Alistair Fulton

Interviewed by

Jonathan Sinfield

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Welcome to the Archives of Information Technology. It's Monday 2nd of July 2018, and we're in the Worshipful Company of Information Technologists Hall in London. I am Jonathan Sinfield, an interviewer for Archives of IT, and today I'll be talking to Alistair Fulton, who is a member of the Court at the Worshipful Company, and Chairman of the Industry Committee.

Alistair graduated as a Batchelor of Science in Physics from Glasgow University in 1971, before embarking in a career in IT. Alistair has been involved with the Triad group of companies since 1978, when he joined Triad Computing Systems as a senior consultant. He was a founding managing director of Triad Group Plc in 1988, and was Chief Executive responsible for the growth of the business from start-up to a London Stock Exchange listing in March 1996. He was Non-Executive Chairman from 1997 to 1999, and is currently a non-exec director. Alistair is a past president of the Computing Services and Software Association, CSSA, between 2000 and 2001, and was a chairman of their international business council from 1999 to 2006. He currently represents the UK ICT industry on the Singapore and Philippines British Business Councils. Good morning Alistair.

Good morning Jonathan.

[01:42]
Alistair, I'd like to take you back, and perhaps you can tell us about your early life, where you were born and a little bit about your, your family please.

I was born in Glasgow. I grew up in a council house in Glasgow. My father worked in the building trade. He was a salesman and became sales manager for a building supplies company in Glasgow. My mother was a state registered nurse in my childhood. She worked as a district nurse, and latterly she became a matron of a children's nursery in Glasgow, and then, she actually ran two of them before, before she retired. I went to the, the local primary school, which, two things I remember. One is, I got locked into the school one evening. I had gone back to the classroom, I had left something in my desk. I was in the classroom when somebody came along from outside and locked the classroom door. So I found myself locked in, which, I think it was, I was six years old at the time, and despite shouting and banging on the

door I couldn't get anyone's attention. So, I had to decide what to do, and I managed to find that the windows opened largely enough that I could crawl out the window. The only problem was, there was a ten-foot drop the other side. So I shimmied down the wall, and, without breaking anything, and off I went home. I never told anyone until this day. What was quite amazing was, the following day in class, nobody mentioned who left the window open. So there we are.

[03:33]

Then I went to Glasgow High School, which is a fee-paying school in Glasgow, but my parents decided I really ought to go to another school called Allan Glen's School. Both of the schools had entrance exams. And my parents entered me into the High School exam, because it came along before the other one, and would be good practice. As luck would have it, I got a place in the top 21 people in Scotland who sat the entrance exam, so I, I got a place at Glasgow High School, and never bothered sitting the entrance exam for the other school. So off I went, and I was there, I did my Lowers as they were in Scotland in those days, and I got eleven Highers, which was plenty enough to take me off to Glasgow University.

[04:25]

So perhaps we should start… You were born in what, in 1949, was it?

1949.

1949. And, the primary school you went to was Cartyne. Is that how you pronounce it?

Carntyne.

Carntyne. Which is a, well, district of Glasgow.

It is, yup.

Yeah yeah. And one of the things I read about you, and thank you first for disclosing the first about the admission on the, [both laugh] on the window incident... I feel I

should be calling a radio station about that. But… I hear you were, at primary school, you were a dux, runner-up.

Yes. In those days they used to give out prizes for performance every year, which normally was a book token, which, you acquired some books. In the final year they had a dux examination, and, I had been top of my class every year, the same, so the same people in the same class every year, year on year, but I, I had lost the dux medal to a girl in my class, which I was very annoyed at, that, that I came second. [laughs]

Yes.

But there we go. I have a silver medal nonetheless.

Well that's a great, great… Yes, I had to look up the word dux. It seems to be a term that's used in…

In Scotland.

In Scotland, for top pupil. Either that or it's a Saxon leader. So I had to work out which…

It is. It's a … Yes. Yes, so, a, a worthwhile prize in Scotland.

[05:48]
Yes. And then, as you say, you went on to Glasgow High School, gaining eleven Highers. And, what were your favourite subjects at secondary school?

My favourite subjects were science, particularly physics. I wasn't overly keen on maths, but you had to be good at maths to do the physics. And, the, the strategy in those days at the school was to cover a lot of subjects rather than, as they do in England now, specialise in subjects, in my view far too early. So, so it was a very good grounding. So as well as the science subjects, which were my favourites, we had Greek and Latin to do as well. And, the very first year I did Greek at school, they used to give you a report card at the end of the year, and I, I came ninth in the, in the

Greek class. And my mother was so impressed with that, until I told her there were only nine in the class. [both laugh]

I, I get the feeling this interview's a bit of a confession. [both laugh] Yes. OK. Yes. Mind you, studying Greek and Latin is, is quite a tall order for, for most students.
[07:14]
And, influences in those schooling years. Was it teachers, parents, or, can you think of anyone who you particularly think back who influenced you during that period of time?

[pause] None in particular. There was, there was an English teacher who, a Mr McCormack[sp?], who got us all enthused about English. The, the science teachers obviously did a good job on me, because that's what I, that's what I wanted to do.

Mhm. And, outside interests in schooling time?

In schooling time, my main occupations were, fishing and sailing. And, the, the Glasgow schools had a little-known schools sailing club which the, the yachts, Enterprise dinghies, were kept in a, in a loch only about a mile from where I lived. So I could come home from school in the spring and autumn and go sailing in the evening, which was great fun.

[08:28]
Beautiful, beautiful. Yup. So your exposure to, to science, your, let's say, love of physics, you decided to on to Glasgow University in 1967.

That's correct. In those days if you showed interest in the university, the school arranged, I think they still do it nowadays, you go in your last year and you have a look round. And, I had a look round the physics department at Glasgow University and was so impressed when the concrete floor rolled back in this large room we were in, and underneath the concrete floor was a cyclotron, and I was so impressed they had one of these, I thought, that's for me. So I went and, and did the physics.

Mhm. Perhaps you could explain, to make sure all our listeners understand what a cyclotron is as well.

Well, if I can. It's a circular device which fires electrons round in a circle and, and gradually builds them up to greater speed, and, and mass, and then they crash them into something to see what happens. Which struck me as a wonderful thing to be doing. [laughs]

[09:38]
Absolutely. And, did you enjoy your time at university?

I loved it, yeah. The, the system they had to do an honours degree in physics was that, you had to do three subjects in your first two years, compulsory physics and mathematics, and then you can choose a third subject. Which, most people chose chemistry. I wasn't very keen on the chemistry, so I, I chose geology, which struck me as, as quite a, an easy subject relative to the, the physics and maths. So that was quite an easy, easy-going year. The second year, the university had just invented a brand new subject called computer science, and I thought, oh that sounds quite interesting. So I, I opted to do that in my second year, so the second year was physics, maths and computer science. And, the computer science course was, as I say, newly-formed. They taught us about adding machines and how to punch cards by hand, so you had to… The punch card machines were so old, you had to learn all the codes for the letters on the punch card. Which was, [laughs] quite, quite intriguing. And the same with paper tape, everything was either paper tape or, or punch cards. The computer had a, a KDF9, English Electric KDF9 computer, which in the year of my doing computer science we never actually saw. You passed a deck of cards, having written a program, passed it through a hole in the wall, and, the following day, if you were very lucky, you got the results of the, of your program. If in the meantime the operators had dropped your cards on the floor, you got a one line entrance back saying, 'The program did not compile.' So… At the end of the computer science year they computer people said to me, 'Well young Alistair, you've done so well at computer science, you can, if you want, now switch to do a computer science degree.'

Mhm.

[11:53]
So, I went to see my tutor to explain this dilemma to him, and, my tutor of course was a physicist, and I explained the dilemma, and he said, without a word of a lie, he said, 'If I were you, I would stick to this, the physics. This computing stuff may not catch on.' Is what he said. [laughs]

Right. And, we should remind people, we're talking about the late Sixties, early…

This is, this is…

Late Sixties.

Yes, this was, this would have been 1968, '69.

Yes. Yeah. Yeah.

But in the end, I thought it was safer to go to the physics, but by that time I had the, I had captured the bug on, on the computer science work.

[12:34]
Mhm. And you graduated in 1971.

'71.

Yup.

We had a, a very interesting professor, a Professor Dee was his name, and all the way through our, our course, he told us that everything you ever need to know about physics you could write down on a postcard, and then derive everything else from that. So, one of the clever clogs in our final year class, at the end of the year, presented Professor Dee with an eight foot by four foot postcard. [laughs]

Brilliant. [laughs] With small or big writing on?

With, with very small writing on it. [laughs]

Oh right, OK. [laughs] I'll curious to, to know what he, what the professor thought you could get by on.

Yes. Well he, he took it well. [laughs]

[13:22]
Yes? [laughs] Would you say there are any particular events that happened during Glasgow that, you know, shaped your education? I mean, you mention your exposure to computer science there.

[pause] Well I think, the Glasgow High School was a very good, was a fee-paying school in Glasgow, so it was one of the, the top schools in Glasgow. So I was very lucky to get in there. I think the, the breadth and quality of the education that they, they did, was excellent. And the university, the… I, I just enjoyed the course, the physics. I enjoyed the, the brush with computer science there. And, I think those were the two things that then shaped where I wanted to go. So when I, when I graduated, you know, I started looking for a job. I started looking for a job in the computer industry rather than the, the physics industry.

Right, OK.

Which, in 1971 there was a, a bit of a recession going on, and it took me a wee while to find a proper job.

[14:38]
And how important do you think your educational achievements were to your career?

[pause] I think that they, the scientific element, particularly the physics element, I think was quite important. There's a certain scientific process, particularly, you know, with experimental stuff. The one thing, the one big take-away I took from the physics course is that, whenever you measure anything, there is always an error in

your measurement, and the first thing you have to know to make any judgement of what you've measured is, you need to know how big the error is. And, it never ceases to amaze me, going through life, that people measure things without that understanding, you sort of measure to twenty decimal places, not realising that one decimal place is as far as you can really go.

[15:38]
Mhm. Mhm. You've already said that your exposure to, to computer science at Glasgow influenced your career choice. So, effectively, that set you on the path for a career in IT, or was to become a career in IT.

Yes. Yes.

So your first, first job, with, which organisation did you join?

Well, my first job was later in 1971 with the Greater Glasgow Health Board, which was the local NHS organisation running effectively the West of Scotland NHS. And they had just that year formed a computer unit within the Health Board, and the purpose of the computer unit was to apply computing to medical applications. And at the time the only computer the Health Board had was an ICL 1904, which ran the payroll for the nurses, and that was as far as they had got. So, it was quite an exciting little department, I think I was the third employee into the department, and, everything that we were asked to do had never been done before, and therefore, that made it all quite exciting.

Mm. So very much at the cutting edge at that stage.

Well at the cutting edge of applying computers in healthcare applications. And, and the early applications were laboratory data processing for biochemistry, blood results, and there was a computer which was already being used by the time I got there. I developed a similar computer system for haematology results processing, which connected to the, the automated blood monitoring and measuring systems that were just coming into force at that time.

Mm.

I had the great delight in developing an administrative system for an X-ray department in one of the hospitals in Glasgow, which took about eighteen months, a year, of myself working singlehandedly on the project together with the chief radiologist of the hospital. And he was, during the war he had worked in the, in the military, in their radar department. So he was a, a radar man, who had converted after the war to become a doctor, and, obviously X-ray and radiology was right up his street. And therefore he was quite keen on using computers in his department, and, we did an administrative system which basically did some of the typing automatically, took the drudgery away from typing. We… Well I introduced the printing of labels with hospital patient information on them, which got photographed onto the X-ray plates in the X-ray department.

Right. OK.

One of the biggest problems in those days was that, radiographers used to write out the patient's name a little label, and that got photographed onto the X-ray plate, and then nobody could read their handwriting.

Mm.

This system cured that problem. So it was quite an interesting problem to solve. In those days we put some terminals in the main wards where the patients would get sent from to have X-rays, and, by the time I finished with the system the report on the X-ray was back in the ward before the patient got back in the ward. And, I do wonder whether the NHS can do that nowadays. [laughs]

Yes. Dare I say, I think that's right.

And that was in about 1974 I think that was.

[20:04]

Mhm. And the systems you… You mentioned the payroll system that was already there with the ICL 1904. What type of systems were you using and developing then at that juncture in time?

Well, the PDP-8, their digital PDP-8 had just been introduced, and the radiology and haematology systems were both PDP-8 based. Biochemistry had an IBM 1130, which was our sort of, desk sized IBM machine. And… But we ran some applications using the ICL 1904 machine. One of the things I was asked to do by my boss was to do a, a simulation of X-rays travelling through flesh. And, so I wrote a simulation program which ran around for ages and didn't really produce very much output until you get a graph at the end, and the, the poor computer operator of the 1904 kept ringing me up and saying, 'Your program hasn't finished. Can I pull the plug on it?' And I had to keep telling him, 'No, please let it finish.' [laughs]

Mhm.

So he wasn't a happy bunny at that. [laughs]

[21:16]
So you, you spent four years at the Glasgow Health, well with the Glasgow Health Board.

Yes. There's another interesting project I was given to do which I've told, a lot of people are amazed at this. My boss told me on day, 'Go and see the,' this particular doctor in a hospital in Glasgow. And I went off to see him, and I asked him what he would like done. He said, 'Can you print out the numbers one, two and three in random order?' So I said, 'Yes, I, I can do that.' He said, 'That's fine. Can you print out 20,000 of them?' I said, Now why… 'Yes, I can do that. Now, what are you going to do with 20,000 ones, twos and threes?' And, he said, 'Well if you print them out, I'll cut them up and put them in little brown envelopes.' And I said, 'Yes, OK. What are doing with the little brown envelopes?' And he said, 'Well we're running, a breast cancer trial in the West of Scotland, and we're going to give these envelops to every GP in the West of Scotland. So when a lady arrives at the surgery who has suspected breast cancer, they'll open the envelope, and if it says one, they'll do a

mastectomy; if it says two they'll do radiotherapy; and if it says three, they'll do nothing.' Now at that point my conscience did start to worry, but then I thought, well, my goodness, this is, this is my job, so I, so I'd better do it. And, my conscience had been worrying me until about, fifteen years ago, I told the story of this to a medical student at the time, and, it turns out that the, that particular breast cancer trial is world famous, and changed the way that breast cancer was treated throughout the world. So I'm very pleased that I was the one that printed the numbers. [laughs]

Wow.

So… And my conscience as, is now clear.

So, this was a trial, and as a result of it they decided to, obviously…

It changed the way the… It's what's known in the trade as a double-blind trial, so they have to randomise everything, in order that… But I, I did feel sorry for pure ladies who turned up and got number three.

Oh I was thinking about that. Yes.

Yes.

Yes. Yeah. But, as a result of that, in the future, other people have, have benefited, yeah?

Indeed so. Yup.

[23:40]
Yup. So you decided to, to…

Come south. [laughs]

Come south. Yes. I was going to say, I was going to say leave sunny Scotland and the sailing and…

Yes.

…beautiful Glasgow, to head south.

And, and part of the reason for that was, the Health Board in those days did not pay the IT people. They hadn't recognised just how important IT was. So, all the people, including me, were on administrative pay grades, which wasn't terribly exciting.

Mhm.

So… And looking around for another job in computing, there were very few in those days in and around the Glasgow area. So I came south. I found a job with ITT, or, Standard Telephones and Cables as they are something known. Mainly because of my PDP-8 knowledge. They had a product, a message switching product called a, a 600 ADX, which was based on PDP-8 technology. And, message switching was the forerunner… Well it was the computerisation of telex, which in effect was the forerunning of email. And, in those days, in the mid-Seventies, most companies who used telex, particularly if they used a lot of telex, would have large rooms with 20 to 40 telex machines chuntering out paper tape all day long, and what the message switch could do was computerise that. The, the telex message went into the computer once and it could send it 20 times or 50 times, throughout the world. So, it was effectively writing a computer program to handle telex, and the complete system to do that. And I, I did the, developed the software both for the, the new UK telex network, and also for the, the German networks. And one of my finer moments was, I went off to Germany to test the German software, and, the Germans simultaneously were producing a brand new computerised telex exchange, in Frankfurt, and I managed to break the, the German telex exchange by sending it too many messages. [laughs]

[laughs] Right. Have you been back? [laughs]

No, they haven't invited me back again, no.

[26:22]

Right. So, you say, it's the evolution of telex into fax we're talking about, would you say, or…?

[pause] Yeah, well fax was, was something slightly, slightly different. Well, well it was some… It's the same concept of sending something over the telegraph wires. Fax was done by a linear scan of a document. So with fax, you could send anything; with telex, it was basically character, character-based.

Right, OK. But you were working with the fax networks as well weren't you?

Indeed. Yes.

Yes. So… And that's what… Yeah. OK.

And, and ITT, the ADX, there were, there were two versions of ADX. I think ADX – for automatic data exchange, and they had a large one which was based, I'm not sure what computer technology, but it was much larger computer technology than the PDP-8 version. And the… And, it was probably… It must be one of, must have been one of the first sort of, complete software turnkey products that the industry was producing. The customer bought the, the complete system, hardware and software. ITT's customers from Cockfosters were, were all over the world. At the time they had a lot of customers in the UK, a lot of customers in Germany, South Africa, and elsewhere. Those are the ones I can remember at least.

[28:06]
Yeah. So, so you're with ITT from '75 through to '78.

Yup.

Would you say that period, I mean that was the changeover period between telex and fax, would you say, or, the start of it, or…?

I wouldn't… Well I wouldn't say telex changed into fax.

Right.

I mean, fax was happening I think at the same time.

Parallel, yes.

In parallel. But… Yup. It was more the telex into email.

Right, OK. OK.

Yup.

[28:39
OK. That's… Anyway, three years with ITT.

And I worked my way through. I became the, I got promoted to be the manager of that software department, so I was their Software Product Manager in my latter life at ITT.

Mhm. And then, time for a move?

Time for a move again. And, this time I found a company called Triad in, they had offices on London, central London, and in Guildford, and, they had just opened the Guildford office. There's a theme here, I think I was the third employee in their Guildford office.

Right, OK.

And… But, but I did work for a little while in their London office before I sorted out moving house from Hertfordshire down to, down to Guildford. And Triad Computing Systems was an old systems house in the similar mould to the others at that time, Logica, CAP, Scicon, and, there were one or two others.

Mhm.

So it was a general-purpose consultancy and software development company.

[29:55]
Mhm. And, I appreciate in the, what, the ten years with Triad Computing Systems as they were then, you graduated from Senior Consultant, Principal Consultant and then Director. Perhaps you would like to tell us about some of the projects that you were involved, or, your clientele, at that juncture in time, and what type of work you were undertaking.

Yup. I called the… I, I joined the, the part of the company in Guildford which concentrated its efforts on scientific and non, and technical computing, the, the sort of, non-commercial stuff. The, the payroll and the accounting systems and the financial systems were done out of the London office.

Yup.

So, we tended to do very interesting technical things, and one of the first things I, I was given to do was to be Project Manager to develop software for a Saudi Arabian weather monitoring system, under subcontract to Plessey Radar. And Plessey Radar used to have a weather monitoring department selling systems to do that, but they decided to close it down. And in between them bidding for the Saudi Arabian work and getting the business, they had closed the software development department. So they went out to find somebody else to do that, and they came to Triad. We, we won the contract to develop the Saudi Arabian weather monitoring system. And you might wonder, do you need one in Saudi Arabia? [laughs]

Yes.

But it, it monitored both the weather, rainfall if there was any. It monitored the sea condition round the coast. And it also took in satellite images from, from the weather satellites they had at that time. So that the… And collected information from ground-based weather stations.

Mhm.

And, there were a number of challenges in that, in doing it in Saudi Arabia. If you wanted to put a weather sensor out in the middle of the desert, there were two problems. One is, there's no electricity, and secondly, there's no telecoms wires.

Mm.

So, that was Plessey's problem, and they solved that part of it by, I think they had battery powered and, and all sorts of very early solar powered devices. We, we just had to develop the software, which included, as I say, collecting satellite images. There were two types of satellite. One is the geostationary satellites that, they rotate round the Earth in such a way that the satellite is in the same position above the same point on the Earth all the time, so it just sits there and takes photographs. The other one is a polar orbiting satellite which orbits a north-south plane. So, effectively, it's on a constant plane and the Earth rotates underneath it. So it's always photo… And it's a linear scan, and it's always photographing a different part of the, the Earth as it flies by. So we had to do the, the mathematical conversion of that scanning to then project that onto, onto our map. And that was quite an interesting mathematical challenge, particularly since you could only receive the data from the satellite if you were above the horizon that the satellite was in at the time.

Mhm.

So, we developed it in the UK. We managed to get some data from the polar orbiting satellite from the UK, and it was just, we could just get a tiny bit of Saudi Arabia in the data from the UK. And that was enough to check that we had got it all lined up correctly, and that the, the satellite view of the coastline matched up with the map coastline. And, we were quite pleased we were able to do that.
[34:24]
Anyway, once we finished that software, the Plessey Radar people took it off to Saudi Arabia, and, one of their chaps installed it, and it worked so well, you only had to change one piece of the software and that was to increase the timeout on the satellite detection, which was quite pleasing. So that was a very successful project.

Yes.

[34:52]
Another, quite different, one was for an organisation, an American organisation called the Institute of Scientific Information, and their research director happened to be based in the UK, and ISI publish abstracts of scientific journals.

Mhm.

And, their research director had discovered that PCs had been invented, and he wanted to be able to use PCs to process the abstracts that they were sending to all their customers. So rather than having loads of pieces of paper, they had a PC and they would send their… And this was new, novel stuff in 1979 or thereabouts.

Yes.

So, he went off to California to buy some of the very first personal computers that ever got invented, and he bought them from a company called Sol, s-o-l, based in California. Bought three PCs and shipped them back to the UK. And this was long before the IBM PC had got invented. So we developed some software to, essentially a database and free text searching software, to search all these abstracts. But also some communication software that you could search the database from another PC over the telephone network.

Right, OK.

Which in those days was, [laughs] quite novel. We take it for granted now. So, we went to… He arranged for us, for him and myself to go to Philadelphia, to demonstrate this to the, the main board of the company in Philadelphia, who were used to wall-to-wall mainframes and were very sceptical that, sceptical that these PCs could be, could be used for anything useful.
[36:50]

So I went off to Philadelphia with a PC under my arm. Got to Philadelphia Airport and the Customs people said, 'Excuse me, what's, what's that under your arm?' [laughs] I said, 'It's, it's a, it's a personal computer.' 'Oh, you can't bring that into America,' they said. And so I turned it over and showed them the manufacturing nameplate on the back of it, which said they were made in California. And they said, 'Oh that's all right. In you come.' So that… [laughs] That was…

Right, interesting.

That was quite interesting.

Yeah.

So we did a demonstration to the board of this company in, I think it was 1979, doing a search of a database, down a telephone line, across the Atlantic, on a PC based in Guildford, and they were amazed that you could do such a thing.

[37:40]
Mm. So, the Sol PCs at that time, they had their own operating system presumably, or…?

[pause] I think they did. Yes.

Mm. And, and… But you had to, to write your own programming language for it, did you, or…?

I just… Everything was written in assembler in those days.

Assembler. Yes.

Yes. Yup.

And, you said access via the telephone line. So…

Using the rubber cups, if you remember.

Right.

The modems, the telephone, sort of remember...

Yes. Yes.

Remember those? [laughs]

Now you're asking me my age I think. Yes. [laughs]

Right.

But, but the… What protocol was used to, to move the data from one place to another?

Oh goodness. That's a good question. I can't remember.

No. Just out of curiosity, because it was, things that we take for granted now, weren't, weren't the case then, as you've, as you mentioned. But…
[38:39]
Anyway, they were significantly impressed by…

By…

…by this. And…

Yup.

So that led to what, future work with them, or…?

Yeah, we, we did have other, a few projects. But we had demonstrated to them the concept that you could store, you know, reasonable amounts of information on the

PC. You could download, you could send it over the, the Atlantic, and therefore, this company, instead of sending paper-based products out, they could now make them electronic and send them out anywhere in the world, which is what they, what they did.

[39:17]
And I did notice that you said that Guildford was effectively the scientific, specialised in the scientific and the technical side for Triad.

Yes.

But then, then I read that one of your other clients was Hiram Walkey… Sorry. Hiram Walker whiskey bottling. So I'm just trying to relate that into the scientific and technical…

Well that… Well it wasn't such a great leap. It was… This was a process control application. So, Hiram Walker, who make, amongst other things, Ballantyne's whisky, they were building a brand new, fully automated bottling plant in Scotland, just outside Glasgow. And, they wanted to computerise the whole process. They had a few PLCs, programmable logic controllers, produced by Allen Bradley, running the detail of the bottling lines and the, basically blending vessels for blending the od 20,000 gallons of whisky. What they didn't have was the sort of, whole control system to tie everything together.

Right.

And, we got a contract to do that. They had some very old computer systems which, they didn't have the source code of the software, so they were very worried about trying to connect into those. And in the end the decision was taken that the new system would just monitor the printers of the old system, which was, in order to get, transfer information from one to the other. Sadly, our team got the project management end of it sadly wrong. This was on a, a VAX machine, PDP VAX. The team kept changing… Well I think the customer was changing the specification, and the team was allowing them to get away with it. As soon as they built a piece of

software, they found they had to change it. So the, the whole project was running behind.

Yes, a lot of project creep.

Yes. Running behind schedule. I got the job of, you know, put in as the project manager to, to put it right. Which, did take a little while, and we did eventually get it right. But it was a, a fascinating project, both from the recovery from where the project had got to, to then ending up with a happy and satisfied customer with a, with a working system. And, all the… Once it was installed, all the, all the bottling was done under computer control, which was an amazing sight to see. I think there were twelve bottling lines all producing whisky. And it connected in to an automated high bay warehouse, which was taking the cases of whisky, coming off the end of the bottling lines, and, under computer control was putting that away in a warehouse.

Mhm.

So, we, we did the bit, all the bit in the middle, joining all these things together.

And, the size of these contracts, in monetary terms, can you recall, or…?

I think the, the Saudi Arabian I think was about a quarter of a million pounds. Hiram Walker must have been at the same. The ISI was much smaller, probably £50,000 to £100,000.

[43:09]
Mhm. And then you got involved with the aviation industry as well.

Yeah. Well that, that came about because the, the Guildford office, some of the other projects they had been doing had been for the Royal Aircraft Establishment at Farnborough. And they had developed a database technology. It was just at the time where there was a, a debate in the industry raging as to what was the best type of database, was it a CODASYL or, or was it a relational database? And, as it turned out, the CODASYL was probably better for technical information; the relational

database was probably much better for run-of-the-mill database work. So, the Royal Aircraft Establishment had commissioned Triad to produce a CODASYL database management system, which was no mean feat.

Mhm.

I wasn't directly involved in that project. But because of that experience… British Aerospace was quite close to Guildford, their headquarters in Kingston, they were doing the Harrier flight trials at an airfield at Dunsfold, which is just outside Guildford. So we were quite well placed to go and talk to them, and we had the credentials, in-flight trials which we had been doing for the Royal Aircraft Establishment.

Mhm.

So… Just as I, I think, I think it was about a month or two after I became a director, we got our very first contract for £10,000 out of British Aerospace to do a design study into a new flight trials instrumentation system for the GR5 version of the Harrier jet.

Mhm.

Which was, quite an interesting project. Our first contract was for £10,000. We, when we finished our contract, I think they had spent fie and half million pounds with us.

Right.

So it was a, [laughs] a very lucrative starter for ten.

Mm, absolutely.

[45:31]

And what we did was… In those days the instrumentation systems for flight trials were all electronic based, and all instructions were hardwired into the electronics. The chief design engineer of the Harrier at that time had the foresight to see that, the software was infinitely more configurable than the electronics was, and therefore he, that's what he wanted to do. He wanted a configurable software-driven trials instrumentation system. And flight trials instrumentation is basically a whole set of monitors on the aircraft to monitor everything, the performance of the aircraft, to monitor absolutely everything on the, the aircraft, put it through its flight trials, and then learn from the trials in order to make design modifications if necessary to the aircraft. So it was quite a, an important thing. It involved interacting with the pilots, which was quite fun. It also meant we had to download software into the aircraft. And, that meant putting military spec PCs on trolleys, wheeling them out to the side of a plane, and plugging into the plane and downloading and uploading software and data. And that was a fascinating project.

[47:12]
Mhm. You've mentioned that, I mean, again when we were talking about Hiram Walker, you were talking about, you were a project manager on that particular project, but, and you've mentioned that your work with British Aerospace came after you became a director. So, perhaps you could just explain your progress over those ten years, '78 to '88, in terms of, different roles. You started off as Senior Consultant and then at the end of that period you were a director. So…

Yup. [pause] Well senior consultant was basically a, a fee-earning grade, and, a principal consultant was also a fee-earner but at a higher rate. So there was no great magic, as far as I could see, from moving from senior consultant to principal consultant. We just charged the charged the customer a bit more. Becoming the, the Director, the, Triad, Triad Computing Systems originally was founded by four directors, and, gradually over the years, you know, the directors went one by one, and, when my boss decided to go, I was, I was given his job.

Mhm.

Another time I was, I wasn't officially his assistant but, but I was more or less doing that sort of job. So I got promoted into, into the job as Director at the time. There were two other directors. My job as… Well I can remember the chief executive telling me when I was appointed Director, he said, 'You'll just be doing the same job, but you can now go to jail.'

Right. Yes.

[laughs] Which is not exactly the best way of putting it, but it was certainly true.

[49:18]
And, when in that period of time did you become a director? Was it towards the end, or…?

It was about 1983.

'83, OK. So…

And, at that time we, the Guildford office, we had 22 people working there. And, my job was basically to grow the, the business, grow that part of the business. And so from the period '83 to '88 we, we grew it every year, making profit and, and increasing the number of staff. So that at the time of 1988 it had 47 staff employed.

And that's in Guildford?

That was in Guildford.

And of course you've got the London end as well.

The London end was, they were doing, as I say, they were mainly commercial systems. They had invented a product for time and attendance recording, which they were trying to sell as a product. So they were moving from the fee-earning business into the software product business. And, as many people will know, that's a tricky transition.

Mhm.

So while the Guildford part was growing, the, the London office was a wee bit bigger in 1983, but it was going on a, a downward path as the Guildford part was going in an upward path. And the two sort of balanced out. So it remained pretty much the same size in total throughout that period.

And do you recall the type of turnover you were talking about at that period?

Oh gosh. [pause] No, I don't remember, no.

[51:00]
No no. OK. But… But you're… But you were the director of, you were group director there of the…

Yeah, well, well the company had two offices. There were three directors. There was the chief executive and a technical director. They were based in the London office, and I was the soul director in the Guildford office.

In the Guildford office, yes.

And, I was 30 miles away from the other two, so, I, [laughs] I was able to, to run it pretty much my way, and as, as long as it was successful, the, the other two were very happy.

51:38]
Mhm. Unfortunately as a collective, as a, as a collective organisation, it ran into hard times. [inaud]

Well, what happened was, the… Well two things. One was the, the level of new business in the London office sort of, gradually went down slowly. The time and attendance product, they had a, a fixed price contract for the time and attendance as a subcontractor to McDonnell Douglas Information Systems, who had a contract with a

defence company, and I can't remember which one. And, it was the trouble with that contract that ultimately caused the problem with the company running out of cash. So it was running out of cash for two reasons. One is the, the lack of new business coming into the London office, and secondly, the contingent liability to deliver under a contract through a main contractor, which is an interesting lesson. And, the chief executive at the time, who was also a major shareholder, went out to find a white knight to rescue the business. He had found one. And, all was going well with the discussions until the white knight decided to not get involved. And that was one Monday afternoon. The Tuesday morning the directors had a board meeting and decided that we needed to get proper legal, financial advice, given the state that we were in. It was the end, approaching the end of the month and we had to pay the staff.

Mhm.

We decided to find a liquidator to give us advice, a company called Touche Ross. And, they said, 'Give us 48 hours, we'll have a look, see what we can do.' And they had a look and decided they couldn't do anything. So on the, the Friday after the, the Monday, we had to, the directors had to put the company into liquidation.

Mhm.

Which was quite a traumatic exercise for all those, all those involved.
[54:09]
Fortunately the, the liquidator had spotted that, the Guildford office had one or two quite lucrative contracts on the go, and, the liquidator decided to make all the technical, well all the staff of the company, redundant on the Friday evening, except, I think it was thirteen staff plus myself, to keep this contract running, so that they could collect the income from that contract.

Is that, are you talking about British Aerospace or…?

[hesitates] It was the British Aerospace contract, yup.

Yup.

So, so they kept that going. And, and the rest of the, the company was made redundant one Friday evening. Which was a, a traumatic exercise all round.

Yes, absolutely. Yes.

So during the discussions in the next week, I had explained to the liquidators that the Guildford operation was actually quite successful. All the troubles in, when the company were actually in the London end of the business, and, therefore, why don't they try to find a buyer for the Guildford part of the business? So they, they did advertise, in the *London Gazette*.

Mhm.

[55:35]
[pause] And off we went. Two weeks later, I got a phone call. I was at my desk one Monday morning wondering what I was going to do. We had had the creditors' meeting, which is the sort of final approval of appointment of the, the liquidators. And, I got a, a phone call from a gentleman called Dill Faulkes, who was acting on behalf of himself and John Rigg, and he came and saw me on the, the Monday morning, and was interested in resurrecting the, the Guildford part of the business.

Mhm.

So I explained the situation to him. We had a number of discussions on it. And, we reached an arrangement that if they bought the business, I would run the new business, and try and get all the staff back, and all the customers. So, we went to see the liquidtor, and the Guildford part of the business was bought from the liquidator for the sum of £15,000.

Right. Right. [laughs] Yes.

[laughs] Which was… And, and then, so off we went, and, we formed, went off to form the new company. I… Sorry. On the day that we bought the business from the

liquidator. The cheque was written at lunchtime. We called, myself and these two new players on the scene, we called a meeting of all the staff, ex-staff, that evening, Wednesday evening, in the offices, to let them know there was a, the company was going to try and get restarted.

Mhm.

So, out of the 47 people, 41 of them turned up on the Wednesday evening. Which was quite spectacular.

Yes.

And, we explained who the new people were; they were going to put the working capital into the business to get it back on its feet again. I was going to run the business. The London part had now disappeared, and we were on our own. And we started the company, the brand new company, exactly four weeks after the old company had gone into liquidation.
[58:13]
And in the intervening time, we and the senior staff ran round all the staff saying, 'You can have your old job back if you want it.' And we ran round all the clients and said, 'Terribly sorry we went out of business. We are now back in action again. Can we have our contracts back please?' And every single one of them gave us our contracts back.

Mm.

And, so we started on the, the Monday morning, brand new company, Triad Special Systems Limited, with 41 staff and a full order book. And, and off we went.

So that's in November…

That was in November…

…1988.

November ’88.

All for £15,000.

For £15,000, yes

Yes.

I mean the, Triad went into liquidation for a, for only, I mean it was only short of £100,000.

Right.

Which, you know, might as well have been ten million, but it was, there was enough to put it into liquidation.

Yes.

And, you know, the lesson to all businesses really is, cash is king. And, if you don’t have the cash, you’re in deep trouble.

[59:22]
Mhm. And you mention one contract pre-liquidation, and presumably, that was a London contract…

That was a London contract, yes.

…which was causing a, a, you know, to meet the obligations under that contract…

Under that… Yes.

…were effectively, a noose round your neck as it were.

Yes. Well although we were in two separate locations, we were really, we were effectively a single company.

All one, one organisation.

Yup. The other interesting lesson, which I've told a few people about, coming out of that, is that, and I must admit, I at the time didn't fully understand the Companies Acts, which is what governs the running of businesses, and, most people who get appointed to be a director of a company never ever read the Companies Acts. And, and, a lot of them are just totally unfamiliar with those. And it's not until you enter a situation like this that you, you have to sit down and read them pretty, pretty quickly.

[1:00:30]
Yes. So, November '88, new company. And presumably, as you, you talk about cash is king, the new, new parties who came on board put in the, the cash necessary to keep you afloat at that juncture in time.

Well they… Well they put in the working capital to get us back going again, which, which I think amounted to about a quarter of a million pounds to, to get it back going. But because we had a pretty full order book, practically everybody that should have been earning fees was earning fees.

Mhm.

We very quickly could pay that, pay that money back, and we, we became self-sufficient very quickly. And the company was a fee-earning model: as long as you keep the staff earning fees it should generate cash quite happily, and effectively that's, that's what happened. So, we were doing quite nicely. We had a, a quite large contract for the rent officer service, which, we basically were computerising the whole of the rent officer service in England. We didn't have it as a single contract; we did have it as piecemeal contracts with each of the offices. And, so we were supplying hardware with the software that we had developed on a sort of turnkey system basis. So we had to buy the hardware before we could recover the money from the customers. And therefore… We… We did run out of cash purely to service

the cash needs of that contract, and the, the people with the money had to dip their hands in their pockets again. But, that was only for, you know, a month or two, including the duration of the contract. But otherwise, we were cash self-sufficient, essentially from start-up.

1:02:33]
And the new partners, had they taken shares in the new company?

Oh they, they had major shareholdings in the business. I had a, a small shareholding. One of the… Even if I had the money to restart the business myself, I couldn't do it because I had been a director of the old company, and directors are not allowed to buy assets out of a company that goes into liquidation of which they were a director. So I couldn't buy the whole… I could not personally buy the company from the liquidators, even if I wanted to.

Mhm.

So, that's another lesson. [laughs]

Yes. But you were a shareholder at that…?

I was a shareholder, yeah. I was a shareholder in the business.

Mhm. And, actually, some of our listeners mightn't be familiar with the concept of a rent, the rent officer service. So could you explain a little bit what that meant?

The rent officer service is, is a statutory body that reports to Parliament which administers the Housing Benefits system. And they're responsible for valuations of house, housing stock, for Housing Benefits claimants, to make sure they get the appropriate amount of money. So, it's quite an important service. We won the initial contract in the old company actually, under competitive tender, through the CCTA. But that was one of the contracts we managed to resurrect into the new, into the new company.

Mhm.

And, to be quite honest, without that contract we, we would possibly have struggled to, to keep the business going.

Yes.

But, then, you know, we, we've carried on looking for new customers, and, the fact that we had gone into liquidation, which is normally a one-way ticket, but had come out the other side with the same customers and the same staff, seemed to impress quite a lot of new customers, and they were happy to, to give us new contracts.

[1:04:42]
And, from '88 you were the MD, so you were directing the company.

Yup.

Through a, through a period of growth as well.

Yup. We, we carried on basically doing what the business were doing before, you know, the the Government part before it went into liquidation, and that was, we managed to grow the business every year, both in turnover and more importantly in profit terms, year on year, which… And we did that by, well, the… Well, well you know, what was our secret to success? And I think our secret was, we employed good people. We sold what we could deliver, and we delivered what we sold. And, that was the, the mantra for, you know, the, the running of the business. We very rarely entered into fixed price development contracts, because of the, [laughs] history.

Mhm.

Problems we've seen elsewhere. We did actually do a few fixed price contracts which did work out OK. They weren't without their problems, but, fixed price software development contracts are notoriously difficult, and, we tried to avoid it as, as much as we could.

[1:06:15]
Mhm. And in that eight years, what type of technologies were you working with?

We were… We, we had got into UNIX. UNIX was on the go there. So, small UNIX-based systems. We had a strong relationship with Informix, which was a database management company. We had a close relationship with sequent, who was a, a larger system manufacturer. And we got involved with a software company called Forté, which, they had some quite clever large systems software. And, we, we liked to use the technology that we, we understood and had experience of. That was quite important. But you had to keep changing the technical base as the technology changed. One of the, the large contracts that we did do, which was under subcontract to Capita, was the, the theory test for the driving examination. When they introduced theory driving tests, we did the booking system, the online booking system for the country, which was based on Fort Forté technology, and that was quite an exciting and high profile contract.

[1:07:52]
So you've mentioned a couple of public service contracts. I'm just thinking what markets you, you were in. You were in aerospace, you've mentioned; you were…

We were in aerospace. Utilities. We had a little niche on telecoms billing systems, which was a, a bit of a specialist art. We did a lot of Government work. We were, we could undertake secure MOD work. Again that was an interesting thing we managed to carry across through the liquidation to keep our status So telecoms, utilities, MOD, and, some other Government contracts, Department of Environment, Department of Technology, DSS. We, we worked for all, all the major Government departments.

[1:08:49]
And, if we take the eighteen years, Guildford and London, under the Triad umbrella, what would you say was the proudest moment in those times?

I think I'd portably… Well, there's two. I think, one was the resurrecting the business out of liquidation, that is, is something that doesn't usually happen. So…

And, and getting our customers and staff all back again was, was quite an achievement. And the other was the, the Holway Boring Award. And, Richard Holway had invented this award almost by accident. He first gave it to Admiral, and, Admiral were one of our major competitors. Admiral was slightly bigger than we were, and slightly ahead of the game because of their size. But we used to compete with them on a quite regular basis. So, once they got the award, I was quite desperate that we also got the [laughs], got the award, so that we could compete with them quite evenly, and… And, I emailed Richard Holway one day saying, I think we've qualified for the, the Boring Award, but we couldn't actually collect it until we were a public company, because the Boring Award is only given to public companies.

Mhm.

[1:10:30]
And… [pause] When we, when we formed the, the Triad Special Systems, the chairman of the company, John Rigg, he had already floated two companies on the London stock market, so he had the experience of how to do that. When we set up the new business, that was clearly on our horizon, that we were setting the company up with a view to doing an IPO on the main London stock market. So, so we put it up with that, and constructed it with that in mind. So, so all the way through, that was where we were heading. And, we managed to achieve that in March 1996, and changed the name in the process to Triad Group Plc. The IPO process I found quite fascinating. We ended up in meetings of stockbrokers and lawyers and accountants, endless meetings. But when the stockbroker produced the, the plan for the IPO, he produced it, I think it was in the October of '95, with a, a completion date of March '96. And it's one of the few project plans I've seen in my life that has actually gone exactly to the plan. Which was, [laughs] quite an eye-opener. So we, we floated Triad Group Plc on the London, the main London stock market in March 1996. The, the IPO share price was £1.35, which valued the business on that day at £35 million, market capital. Which for a business that was bought for £15,000 not so many years beforehand, was quite something.

Yes, how to… 35 million, yes, in a period of eight years…

Yup. Which in…

…15,000 to 35 million.

In those days, that was all before dotcom nonsense. [laughs]

[1:12::50]
Absolutely. Yeah, yes, yes. I was going to… You actually said that, if I understood you correctly, even in November '88 it was always the plan to, to…

Yup. To do that. Yup.

A public launch. And, and was that something that you decide, or the investors, the other investors who came in with you?

Well the other two had experience of doing it before.

Yah.

And, quite clearly that's, that is a way you can make a lot of money. And therefore, that's why they were putting the investment in the, in the company. In fact, the two of them already knew of Triad before Triad went into liquidation.

Right.

Triad had been around since 1973, although it hadn't gone as, it hadn't grown as, as large as some of its contemporaries in 1973 had done. But it was a well-known name in the industry. So, it looked a reasonable bet for them.

Did you see any other potential benefits of the IPO?

The IPO was good for the staff, in that, we did use, oh what do you call it, stuff. Share, share option schemes. We used share option schemes all the way through the business to encourage people to take ownership in the business and get some reward,

and feel part of it. But I have to say that, most of the staff didn't really understand the value of the shares they hold until they could read the value of them in the newspaper, and the *Financial Times*. So the IPO made a, a great difference to the attitude of people holding shares in the business so that they now could see that they were valued, they were valuable, they were tradable. Whereas before it was, you know, jam tomorrow, never quite sure how much jam they were going to get.

[1:14:57]
Right. And you've already said one of the other benefits was, you were now eligible for the…

For the Boring Award.

…Boring Award.

Indeed. Which I'm quite proud of. I think, it, you know, Richard tells the story that it came around by accident that he, he called Admiral a boring company because they increased their profits every year, and that, that stuck. And I think it is a, given that so few companies in the IT industry have achieved a Boring Award over the years, it's something I'm very proud of.

Mhm. And just so, again, for, for the benefit of our listeners, the Holway Boring Award is a awarded to IT companies…

Who are a listed company who have at least ten years' unbroken profits growth, every year for ten years you increase your profits.

Right, OK. And, yes, so, so, I understand why you'd be proud and pleased with that.

Yes. Well there's only… I think there's, there's now eight. I think there's only eight companies, and only, there's only one of them still holding the award. [laughs]

Mhm.

Sadly Triad lost the award some years later.

[1:16:09]
And, again, if we look at that period before the IPO, if you could have your time again, is there anything you would do differently to…?

[pause] Possibly not. I mean, one could argue, you know, one could have done more to stop Triad Computing Systems going into liquidation, but… And that's, that is a regret, on one hand. But on the other hand, that was a very positive thing for coming out of, and, you know, the, Triad Group Plc wouldn't be where it is now had the old company not gone into liquidation. So…

No.

So, so regret on one hand, but it turned out to be a very positive thing on the other.

[1:17:03]
Just thinking about staff at that time. Obviously fortunate for the 41, at least 41 of the 47 staff at the Guildford side of the business. How do you… How did you work with and develop your, your colleagues at that juncture in time?

Oh, well… Well training was, was always quite important. We, we had to train on the technology, but the, as the technology changed, you needed to learn the new technology. But, we… We grew the business basically by, you know, developing under our contracts, always developing what the customer was expecting, and if you choose your customers carefully, they'll always come back for more.

Mhm.

And, and really, that was the, the mantra at the time: do it, deliver a good service, and, and they'll come back for more. And that in fact is how we mainly grew the business. We, we didn't have an out and out sales team. We had consultants who we trained to do selling. Not all consultants are good at selling. And, we, we picked a few out, sent

them on some sales training courses, and, kept an eye on them, encouraged them, and, and that's how we grew the business.

Mhm.

So we, we… So it was the consultancy sell rather than, you know, using the brush salesman type, type selling. We had a customer, Royal Aircraft Establishment one day, I can remember him saying to me, he said, he said, 'I'm very happy if you send any of your consultants round, but please, please don't ever send me a salesman.

Right. [laughs]

So we… [laughs] So we sent the salesmen with a consultant badge on. [laughs]

Right. [laughs] Oh, right, OK.

[1:19:10]
It's now 22 years since that initial listing. Initially I think it was CEO, then you were Chairman, and, and now you're non-exec.

Well I'm now the senior non-exec director, having been on the board of the public company since 1996, which is breaking all the stock market rules I'm told by the accountants every year. But my view is, as long as the shareholders want to keep voting me on the board, I'll, I'll serve on the board. The company is a full listed public company, so I, I can't say too much of it, about what's going on. The… It has had a bit of a chequered past, since I stopped being the chief executive. We've, we've been through quite a difficult phase. We are now coming out of that I'm pleased to say. We, we recently announced our last year's exults, which was a an increase on profits from the year before, so we, we are now back into the phase of growing our profits year on year, and I think we've now grown our profits every year for the last four or five years. So, we're looking forward to perhaps regaining the Holway Boring Award sometime in the future. [laughs]

And we shall keep our eyes on it. It's a long association isn't it, 40 years.

Forty years, yes. But it's, it's been a bit of a rollercoaster I must admit.

Yes. Yes. But in the main successful.

In the main I am very pleased with it. And I probably wouldn't have it any other way.

[1:21:04]
No, good. Of course it's not the only things you've been doing in that period of time. Perhaps we can talk about your role with the Computing Software and Services Association.

Yeah, well…

Subsequently became Intellect.

Yup. Well in 1995 my secretary at the time… The company had joined the CSSA some years before. My secretary said one day, 'Oh they've sent through the papers looking for election, you know, people to elect onto, onto the board.' And I said, 'Well, well why not? Put my name forward.' And, blow me, I got elected onto, onto the board by the members of the association, which are member companies. And I was there till 2007, the first three years as the elected member. After three years normally you, you disappear again unless you get re-elected, or, the association, or the, the board, invite you to stay on. And I was invited to stay on, and I stayed until 2007. And in the year 2000/2001 I was invited to be the President, which was a, a great honour.

Mhm

It was just at the time we were having discussions with the Federation of Electronic Industries, the FEI, and, as a result of that the two organisations were put together, were merged, and formed Intellect, which is, which it was known as from 2002 to, until a few years ago.

Mhm.

And, it changed from Intellect to techUK.

[1:23:02]
Mhm. Right. Thank you. Other areas with the industry, you've been involved with business councils and that, in, in the Far East as well.

Yup. Well, through, through being on the board of CSSA, a previous president of CSSA had got invited onto the Singapore-British Business Council, but he wanted to stop doing it and he asked me, would I like to take it on? So, I, [laughs] I thought that could be quite interesting. And, and it was, it was very interesting. The Singapore-British Business Council was quite a, a high profile body of people which was part business people, part government, but was originally set up by the two deputy prime ministers of the respective countries. It was run in the UK by Sir Charles Powell, now Lord Powell. And, they had a number of activities. They had an annual meeting which alternated once in the UK and, and next year in Singapore. And when I was on there, the… Well the Government representation within the Council was UKTI, which was the, the department responsible for trade and overseas development. Once I was on the Singapore, they said, 'Would you like to do the Taiwan one as well?' So I joined the Taiwan… Oh no, it was the Philippines, sorry, the Philippines was the first, the next one. And once I was on the Philippines, they said, would I like to do Taiwan as well? So I ended up with a collection of Singapore, Philippines and Taiwan, serving on these British business councils, which was to promote trade in both directions between the two countries. And I was the UK IT industry man on Singapore and the Philippines council and merely a member on the Taiwan one. So, so I was there… And got to know the IT industries in these other countries quite well, which was quite an eye-opener, not having been involved with it before, as to how quickly in the Far East the IT industries were, were growing. The Philippines one in particular, the first time I went to the Philippines in 2000, there were 10,000 people working in the IT industry in the Philippines. Nowadays it's pretty close to one and a half million. And they as a country, because they're English speaking, English language speaking was so good, they very quickly got into call centres and, and BPO,

and software development. And their industry, as I say, has gone from 10,000 people to one and a half million in about fifteen years.

[1:26:12]
Mhm. And, I mean, obviously the title of these organisations, British Business Council, are they connected, or, are they connected in any way? So, kind of, you mentioned UKTI, but, do they, are they really separate organisations in different countries, or are they, is there a connection between those?

There were… There was a very loose connection, and that was generally through UKTI. There were some… The way they worked, there were sort of, two parallel memberships. So there was a UK membership and a, a Singapore membership. So, I was the, for example, I was the UK IT man, and there was a corresponding Singapore IT man. And my counterpart was a chap who ran one of the biggest airline booking systems out of Singapore. And, and that was the same… And they had that for a number of industries. So, there were a number of industries, you know, aerospace, finance, agriculture, goodness knows what. And so there was a, a subcommittee chairman for each of those in the UK, and a similar on the other side. So that's how it operated. So there was close relationships there. And, there were some overlaps, some of the people, like me, and there were other, I wasn't the only one, there were others that served on more than one of the, one of the councils.

[1:27:50]
More than one, yeah. And, if you could explain what… You say, the objective is to encourage trade between the, the respective countries?

Yup. And, and particularly… And a lot of that was, really building up the contacts, on the other side, and, the councils would promote themselves, mainly through UKTI. And, you know, IT companies for example would say, 'Oh I want to do business in Singapore,' and they would put them in touch with me, and I could put them in touch with relevant people in Singapore. You know, go and see him over there; if you're interested, you know, if you're looking for a distributor or an agent, or, or somebody who knows the market, then I could put people in touch. So a lot of it was, you know, some dating really [laughs], we were a dating agency.

Yes. Networking and referral.

Networking and referral, yes. And it came the other way as well, you know, and Singapore companies, I could, I could point them in the direction of people here.

Mhm. And who, who funds the...?

Well originally they were funded by UKTI, but as money got tight in the UK Government, the money gradually got whittled away, and, to the extent that some of the councils then disappeared. The only one that's still going is the Philippines British Business Council, which does not receive any government money, and has not received any government money for, quite a few years. And therefore… It's run by business people with the support of the embassies, both the Philippines Embassy in London and the British embassy in Manila. And, that set of people does all the work now, without any involvement from central government. Though obviously the, the British Embassy is a government body.

[1:29:52]
Mhm. So… I mean it's interesting, I mean, particularly with our changing relationship with…

With the world.

…with the world. [laughs] Indeed. Particularly Europe…

Yeah.

…that such organisations aren't being funded, or…

Well, well it's, it's crazy in my view. But, you know, some of, some of the business people have been on the, the Business Councils for, you know, 20 years. You know, during that time, even if the Government support was there, you know, the

Government people would change every two years, and, particularly in the Far East, the longevity of the relationship is extremely important.

Mhm.

And, I find it amazing that, you know, the Government doesn't seem to understand that. But there we… But there we go. So, so… So as a result of that, there being no funding, the Philippines-British Business Council is the one that's still going. Out of desperation I decided I would create a website for them, because it was clear to me that nobody else would. So I created a website, oh gosh, seven or eight years ago, as the window into the, the British Business Council. And it has been amazing the number of contacts that have come through that very simple website, which has led on to people doing, you know, business between the, the two countries. And I, and I maintain it, the website, in what I laughingly call my spare time. [both laugh]

Do you get , do you get out to Manila much, or…?

Well I try and go once a year. I used to go more frequently when the Government was paying for it. But I do go out about once a year. And it's amazing. And I'm very keen to keep on doing it, because, keeping an eye on what is going on in the IT industry out in the Far East is actually quite important.

[1:31:58]
Mm. And, and of course you've been involved with other companies as well. You were involved with, is it Totem Systems, in, from, is it 2003 to 2009 you were involved there., or…?

Well I, I started mentoring the company, which was developing, it had a number of software products it had developed for the financial services world. And some of the products were very successful, but the, the business was struggling to grow. After quite some years we decided, well, it really needs an injection of funds, so let's work on a business plan with a view to raising some funding. And, the chap in charge , and I hadn't spot… I failed to spot that this was happening, but he was spending so much time writing the, the perfect business plan, which he did, it was a, was a very very

good business plan, but in the process he had forgotten to keep running the business while, while he was doing it. And sadly the, the business got into trouble and we never got round to going out to, to raise any venture capital. And, and the business sadly died. [laughs] But I, in another situation, I was helping another company through, a different venture capitalist, and, they sent me a, a very good example of how to write a business plan. And it was this particular one. [laughs] Which… I don't know how it had got to them, but… [both laugh] They sent it back to me as a very good example of how to write a business plan.

How to write a business plan… [both laugh]

Of a company that had just died.

…that unfortunately failed. Yes.

Indeed.

Dear oh dear.

Indeed.

[1:33:56]
And you were involved with IT World]?] and Buy IT[?].

Yeah. That came out of the CSSA. And, they started a… At the time, in the late, this would be the, Nineties, there were trouble with fixed price development contracts all over the industry. So, a working party was created within the CSSA, and, this organisation, IT World, Buy IT[?], got involved with it, and Buy IT[?] was all about publishing best practice in all sorts of areas of doing IT, in order to try and avoid all the disasters of fixed price contract. And, IT World was a very successful company. It ran awareness programmes for Government, not just in Buy IT[?] but, but all sorts of other programmes that, that weren't in IT. And I was invited to be Chairman, and it was a very interesting and successful time. The, the owner and chief executive got to retirement age, and, he passed the company on to the, the staff that were there at the

time, and I took the opportunity to step down as Chairman at that point. As far as I know, the company is still successfully run.

[1:35:37]
In operation today. And you're also a director at Site Confidence.

Yeah. Site Confidence was a start-up to provide a monitoring service for company websites, and, basically a service to constantly check a website to ensure it was still there, it was still working, it hadn't fallen apart, and to notify the company, you know, that your website's in touch. So, this was a service that was new, in those days, it hadn't been thought of. The two people who owned, who started the business, one of them used to work for me at the, at Triad, and he, he contacted me, you know, would I like to help with a start-up? So I was an investor. And, I was made a director in the early stage, you know, when the business was founding.

What, in 2000 or something?

In, in 2000. Yup. However, I mean, the two, the two people that founded it, one was the technical chap who used to work for m, and the other was a marketing chap who was very good at that. Sadly, eighteen months into the business the technical chap died in his sleep one night, completely out of the blue. And, which was quite a shock to a start-up business, eighteen month old, as you could imagine. And it was all hands to the pumps at that point to, you know, keep the business going. And eventually the business was sold , in 2012, to NCC, who used it as their portfolio company to, to monitor websites. And, so it's now getting incorporated into NCC, and is a very successful company. And a very successful exit.

[1:37:34]
Mm. Thank you. Alistair, you mentioned mentoring, and I said at the front end of the, the, our talk today, about your involvement with the Worshipful Company of Information Technologists.

Yup.

My understanding is you've been involved in mentoring programmes through the Company.

Through the Company. Yeah. I was there, I was part of the Entrepreneur Panel when Nick Birtles started it up, and, the mentoring came in very early into that. And so I, I joined into the mentoring process. I've mentored five or six companies through that. Sometimes the companies don't take the medicine, which is always a great problem for mentors. Sometimes they do. One of the companies that I was a mentor and I'm now Chairman of is, is a company called Enabled City Limited. It was originally Enabled London. And it was a, set up as a charitable company. And, the first thing I did was suggest we change the name, because Enabled London was very limiting. How could we sell our services to Manchester, Birmingham, New York and everywhere else, if we were Enabled London? So we changed it to Enabled City Limited, and, and converted it from a charitable operation to a, a commercial company. And it provides a number of software products for people with learning and other disabilities, notably products for way finding, if you can't read a map. We have a, a pop-up dictionary which is part animated for websites with difficult words. We are quite big in producing easy-read documentation for people who have difficulty reading or understanding English. Some of that work is for the NHS. We have developed a database of easy-read documents describing all sorts of medical conditions and medical procedures for those people who have difficulty reading and understanding English. And, we, we have also taken that into producing films for the NHS, preparing, presenting very difficult concepts in very simple and easy to follow terms. And that's proven to be quite an interesting area. What I find amazing, however, is the, in selling that, those products into the markets, the, a lot of companies just do not understand the need to provide some of these services to their customers. And, what we, what I have found to my horror is that, the people who buy the products are basically people who have family history or they know somebody who is disabled or with learning difficulties, and therefore they, they do understand. But I, I must say that I do find it shocking the, the lack of knowledge and understanding that's, that's out there.

[1:41:08]

Mhm. So some of this is, I say, more, as you say, helping the disabled community, if that's the right way of putting it…

Yes.

…and… But… And there's also translation work as well, are you saying?

No no, we don't do translation. W provide facility, you know, the, there is a product called Word-Bank, which basically, you can license for a, a, a company's website, and it will provide you with pop-up animations for highlighted words.

Ah right, OK. So that's a, that's where I was…

So it's for their customers. So it's provided for the organisations to provide the service to their customers who may have disability.

Mhm. Mm.

We are in the process of turning that on its head. So rather than license the organisations, we're working on a model now to license the people who need it, so that they have it in their browser wherever they go, rather than them finding it only in the places who bother to license it.

Yeah, that...

So, so we're, we're in the process of turning that on its head at the moment.

So it would be, what, an add-on to a browser, is that the…?

Well, that's, that's the model at the moment. There may be a slightly better way of producing an app.

Oh right.. Good. Yes.

You know, turning that into an app. We haven't quite finished that.

[1:42:33]
And, support and sponsorship for this organisation?

What, personally? Well I am, being a member of the, the livery, you're talking about the livery?

Mm.

I joined the livery in the mid-Nineties. So, 20-something years. I, I've served on, well I've served on the Entrepreneurship Panel, the Accessibility Panel. I was on the Industry Committee some years ago when the then chairman of the committee suggested that the livery should abolish it. Which didn't go down at all well.

Mhm.

So, I, [laughs] I was in the hot seat at the time, so I got put in to, to run the Industry Committee, which is quite fun. And more recently I'm helping with the membership committee and in particular producing, with others, the membership recruitment strategy for the livery.

Oh right. Yeah yeah.

Which is in the final stages of getting nailed down.

Mm. And we should actually explain that, the IT livery company is what, 800 strong now.

800 strong, yes.

And, one of the most active companies in the…

Indeed so We're not short of members. There has been a feeling that, in its early days it did capture all the captains of the IT industry, but, as time is going by we, we, we are in danger of not doing that. So we, we're trying to make sure we do capture all the captains of the IT industry, for all the right reasons.

[1:44:24]
Yes. [laughs] Thank you. And, just returning back to Enabled City, they, looking on the website, and thinking about sponsorship, I don't know how they get involved, or perhaps they buy your products, but, you know, Premier League football teams, or at least one has got involved, and…

Yeah, well that, that is, that's a market that they are selling into. They have already sold into Tottenham Hotspur.

Mhm.

They've spoken to most of the other Premier League clubs. We've even spoken to the Premier League organisation itself. But at the moment it is, it's a very difficult sell. The… Most of the Premier League clubs, sadly their grounds are pretty full most of the time, therefore, there is a view in certain places that perhaps they don't need to do too much to encourage disabled people, because they can sell the seats anyway. Which is, in my view, not the best attitude to have.

No. No.

But…

But Spurs for example, they've bought the system, and they…

As far as Spurs, they're a shining example of, you know, looking after the totality of their, their fans, their visitors, and the community in which they live, in that the, sport is a wonderful vehicle to encourage people with disabilities to get engaged. And Tottenham Hotspur in particular are doing a fantastic job of working with their community, and disabled people in their local community, and getting them into sport.

Mm. So this system that Enabled City provide, enables disabled people find their seats, or what is the…?

It, it's… For, for the community element of it, the football club has a, a charitable foundation. They run a number of programmes to engage local people with the club. So they run, you know, training courses playing football for people with all sorts of disabilities. But one of the prerequisites is that the, the individuals need to get to the sportsground where they're having their training course.

Mhm. Yes.

So people who are not used to travelling on their own, they need, need help to do that. And our product is a way-finding, a product that helps them research where they're going, see the route that they might take, and familiarise it and make sure, and increase their confidence, as they, as they head that way.

Seems a very worthwhile product. Let's hope it's, he take-up improves going forward.

I'm sure it will. Yeah. Several of the other League clubs are very keen on it, and, we're just waiting for them to place the order to be honest. [laughs]

[1:47:33]
Yup. I wish you success in that. Talking about IT generally, what do you think is… If I was to ask you about the biggest challenges or opportunities for the IT industry in the next ten years, what thoughts would you have on that?

[pause] I think the opportunities are, you know, increasing. IT is getting everywhere now. The whole artificial intelligence thing is, is kicking in; it's been on the sidelines for many years, but it seems to be coming to the fore now I think. The whole entrepreneurship world has changed since, you know, when I, when I was a, a youngster, nobody knew about entrepreneurs. Nowadays, the IT industry offers an

opportunity for, just about anybody. You know, if they've got a phone and a, a computer, they can start a company.

Mhm.

And, that's a fantastic opportunity. I think, however, there's far too many people doing it that, you know, there's quite a few who are not going to make it. But then, to be able to do that, I think is a, is, is wonderful. And so, the whole, the whole business knowledge needs to get tacked onto the technology, and sadly, there are too technology people who have a, a whizzy idea but don't necessarily have the business skills to turn it into a business. A lot of them will succeed, but quite a lot more will fail.

Mm.

So… Who knows where the, the technology is going. It's almost impossible to predict. I think the autonomous cars is going to be an interesting challenge. I think it's definitely going to come. I think it's probably going to take longer than everyone thinks. I think there are still many what I would call run-of-the-mill applications still yet to be developed. But we're seeing that all the time with, you know, new businesses popping up. There's clearly got to be a lot of consolidation that are, you know, there are at least, you know, ten brand new companies all trying to do the same thing, no matter where you look. And they all can't be successful. [pause] I don't know what the, how the technologies change, I wouldn't even hazard a guess as to… Interestingly, the structure of computers has hardly changed over the last 60 years. And I, I guess that's going to continue for a while.

[1:50:25]
Mhm. You mention, it's probably easier today, for, as you say, young entrepreneurs to set up businesses et cetera.

Yup.

But, the concern is, where they get the, the business nous, if that's the way of putting it.

Indeed. Yup.

And you've shared with us today, issues of, you know, a business that ran out of cash, you were talking about, cash is king. Where do you think individuals can get that knowledge today?

Well now, the, the livery mentoring scheme will continue and grow. And, and that is one place undoubtedly to do that. There are… I mean there are, there are other mentoring schemes out there as well. I think, you know, people who have been there and done it and got the T-shirts are well worthwhile picking their brains. [pause] Also I would encourage people to come to the livery and, and get involved with the mentoring scheme.

[1:51:32]
Thank you. What advice would you give to someone entering the IT industry today? I know we've just talked about the entrepreneur side, but, outside of that, what advice would you give someone, either entering or considering entering the IT industry?

I would say, go for it. I think there are tremendous opportunities. It's not a single career. I think there are, there are many career directions one can go within the whole brand of IT. And, there are opportunities to carve out your own niche and, you know, and make a name for yourself in our industry. I think it's a wonderful place to be.

Mm. Well thank you, and thank you very much for sharing with us your, your career today.

Thank you.

And insight to business. It's been a, a pleasure to speak to you. And I wish you all the best for the future. Thank you Alistair.

Thank you Jonathan.

Thank you.

Thank you very much.

Thank you.

[End of Interview]