having developed them. And, this contract, I forget what it… It was probably worth, the maintenance contract on that was probably worth, back in those days, £250,000 a year, something like that. It was a significant customer. And when Maxwell took over, the IT director, whose name I've forgotten, contacted me, and said, 'Bill, look, you need to know…' And the contract was up for renewal in July. Maxwell had just taken over in April or something like that. 'You need to know that,' and God knows why this was the number, 'anything over £7,000 goes over his desk.' Now of course, I knew about the Pergamon affair and the relationship between, [laughs] Maxwell and Steinberg. And of course by then I had got to know Steinberg quite well. Another interesting character. And I'm thinking to myself, oh my God. It's inevitable that he's going to see this, and see it's Leasco, and we're doomed. And what am I going to do about it? Do I, do I just wait for that to happen, or do I upfront it? So I decided, I would upfront it. And, as luck would happen, there was an Anglo-American conference in London, and being an American-owned, even though it was UK-based, an American-owned business, Maxwell was the, I think it was a lunch meeting, he was the speaker. And of course I had never met him before. Massive, I mean huge, absolutely huge. Very bright. Extremely bright, and charming when he wants to be.

And a bully.

Yeah, I can tell you more, I can tell you lots of stories about Maxwell. I got to know him quite well. So, I thought, I'll upfront it. So I went to this conference. And as he came off stage and he's walking across, this was, I think at the Grosvenor, walking across the, across the floor, I decided I'd intercept him. So I walked across. I said, 'Mr Maxwell, allow me to introduce myself. I'm Bill Halbert.' So, he looked down at me, a bit of a grin came across his face, he looked down at me, he said, 'I know who you are. How come it took you so long?' [laughs] I thought, wow. That's impressive. That was very impressive. But he then laughed and said, 'It's fine, don't worry about it, it doesn't matter.'

[1:06:15]

So you retained the business?

Retained the business. And dealt with him on a number of occasions, and, and saw the way he operated, which was… [laughs]

Horrendous is one of the words.

Yah. I saw the way he treated his two sons, Kevin and Ian. I just couldn't… I couldn't for the life of me understand it. I'm thinking, these, these are your children. What on earth are you doing?

[laughs] If you do this to the children, what do you do to your enemies?

Oh.

Yes.

But he was, he was incredibly, incredibly bright. Incredibly bright. He tried to involve me, because we had all the backup systems, in strike-busting at one stage, and I refused. And he wasn't happy. And I said, 'Mr Maxwell, look…' And he insisted that, he never… He insisted on being referred to as 'the publisher'. I remember getting called one Sunday afternoon. I picked up the phone. 'Is that Mr Halbert?' 'Yes.' It was a journalist from the *Mirror*. 'This is so-and-so from the *Mirror*. If you're available, the publisher would like to speak with you. Are you going to be available?' I said, 'Yes, I'm, I'm at home at the moment.' So, he rung off. A few minutes later the phone rings. I pick the phone up. 'Maxwell here.' And he wanted me to go to a meeting at what he described as his council house at the time, which was Headington Hall, said council house [laughs], that afternoon. I said, 'Well look, I'm sorry, I'm just about to go out with the family.' 'Well can you make it round?' I said, 'Well I could make a meeting this evening.' So I went, I went and met him at seven o'clock that evening. And this was about, this… Because we had the backup system, this fundamentally, the meeting was about trying to get me to run, Leasco to run the

systems for him during the course of this strike. Strike bust. And I said, 'Look, I, I…
If you want to give me a contract to do something, that's one thing, but I can't get
involved in a dispute between you and the unions.' No, he was an extraordinary
character.

[1:08:15]
*Some parts of Leasco were then spun out because Steinberg, decided not to invest in
the UK any more.*

Yes.

And needed the cash elsewhere.

Well it wasn't his only business in the UK.

*No. Not least for his lawyers' fees. [BH laughs] And you were then kind of, almost
moved sideways, into Software Sciences, because they acquired part of the operation.*

Yes.

And then you became MD for five years.

Yup. Steinberg wanted me to sell Leasco.

Right.

And I got a buyer all lined up. The thing that killed it was, he was not prepared to let
the name go.

OK.

Leasco. He just didn't, wasn't prepared to let it go.

OK.

And I said to Saul, 'Look, this deal won't go ahead if you let it go.' So, I was approached by the guy who was then running Software Sciences, Mike Shone, sadly departed of course, became a good friend of mine, Mike. And, so part of it… Mike acquired part of it.

Right. And you were tasked with building the civil central government market.

Correct.

Which you knew rather well, didn't you?

I did know it very well, which is why he wanted me to… And indeed Leasco had a strong presence in that market too.

Right.

And, I knew it well. But Software Sciences, curiously, had virtually no presence in it. It hadn't succeeded in that market.

[1:09:42]
OK. So you were able to, so to speak, bolt that on by starting it up, including air traffic control. Now a very significant event occurred for the UK IT industry in the year before, which was 1984, the year before you moved to Software Sciences, and that is the privatisation of BT.

Yes.

And in air traffic control, we have now a classic combined computers and telecommunications system…

Yes, exactly.

…which is really a precursor of what we would now call IT.

Correct.

And so you had to now get your head round that development.
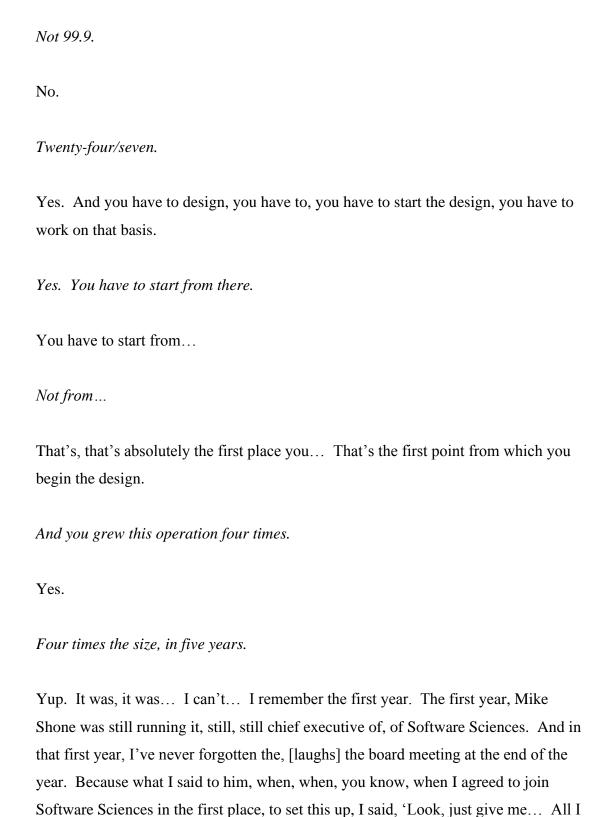
Yes.

How did you do that?

Well again, it goes back to those technology roots. I, I, you know, I, I still had a, good understanding of technology and the way it was moving. In some senses you still do today. And, if I go back to, if I go back to some of the later stages, later systems at ICL, where, you were always saying to a customer… I remember selling one system, I think, was it, HMSO? I can't remember now. Might have been. Where, where, you had previously been saying to an ICL customer, 'You need to talk to BT about any telecoms that are needed,' but started to get towards the end of that period, and indeed, if you look at the Computer Services Centre subsidiary, that was a combination of… It was very heavily communications protocol based. It was, it was a fusion of the two. And I've been heavily involved in that. So I understood what that looked like, from a technological point of view; I understood where communications protocols were moving to. So, it wasn't, it wasn't that difficult to, to handle that. The difficulty with air traffic control was, was the, was the risk perceived by National Air Traffic, NATS, by… So trying to get an air traffic control system through all of the acceptance stages, and getting people's signatures on acceptance certificates, was a massive problem. Massive problem. So, yeah, I mean, we developed the EDDUS military air traffic control system, the North Atlantic route system. We couldn't get the decision on replacing the West Drayton system, which came much, much later. But yeah, one of those big… So, I had always, I always had a good understanding of big control systems.

[1:12:54]
And these have to be, twenty-four/seven.

Twenty-four/seven. Absolutely.

Not 99.9.

No.

Twenty-four/seven.

Yes. And you have to design, you have to, you have to start the design, you have to work on that basis.

Yes. You have to start from there.

You have to start from…

Not from…

That's, that's absolutely the first place you… That's the first point from which you begin the design.

And you grew this operation four times.

Yes.

Four times the size, in five years.

Yup. It was, it was… I can't… I remember the first year. The first year, Mike Shone was still running it, still, still chief executive of, of Software Sciences. And in that first year, I've never forgotten the, [laughs] the board meeting at the end of the year. Because what I said to him, when, when, you know, when I agreed to join Software Sciences in the first place, to set this up, I said, 'Look, just give me… All I want, a secretary, a salesman, and a support guy, and we'll kick off from there, and build this.' And, I remember, at the end of the year, December time, board meeting, I forget where it was now, and getting the news that we had just won the new passport system. And that closed, in that period, from April to about December, £20 million

worth of new orders, which was quite something in those days, from a standing start, in that civil government area.

[1:14:36]

And with that type of experience, and having grown it four times, here is BT thinking, ah, perhaps this is a market for us. But instead of going in as BT, they decided to set up a separate organisation.

Yes. That was Iain Vallance. Iain Vallance…

Syntega.

Syntegra.

Syntegra.

Syntegra. Yup.

s-y-n-t-e-g-r-a.

Yup.

Iain Vallance, who has already made his contribution to the Archives, Lord Valance now.

Yup.

So he was a dyed-in-the-wool GPO, BT, man.

Yes.

His parents were.

[laughs] Yes.

I think he was probably born to the click of, you know, electromechanical switchgear going through.

You may be right. But it… But, but an incredibly bright, prescient individual.

Right. And he's trying to build up this organisation. So, he doesn't actually have it as a BT direc- Well, he does have a BT-owned subsidiary, but he doesn't call it BT.

No, he, he wanted it… He wanted it arm's length and independent.

Why?

Because… He wanted a systems integration business. What it… Why. In the first place, he realised that with the, with the onset of convergence between IT and telecoms, that the telecoms industry would be, would be intermediated by the IT industry in terms of value creation, and they'd just be, they'd just be dumb pipes. He therefore wanted to capture some of that value creation part of it, and not be subsumed by EDS or IBM or whoever else in those, in those kind of deals. So he wanted to create his own systems integrator, but a systems integrator that would understand that convergence. So he didn't want to create a, an IBM global services, or an EDS; he wanted to create a new systems integrator. And I thought… And it was… It was meeting Iain Vallance that caused me to join it. And it was a very clever move by Rae Sedel, who, who was the headhunter, she was very well-known, Rae Sedel, from Russell Reynolds. And after a few minutes, after she had called me… I'm, then, you know, Mike had been moved on from Software Sciences, I was running Software Sciences. We're doing extremely well, very well. I, I had a good relationship with Colin Southgate, who was Chairman and Chief Executive of Thorn EMI, who then owned… He was the founder of Software Sciences originally of course. Albeit he and I fought a lot, a good relationship. And Bill Ellis of course. Not a great friend of mine. I, I… I had no intention of leaving Software Sciences at all. But among the systems houses Software Sciences was still quite small, it was about 100 million at the time, just over I think, and it wasn't… It had some international capability, but it wasn't global. And, anyway, when Rae approached me,

my first reaction was, after a few minutes, 'Hang on a minute. You're talking about BT.' I said, 'Look Rae, I, I'm very happy where I am. I'm not thinking of moving anywhere. But frankly, if I was, the last organisation I'd look to join would be BT.' Because, I think, like most people in those days, I, I had a fairly negative view of BT, to be honest. And she, she did something which was really, really, very smart. She said, 'Bill, what have you got to lose by meeting Iain?' Which is what I did. And, the rest is history.

[1:18:18]

And he wanted an arm's length subsidiary business, but one that understood the communications world, and understood convergence, and could play to that. And Syntegra did, did that extremely well. Now, I didn't have the name Syntegra at the time. I, I'll explain how I came across the name Syntegra, but didn't have that at the time. So I, I eventually agreed to join in 1990, and, you know, Syntegra effectively was a start-up.

Another start-up for you.

Another start-up. And, and it grew, grew to a global organisation, five and a half thousand people. I mean it was a very successful, extremely successful business, with some, again, major operational systems. And if you look at, look at the dominance in trading room systems, every system that we put in required significant communications, and drove significant communications traffic. So if you think of foreign exchange dealing, it wasn't just the foreign exchange systems themselves; it's a big communications system. If you…

[1:19:31]

Who were your major competitors?

The major competitors, you know, were people like IBM Global Services. You know, the big systems indicators were the major competitors. People like Logica still in those days. Cap Gemini. You know, all of the, the names that you'll be familiar with, we competed against.

Right. Were you able to get customers in the US?

[hesitates] We… Yes we did, but, but the way we did that… Having started, started as a UK business, and had built up from scratch, but, Iain, and, he wasn't… His view of this wasn't universally supported on the board. I remember the first board meeting when he asked me to present my plan, realising, wow, this is not, not everybody agrees with this. In fact one individual, I can't remember if it was Mike Armitage, one of the board members, after I gave this presentation of what was going to create, [laughs] said to me, 'Well tell me Mr Halbert, how the hell is this going to warm up the copper wires?' [both laugh] I thought at that time, oh my God. [laughs] Anyway, we got through that, and it was successful. It became even more successful when Iain brought Peter Bonfield in. And I had met Peter before. Peter became a friend. And Peter supported it extremely well. I mean he understood it, he supported it very well.

[1:21:04]

So, we were able to, because we were owned by BT, I mean that, that gave us a calling card anyway, and of course BT's pockets gave us another really important thing, was, what I said was, 'Look, to, to make this a global business, we can't just go to the States and win business. We're going to have to make acquisitions.' Which is what we did. So, in the States, CDC had created a services arm, and we bought, when CDC failed we bought its services arm in the States. We bought a systems company in France, we bought a systems company in Holland, another one in Australia. So we, we bought a number of small acquisitions, but we were looking… We weren't looking to achieve a geographic market share; we were looking to create a global business. So we were looking for, you know, a global footprint in, in trading room systems for example, which we did. I mean we, we became one of the two major players in that, in that field. We got about a 37 per cent share of the world's global trading systems. In fact we, sadly, we were involved in, involved, in 9/11, in trying to get people up and running again immediately afterwards.

[1:22:25]

I've got two points for you here. Some say that the, the majority of acquisitions in the IT sector fail. And others, and I think there are more of them, say, the Americans will only sell us Europeans the rubbish. How was CDC's service operation?

[laughs] A lot of it was rubbish.

OK.

A lot of it was.

Yes.

And…

You had to cut it out?

Correct. And I think, the reason that they fail is, you're not sufficiently disciplined about, what are you trying to acquire; be really really, don't get, don't… A lot of acquisitions fail because chief executives get too much ego invested in it.

Right.

Now I didn't. I left it to the team. And I took the view that, I'm the, I'm the customer. You're… I'm the customer. So you've got to sell me this acquisition.

Your M&A team.

Yes.

Mhm.

John…

Did you have external consultants?

Supported by external consultants, yes. And… So very targeted. We're looking to build… So we're looking, we want, we want to… We want to dominate the global trading systems market. So we need to be in Japan, we need to be in Singapore, we

need to be in New York, OK? And we need businesses that have some element of penetration of those kind of customers, and certain skillsets. They may have other things. So if I look at CDC, it had some other things that were just, you know, they were doing, hardware systems support. Well, get rid of it. But not enough people are disciplined enough to say, look, with anything you acquire, there's going to be some baggage. The first thing you do is get rid of the baggage.

Are you a good butcher?

I think so, yes. I think so. Partly because I stand back from it. I don't get… There's no ego invested in it. We… Keep the eye on the prize. But one of my favourite words, throughout my whole career, has been, focus. Keep the eye on the prize.

[1:24:36]
You built that to a billion-dollar global business, with over 5,500 members globally.

Mhm.

And with significant market shares in very important vertical markets.

Yup.

[1:24:48]
And there's a big US IT company, well telecoms company, called Sprint, and they look across the Pond at BT, and they say, 'That's a good idea.'

Exactly That's right, yes.

And also, we'll offer a huge amount of money to this man called Bill Halbert to build it for us in the US.

Yes.

So…

Yes. [laughs]

In 2003, off you went.

Yes. And I went, because at that stage, Peter Bonfield had now… There was a bit of a bust-up at BT, as you, as you know. You've interviewed Peter anyway. So… And Peter left. Ben took over. Christopher Bland took over as Chairman, and Iain left. There was a, I'm not sure, well I, I will say, supposed debt crisis, because I never was personally convinced there was that debt crisis, the 30 billion debt crisis. One of the businesses, however, in that period, going back to 2001 now, it was decided to, to sell, a bit like Cellnet, was Syntegra.

Mm.

And we got all the way to the eleventh hour to sell Syntegra, and then Ben came in, and said, 'No no no no, I don't want to sell it.'

Mhm.

'I want to… And I don't want it any longer as an independent business. I want to integrate it into,' it wasn't called Global Services then, it was called Ignite. 'I want to integrate it,' into what became Global Services, and not have it independent. Now, I disagreed with Ben. Perfectly amicably. I said, 'Ben, look, that's, that's fine, if that's the board's decision, that's fine, but I'll say two things. A) I don't think it's the right thing to do. You're just about to pull the pond into the ocean,' was the expression I used. 'And two, I'm the founder of this business. I can't integrate it into mainstream BT, so don't ask me to do that. If you want to do it, that's fine, but I can't do it.' So that's, that's why… I did stay for two years, to help with the plan, but having done that, and having negotiated the deal with HP, which was fascinating, dealing with, [clicks fingers], oh, what was her name? The…

Carly?

Carly, Fiorina.

Mm.

And that was, that was an extraordinary period.

[1:27:04]
Tell me your judgement on her.

Um… Incredible public speaker.

Mhm.

I've seen few people better than her, stand on the stage with no notes, and give a very powerful presentation. [pause] Internally, I would say internally within HP, a bit of a bully. I've seen her dis- I've seen the way she dismissed people. Wow. [laughs] So she, [laughs] she didn't take any prisoners, Carly. But of course, she…

Not the right person surely for an organisation that has a matrix structure and has to deal with consensus all the time.

Correct. And that was one of HP's problems of course.

Yes.

And, and inevitably, she fell foul of the Compaq acquisition and what have you. But… So…

[1:28:01]
Sprint.

So… So I was approached by Sprint.

Yup.

I didn't, I had never dealt with Sprint at all. I didn't even know they knew me. Well they, they didn't know me, but the reason it came about was, I had worked… BT's CTO was a guy called Bruce Bond[?].

Who we have interviewed.

Ah. Fantastic.

Sat in that very chair.

Fantastic. A lovely man. Well, Bruce Bond, you… He quite liked Syntegra, Bruce, and, liked what we were doing, and I got involved… Bruce was the guy who came up with the concept of 21CN. And I remember his presentation, which was going to go to the BT board, and I'm looking at this presentation myself. You know, it's like, 50 dense PowerPoint slides. I'm looking at this thinking, Bruce, there is… The board isn't going to, won't have a clue about any of this stuff. And didn't. Anyway, long story short. Because of Syntegra, when Bruce Bond went back to the US, I think for personal reasons, at the time, something to do with his wife, I've forgotten now what it was, but he went back for personal reasons, it was Bruce that talked to Sprint about Syntegra and me. I had no idea, I had never met Sprint before. So it was Bruce that did that.

[1:29:22]
OK. Now, Sprint built a fibre optic network across the US, long-haul, to tackle AT&T.

Yup.

And their, their great selling point was, the quality of their communications, the quality of their line.

Yup.

You can hear a pin drop, was one of their things wasn't it. So they wanted to get into this. You went to the US, helped them build it. And the medium-term plan was, you, you build it, and then bring management on from inside Sprint to run it. Is that…?

Correct. And I come back to the UK.

Right. Is that how it worked?

I didn't, I didn't want to move to the US.

No. Is that how it worked?

Yes.

OK. And that was successful?

That was successful. So… It was successful. Regrettably Sprint wasn't successful of course.

[1:30:05]
No. So, now you're, 2006.

I came... I came back earlier than I had agreed with Sprint.

Right.

The business was up and running.

Mhm.

But what happened in the summer of 2006… Because, I had some non-exec roles here in the UK.

You did.

So, I wasn't actually living one hundred per cent of the time in the US.

OK.

What I was doing was, I was commuting, so I was spending a few days every month here, and the rest of the time in the US. Summer 2006, you may not remember this, was when that plot was discovered at Heathrow to blow a number of airliners out of the sky over the Atlantic.

Yes.

I arrived at Heathrow the very morning that was discovered. The very morning.

Right.

As, as employees at Heathrow were being briefed about it. My commute then became, thereafter, chaos. Summer 2006. The business was up and running, the team was there. So I…
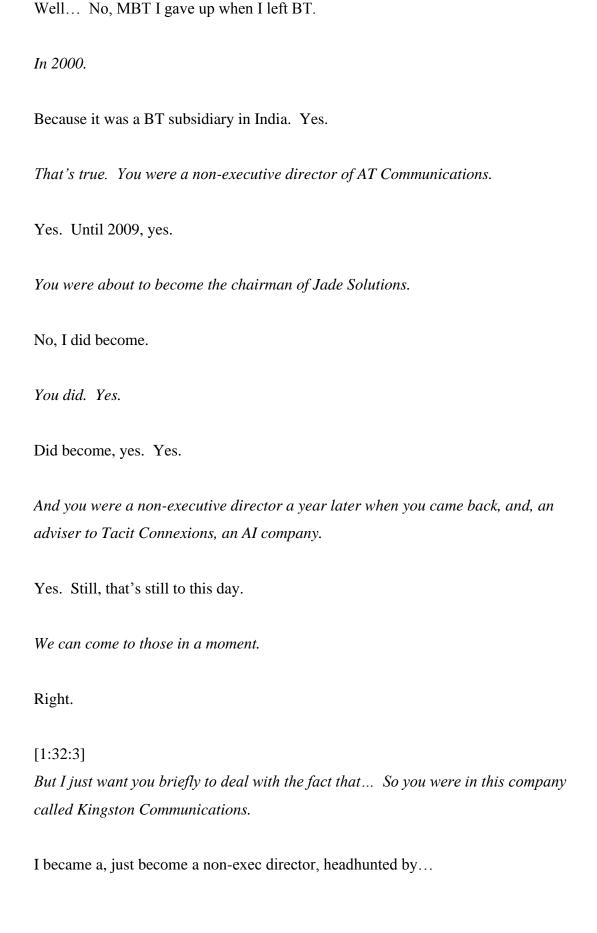
And you're 58 by now.

Yes. Yes. So, I, I agreed… I said to Sprint, I said, 'Look, this is impossible. I cannot keep doing this. I can't take any, I can't take anything on an aeroplane. There's no carry-on, there's no… You need to agree to take this, take this business in-house, appoint the people to run it, and I'm going to go back to the UK.' Which is what happened. So I came back end of 2006.

[1:31:32]
2006. And you basically then had a portfolio of non-executive directorships.

I did, yes.

This was with, for instance, a company called MBT.

Well… No, MBT I gave up when I left BT.

In 2000.

Because it was a BT subsidiary in India. Yes.

That's true. You were a non-executive director of AT Communications.

Yes. Until 2009, yes.

You were about to become the chairman of Jade Solutions.

No, I did become.

You did. Yes.

Did become, yes. Yes.

And you were a non-executive director a year later when you came back, and, an adviser to Tacit Connexions, an AI company.

Yes. Still, that's still to this day.

We can come to those in a moment.

Right.

[1:32:3]
But I just want you briefly to deal with the fact that… So you were in this company called Kingston Communications.

I became a, just become a non-exec director, headhunted by…

You were headhunted.

I want to say Korn Ferry.

Anyway, you were headhunted. And tell us about Kingston Communications. Because it's quite an interesting company, isn't it?

Very. I had known it before. And in Syntegra we had used Kingston from time to time as a subcontractor. So Kingston Communications had been floated on the main market by Hull City Council in 1999.

Right. And it was the only one standing of all of the local authority telephone companies…

Correct. Yes.

…that had been established at the end of the nineteenth century.

Correct.

And Kingston was not part of the BT network.

Correct. The only one.

And still isn't really part of the BT…

It's the only one. No it isn't. There is no BT in Hull.

Yes.

No, absolutely, absolutely right. There were…

So this is partly back to your roots. Does this… Was that part of it? Oh, I'm going back to the north.

Actually, no, that's pure coincidence. No no, no it wasn't. No. It was… I was asked if I would join as a non-exec, partly because of the whole Syntegra story.

Yup, yeah sure.

So what, what Kingston Communications had done post-flotation was a path that lots of telecoms companies had trodden, which is, we're a telecoms company, we now, we're now floated on the market. We want to expand into the value-added space.

Yup.

So they had made a load of acquisitions in the IT space, various acquisitions in the IT space, as well as, building a network outside of Hull, a national network. And what they wanted… What they believe they wanted at the time was, was a non-exec who understood that world, and obviously Syntegra and the BT story and Sprint and what have you was, in their view, the right fit. So I joined for that reason.

[1:34:24]
But then you're pulled into…

Well it very quickly became clear it wasn't working.

Right.

It wasn't working.

So you've got to take an executive role somehow.

So, I ended up being asked, in 2008, wasn't long after I joined, if I would take on the executive role.

You said yes.

Which I did.

[1:34:48]
And you grew it from a market capitalisation of 40 million, to about 500 million.

Yup.

OK.

As you see, it's now in the process of being acquired.

What happened so good in early, or late 2015, early '16, to do that to your share price? What was that?

[laughs] That was a deal, with CityFibre.

Right.

So… One of the things that struck me was that, we needed… Part of, part of Kingston's problem was, between flotation in '99 and 2008, it had made these investments in acquiring things, and building a national network, but it hadn't invested in the original core business, in Hull. And it was the BT of Hull. That was it. There wasn't anything else. So it had this old copper network. Its service was fixed line voice only. And by then, it's in decline of course. So, I'm looking at this thinking…

Because cable companies are in now, aren't they. They're ripping up the pavements in Hull and laying cable.

Well, they are to a minor extent.

OK.

To a minor extent. So, my view was, look, what we need to do… Because what the shareholders… When I took over in 2008, the shareholders, who, who were the, the shareholders who, [laughs] who revolted if you like, said, 'Look, stop, stop everything, this has got to change.' And the reason they did that was, it, it got that close to its banking governance.

Right.

So, so it, it was an emergency. And I was called in as a non-exec to shareholders, five shareholders, and it was an emergency. So, what they wanted when I took over was, they wanted me to get rid of everything that had been acquired, and only keep the original business in Hull. And what I said to them was, 'This is September 2008. We're in the middle of a global banking crisis. There are no debt markets. This, this that you've just told me you want to get rid of, the whole business is only worth forty-odd million pounds.' The share price had collapsed to nine pence. 'And, the enterprise value is minus £250 million. I cannot do that right now. It won't work.' I couldn't even give it away. 'What I will do is, I'll run a strategic review and look at two things. What needs to be done to invest in the business in Hull, to stop the decline and bring it up to where it needs to be, in today's world; but also, what do we have over here, and, and what value can we create out of it. And I'll come back to you at some point with, with options.' So that's how we started this.
[1:37:37]
So, going back to this question. It was clear that we needed to invest in putting fibre in Hull. But my view was, unlike BT, not fibre to the cabinet; fibre to the property. Unique. So we had to leapfrog the market, to take the gamble of going fibre to property. Couldn't make the business case internally at the time, but it was clear that's what we needed to do. But given the state of the business, with the debt crisis and all of that, how were we going to fund it? Well, one of the assets we had was this national network. And looking at it, networks… You may, may or may not be familiar Richard, that networks, there's a seven layer model. So the, the so-called passive layer, just the physical ducts and the fibres.

This is the OSI seven-layer model.

Correct. Absolutely correct. So the bottom layer is, is passive, completely passive.
Right? And we had a figure-of-eight, national network, with 25 CityFibre rings that
had been built, quite significant, and here was CityFibre saying it's going to build…
So, long story short. The deal with CityFibre, with Greg Mesch, chief exec,
CityFibre, to buy just the passive layer of the national network from us, for, about 100
million. And put that 100 million into fibre in the ground in Hull.

Right.

And that's what did that.

[1:39:22]
*That's what did that. So, if we come on a couple of years, just at the end of 2016,
what did that drop?*

What did that… That was… OK. That drop was… We had… I argued against it,
but lost the argument with auditors, and indeed our CFO of the day. We had a
contract. I'm still under obligation not to say who it's with, because the customer
didn't want to be identified. We had a contract, complex development, to replace two
existing systems for this customer. And we were going to replace these systems, and
one part of the business had started to develop a pre-eminent position in cloud-based
systems, complex cloud-based systems. So we're going to develop two replacement
systems. And, it was complex. We were going to put them into the public cloud, and
run them for this customer, through the life. And we got to the stage where, we could
not make any further progress. The customer became a little litigious. I in turn
looked at it and said, 'Whoa, hold on a minute. No no no, the reason we can't make
progress, in my opinion, having spent my whole career in major operational systems,
in my opinion, the bulk of the problem here is with the customer, because they cannot
give us the existing business rules that determine the way the existing system works.
And if we can't do that, we can't go beyond this point.'

No.

So I said, to our CFO, and to the auditors, 'No. I'm going to, I'm going to push back. I'm not going to accept this. I'm going to push back.' And, what will happen here, I predicted, back then, what will happen is, that'll be successful; we'll agree a mutual walk-away; and we'll agree a new development that won't start from that same basis, to achieve what they need to achieve. Now, if you look at it now, that is exactly what happened. However, I lost the argument with the board at that point in time, and, the auditors, our CFO and our chair of our audit committee, made provisions against losses on the software contracts.

Ah.

And that's what did that.

That's what did that. And now…

Since when those provisions are now being written back again. [laughs]

[1:42:08]
Oh that's good. And now the price is ramping up, because…

Because of an acquisition.

Because you're in talks to be taken over.

Yes.

Can we say by who?

Yes. It's USSL, which is the Universities Superannuation Scheme.

Right.

So, they're buying the business.

Why do they want it?

They want it, because they are effectively… Think of them a bit like an infrastructure fund. They invest in the long-term investments. So, if you think about what we've done at Hull, in Hull, putting fibre to the property, and that's now… Well, Hull now, all 205,000 or whatever it is properties, have the availability, not everybody's taken it up yet, but it's been delivered everywhere. So one hundred per cent available fibre to the door.

Eat your heart out BT.

Eat your heart out BT.

Mm.

When you consider, that's true of less than, less than five per cent of the whole of the UK, it's true one hundred per cent in Hull.

Are you going to stay on?

NO no. No, I've already gone.

OK.

I've already gone. So… So, the, the Superannuation Scheme look at Hull and think, given that investment, what we're looking at here is an in perpet- Because there isn't anything else in Hull. Yes, there are some small cable, but here's nothing really of any significance.

Perfect monopoly.

And as long as the business continues to do the right thing with the regulator, in my opinion, it's safe. You know, I, I got to know the regulator, Sharon White, really well. It's perfectly safe. So what, if you think of it as an infrastructure fund, what it's

looking at is almost an in perpetuity cash stream going on and on and on and on. It, it's a big pension fund. It's a bit like Telent taking over… You remember Telent, that took, Telent took over… Oh, which communications company did Telent take over? It's basically a pension fund with a telecoms company on the side.

[1:44:11]
You've been very successful. What's the biggest mistake you've made?

[laughs] Biggest mistake I've made… [pause] I think the biggest mistake I've made, goes back to your questions around that performance of, of K Com, of not being… I should have been, ruthless would be the wrong word, but, but a lot stronger with the board. I shouldn't have allowed that provision to be made. I should have fought really hard for it, and I, in the end I just backed off. [pause] So, I… And I think… [pause] If I had been, if I had, if I had dug my heels in and been a lot stronger with the board, I think that wouldn't have happened. And if I'd have avoided that, the acquisition of the business would now be at a higher price than 97p.

[1:45:38]
You had a very varied career in the IT industry, and in the IT industry in the sense that, both the computing side and the telecommunications side.

Yes.

Bill Halbert, thank you very very much for your contribution to the Archives of IT.

Pleasure.

[End of Interview]