Stephen Baker

Interviewed by

Richard Sharpe

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Via Zoom

Welcome to the Archives of Information Technology where we capture the past and inspire the future, and I think you'll find that the participant who is making his contribution to the archives today does indeed have an inspiring story to tell about IT and his role in it. It is Tuesday, 14th September 2021 and I'm Richard Sharpe and I've been covering, researching and reporting on first of all computing and then the wider IT industry since the early 1970s. Born the same month as me is our contributor today, Stephen Baker, and I've counted up that Stephen has worked in his very varied career for about fifty-five companies and organisations, both in the private and in the public sector, so he knows about it. And he also started, like me, on the computing side and developed along as well. Stephen, you were born in Tipton in the West Midlands, a highly industrial town just north of Dudley. Is that right?

Yes, hello Richard, thanks for inviting me to take part in your IT Archives, it's a big honour. Yes, I was born in Tipton in 1948. Tipton is in the Black Country. There's often confusion as to what the Black Country means. A lot of people think that because it was very industrialised there was soot everywhere and everything was black. And yes, that's very true, but the real meaning of the Black Country is that there was a seam of coal that was about four metres thick, very close to the surface, and it meant that in the 16th century and 17th, 18th, 19th centuries, it was able, people were able to easily extract this coal and when the Industrial Revolution came along with iron ore and limestone, which was local at Dudley, all of a sudden the area took off and it became really a centre of engineering, metal bashing and heavy labour and heavy work.

If you want to see what life was like, then I suggest to anybody who's listening to this or looking at it, they must go to the Open Air Museum in Dudley, which is just south of Tipton, and there they will see a fantastic reconstruction, moved brick by brick often, of old parts of the Industrial Revolution and more modern parts as well. It's a fantastic, a fantastic museum and people should go, I did enjoy it tremendously. So the background here was heavily industrial. Your parents were clerks were they?

That's right. Yes, they worked in the local authority, they were white collar workers and we lived on a council estate. There was my mum and dad and myself, and also my grandfather and grandmother, we all lived in the same house. And Tipton was a

pretty rough area in a sense. A lot of the work was very heavy labour, so you tended to find that people tended to take part in sports and activities, which in a sense reflected that heavy labour. So football was a big thing, West Bromwich Albion, the Wolves, which I'm a supporter of, a long-suffering supporter of. And the big other activity, besides the Methodist Church, was drinking. And it was a very heavy area in terms of drinking, mainly because it was, it gave the workers who worked in very hot environments, it replenished the salts. Unfortunately it had other side effects as well, so you tended to find that there was a lot of family issues around it and drunkenness and all the rest of it. But there were pockets of Tipton, in terms of either area or indeed culture, where you couldn't have gone to a better place. A lot of it revolved round the Methodist Churches.

[0:04:46]
Right. There were pockets of righteousness around the Methodist Church. And were your parents Methodists?

Yes. My mother in particular, also my grandmother. They were very heavily involved in what was called the Tipton Cathedral, and it was Park Lane Methodist Church and it was a big place, it had over 1500 seats in it and when it was the church anniversaries they had three sessions on the Sunday, on the anniversary day, and you couldn't get a seat, because it was...

Right. Now you went to school locally… you went to school locally did you?

Yes, I went to Tipton Green Primary School to begin with, and that was very local to where I lived. And then I took my eleven-plus, and I failed it. So…

Why do you think you failed it? Why do you think you failed it?

Sorry?

Why do you think you failed it?

Well, to be quite honest with you, I've never been that good at taking exams. I mean it's always difficult because they never tell you themselves why you might have failed it, just that you did, and really in the catchment area that I lived in, the local school to that was called Park Lane. And in those days Park Lane was a very rough school, it didn't have a very good educational reputation. I think that's different now, but certainly in those days in the early fifties, well, sort of late fifties, didn't have a very good reputation, a lot of violence at the school. So my mum knew the headmaster, because he went to the same Methodist church that my mum did, of Willingsworth County Secondary School, and that was a school that was probably about five miles from where we lived, so it was on the bus every morning, catching the bus at seven thirty. Schools didn't close for bad weather, so if the buses had stopped running you walked to school, just an accepted thing of the day.

Did you enjoy school? Did you enjoy school?

In some ways, yes, in other ways, I wasn't that bothered. I felt more at home doing things rather than necessarily learning things.

Doing what type of things?

Well, I used to, I know it sounds a bit trite, maybe, but I used to do a lot of model aircraft and things like that. So little bit of things with my hands and stuff. But I also enjoyed being in the Scouts and it was the Scouts that I thought formed the person that I became, because it gave you a sense of teamwork, it gave you a sense of trying to achieve things and it gave you a sense of responsibility. And I really do believe that the Scouts helped to make the person that I eventually became. It's not an advert for the Scouts but…

Are you good at teamwork? Are you good at teamwork?

Sorry? Yeah. Well, yes. Teamwork is essential, particularly in the sort of work that I was eventually doing. You're working with people and because I went to different companies to do my work, as a, either as a contractor or a consultant, you had to become a member of that organisation really, really quickly. You had to understand

the culture, you had to understand their problems, in a sense, in terms of doing the work they were doing, then you had to come up with solutions, and you had to do that pretty quick because people paid you to do the job. They didn't want you hanging around for a month trying to understand how it all worked. You had to get in there and hit the deck running. And I do genuinely believe that the time that I spent in the Scouts and the stuff that I did with them helped me to sort of develop that ethos.

So, you weren't destined for university.

No.

You left secondary school without really any qualifications, is that right?

Yes. Secondary modern was quite different to maybe what academies are today. The secondary modern in the Black Country really wasn't churning out academic people. If you were academic you went to the local grammar school and you learnt Latin. My wife went to the local grammar school, Tipton. She learnt Latin, French, you know, maths, English and all the rest of it. The school that I went to, as the headmaster pointed out on the first school assembly, was that, he explained why they didn't do O levels, as it was in those days, and his explanation was, was that you didn't need O levels to work on the factory floor. And that gives you an idea really as to where most people were expected to probably end up, was the factory floor.

[0:10:14]
You didn't end up on the factory floor, you ended up as a clerk, I understand.

Yes.

Again, did you get that job because of the family connection and the Methodist Church, or how did you get that job?

Okay. Yeah, my dad worked at West Bromwich Corporation and it was at a time when in a lot of cases people often got a job because of where their dad worked.

Yeah.

And it was in those days where it wasn't that difficult really to get a job, and so my dad said to me that there was a clerk's job coming up in the cashier's department, and he put a word in for me and I managed to get that job. Okay, these days it would be accused of, I don't know, insider information or, I don't know. But in those days that was really how people got on to the ladder.

Sure, sure.

Was their parents perhaps knew that a job was coming up, had a word with the manager, didn't necessarily mean you automatically got it, but you know, it was helpful to have your dad on your side, as it were. And that's how I got into West Bromwich Corporation.

So it looks as if your future is settled. You're going to be a clerk, you're going to be like your parents, you're going to be part of the white collar, but lower middle class or upper working class in the area of Tipton, serving the local community somehow or other, in case this borough. And then I understand from what you've told me before, what you've written to me before, then you saw a computer being installed. Tell me about this.

Yes. Okay. I realised very early on that to get on in the local authority, if you wanted to get on in terms of position, you had to get what was called the Institute of Municipal and Treasurers and Accountants certificate job and you needed to A levels and all sorts of things to get that. Well, that just wasn't really my bag of tricks. And I was sitting one day doing my work and I noticed that they were starting to take down some of the offices that were fairly adjacent to where I was. And somebody said that a computer was going to be bought. Now, you know, I didn't even know what they were talking about, but each day went by and I saw this room being constructed and air conditioning went into this room, and people who seemed to be outside of West Bromwich Corporation were coming in and doing things. And I saw some vans turn up and on the side of the van were the initials 'ICT'. Didn't know who ICT were, but

I later found out that that was International Computers and Telecommunications. Every day I would see…

And Tabulations. International Computers and Tabulations.

Tabulations. And they turned up and loads of boxes and things and out of these boxes came an ICL 1901 computer with 4k of memory.

[Richard laughs]

And there were some big printers, there was a 300 line a minute printer, card readers and some cassette decks as well, not even magnetic tape, cassette decks. And this was all set up and engineers came in and they did what they had to do and all the rest of it, and eventually they got this thing working and the sort of higher management of West Bromwich Corporation, to them this was, you know, rocket science this was, this was going to the moon stuff. And they were very, very proud of this computer going in and the fact that it was new. And I used to look across every day at what was going on and I'd see batch programs being run and boxes of paper being produced and payroll stuff and all sorts of things. And I thought to myself, well, you know, I'm sitting here doing my little bits and pieces and these guys look as if they're working towards what the future's going to look like, and it could be that my job may not be in existence in years to come.

You made that connection, did you?

Yeah.

You made that connection then?

[0:15:07]
Yeah. And I thought to myself, well, you know, what could I do to go into this. And I thought, well, there's no point in me trying to take exams and things because I'm not really very good at taking exams. But I was lucky that in those days there weren't really any exams to take, there were no real university degrees to take or whatever.

The only thing that you took was if you wanted to be a programmer, you took an aptitude test. Well, I asked if I could take an aptitude test, but at the time they said well, you know, we've got enough programmers, so we're okay. But I noticed that not only did they have programmers, but they also had people who operated the computer, and that looked really interesting. And I found out that you didn't have to take an aptitude test for that job. But again they said, well, at the moment, you know, we're fully complemented, so we're okay. So I started looking around to see if any other organisations would take me on computers and I found a small advert in a local paper, *Express and Star*, for a company in Tipton called the London Works Steel Company. Didn't know anything about it, obviously there was no internet or Google to try and search and find out about the company, so I applied, not knowing really how I would get on. And I went along to the interview and I said why I would want to get into computing, because I felt that it was the future and I felt that through hard work and application and trying to be at the forefront of what was going on, I felt that I could make a contribution. Now, I'm not sure what swung it at the end of the day, but they offered me the job, as a trainee computer operator.

Okay.

And I started in that.

And you started in April 1968.

Yes, yes. That seems a long time ago.

That's an interesting year. You're twenty years old.

Yeah.

When you were born, things were very much in a nascent form. The Manchester Baby Bell computer ran, another computer Cambridge University ran, so probably in the UK there were two computers, and at that year, '48 as well, the transistor was developed in Bell Labs. So we've got both computer and telecommunications in that year. Now, twenty years later, in '68, when you get your job as a trainee operator at

the London Works Steel Company, we've got ICL being formed and ICT and English Electric Marconi, etc, and there are about 2,252 computers in the UK, would you believe?

Oh, right. Okay.

In 1968. Fifty-four per cent of them made in the US.

Yeah.

Intel was founded by Moore and Noyce and IBM was about to create space for the software industry by de-bundling. Now, you were therefore on this very early curve. Did they train you?

Only on the job, there were no courses to go on. So I just trained by, you know, turning up every day, working my shift, watching what was going on and just learning purely on the job.

What computer… Sorry. What computer did the London…

A little… yeah, I was just going to say I did do a…

What computer did they have, the London Works Steel Company?

Yeah, they had an ICL 1901, 4k of memory, four cassette decks, card reader and a 300 line a minute line printer. And that's how they started.

What was it used for?

Sorry?

What were the applications?

Yeah. Mainly payroll to begin with, but then gradually they started to use it for invoicing and payments. I'll tell you a little bit later about what they eventually did, which actually hooks in to one of your other interviewees that you've done, a Mr Frank Jones. Now, I'll tell you about that in a second. But it was all the typical normal sort of accounting type stuff that was done. So you'd have the end of month accounting reports and all this sort of thing. It was all done by people sending bits of paper to the punch card girls who would then convert that into punched card, and we did some business actually as a result of punched cards. We used to sell the chaff as wedding confetti, but unfortunately, the brides tended to complain because they used to find the chaff would get down the back of the dress or whatever and the sharp corners used to cause all sorts of problems on the wedding night, as you can imagine. Anyway, we made a bit of money out of that. [laughs]

[0:20:52]
Was this computer, Stephen, run twenty-four hours a day?

No. It was one and a half shifts.

Right.

So basically it was from eight in the morning until normally about nine in the evening, that sort of thing. Later on we went to three shifts, plus weekends, plus buying in time from other computers within the Duport group. But when I first started out, it was about a shift and a half that we did. And obviously, for me it was great, because I was able to learn on the job, I wasn't expected to take exams, so to me that was a great way of getting started.

And what was the control console? Was that like a teletype with a roll of paper?

Yes, it was a teletype.

Yeah. With a roll of paper?

Yeah.

And you typed in the commands?

Yeah, you typed in all the commands. So you had a crib sheet, and so if you're doing the payroll, so the weekly payroll, you'd have a crib sheet, a, you know, what you had to type in, what the messages were that were going to come back, etc, etc. And so I mean it was all very, very basic. This was before operating systems came along like George 2, or anything like that. So yeah, everything was done manually.

And then the results would come out on a line printer and that would go thump, thump, thump, thump as it was printing out.

Absolutely. It would go across, zoom, zoom, zoom. Yeah. And if it was a real boring evening we used to sort of play various computer type games. Not the games that you're thinking, but things like if there were two of you there then we'd get the rings that used to be on the back of the magnetic tape and we'd do hoopla competitions and stuff like that and all sorts of things. But when we had the disks it was so slow that if you were doing a sort, you could actually hear the sort going on. If you were sorting information it would go, *de-dunk de-dunk, de-dunk de-dunk de-dunk*, and you knew exactly what, whereabouts in the program this was going on. So yes, I mean it's, you know, you compare it with today and it's…

Did you, like me, have a cleaning morning where you had to clean the whole… a cleaning morning?

That's right, yes.

One morning a week was cleaning and everything was vacuumed out, all the chaff was vacuumed out, the line printer was vacuumed out for the paper dust and the tape decks were all cleaned and the heads were cleaned. Did you have that cleaning morning?

Oh absolutely, yeah. In fact, I think it was about twice a week that we used to do ours. And cleaners, office cleaners weren't allowed in the computer room. This is the

days when you used to have an area, so you went through one door, then you closed the door and you stood in a little enclosure with a sticky mat on the floor and you had to tread your feet up and down on the sticky mat to get any dust and dirt off, and then you went through the next door. And people weren't allowed in the computer room. You had the authority to march people out of the computer room. Well, I mean, you know, this was absolutely fantastic really. I mean, you know, the power that you had to deny people to come into the computer room. And yeah, so we used to have to clean the floors as well, so not just the equipment, but also the floors, you know. And if the air conditioning broke down – you may very well remember this, Richard – if the air conditioning broke down, you didn't stop, but you had to improvise. And if it was the humidity that broke, then you'd boil a kettle in front of the tall air conditioning so that the steam from the kettle went up and then the air conditioning unit blew the steam out and that corrected the humidity in the room. I mean it's, you know, you look back on it and you think, oh… [laughs]

[0:25:30]
Did you become a shift leader?

Yes. Yeah, I became a shift leader, but then our computer operations manager left and also another person left at the same time, who would have been expected to have taken over, and the computer manager who was over everything, so the systems analyst, the programmers, the computer operations, he said that, you know, they're going to have to look for a new computer operations manager and I went along to him a couple of days after I heard about it and I said well, would you let me take on the job. And he kind of looked, you know, and said well, you've only been here a couple of months. And I said, well yeah, I know that, but, you know, I do feel that I could manage this and get it done. And he said, well okay, but obviously if you're doing that, you've also got to do the job that you're doing, because we'll be one short until we can get a new computer operator in. I said, but that's no problem. So I was in charge of the computer room and also all the staff that were doing the punch cards and also the staff that were preparing stuff for going into the computer, and I took that on. And after about, ooh, three months, the guy said, okay, we're going to make you permanent because you are doing a good job. So that was the philosophy that I took on for the rest of my life. I would be engaged in the sharp end of whatever was going

on and I would take risk, I would take risk within what I thought was my capability, you know, I wouldn't be stupid about it, but I would work outside my comfort zone. And that in a sense is what I did now for the rest of, you know, my working time in computers. And that's really the first part of the taking responsibility for people and in a sense, pushing myself.

You were four years at the London Works Steel Company and then you moved to Duponts Computer Services where you had apparently used some of their computing power and you were another four years there as the operations manager, yeah?

Yeah.

Okay. Where was Duponts?

Okay, it's Duport. D-U-P-O-R-T.

Excuse me.

That's it. Well, Dupont of course are the chemical people.

Yeah. Duport.

Yeah.

So this was a local computer services company, was it?

Right. What is was, was that in the Tipton area there were a number of, in those days anyway, household names. People like Vono. Vono produced furniture, and Slumberland, they produced beds. Then there were engineering companies like London Works Steel, Ewarts up in Dudley, and probably about, altogether about eight companies. They also had two big blast furnaces in South Wales, at Llanelli and Briton Ferry. So it was a conglomerate and Duport stood for Dudley Port, which was the area that most of these individual organisations worked, so it was a conglomerate. And Duport Computer Services was formed as the group's computer service.

Yeah. What computers did they have?

They had two. They had an ICL 1903 and an ICL 1904.

Right. Again, four years there. Then you moved to NBC Computer Services.

Yeah, the National Bus Company.

National Bus Company. Where was that?

[0:29:59]
That was in Birmingham.

In Birmingham?

Yeah. And the reason why I moved there is a link between one of your other interviewees, Frank Jones. When I was at Duport my boss was Frank Jones and, smashing chap, I got on with him, you know, really well, but he was only young, university educated, and after I'd been there for a number of years I couldn't see Frank at that point moving on. So I felt I was ready to, you know, take more responsibility, do other things. And as I say, I couldn't see Frank moving on, so I was recently married at that time, I said to my wife, I think I really need to move in order to progress. So I left Duport Computer Services and went to work for the National Bus Company. The National Bus Company was a conglomerate of local bus companies all over England and Wales – not Scotland, but England and Wales – and it included people like the Midland Red. It included bus companies down in London, other than the central sort of London buses, that wasn't part of it. But they also included people like National Coaches, so the national coach system that you see today was all part of that. And I went to work in Birmingham for the Midland Red, which was the part for that area, and it was quite a big bus company, there were a lot of buses, covered a wide area. And I was their Computer Operations Manager.

What were the applications?

Sorry?

What were the applications, Stephen?

Oh well, everything, payroll, accounting, blah-blah-blah. But also a big thing for them was spare parts and spare part management.

Oh yeah, okay.

Because they had loads of garages all over the place and their thing was obviously, I guess in the early days of being lean in terms of spare parts. You don't want too many spare parts around the place but you want them in the right place at the right time.

Yeah.

So it was almost like, you know, sort of modern day manufacturing on time and things.

Yeah, sure. Again, four years there. Now you picked up the responsibility, it seems to me, quite early on, to look after your own career.

Yeah.

That's what you have to do.

Well, yes. I decided that I was enjoying what I was doing, but I definitely felt that there were various pathways, and when I was at the National Bus Company I felt that yes, it was very interesting, it was an ICL computer, eventually they went to, they consolidated all their computers in the group and went for UNIVAC and they had three big UNIVAC processors, or 1100 series, and on the back of those three big centralised computers, they had thirty-two UNIVAC mini computers which were in each of the local bus organisations. But the main thing was, was that they were able

to hook up to the centralised systems or centralise facilities. So the spare part systems that Midland Red had became the centralised spare part system for the whole of National Bus. So we were doing all this remote processing and stuff and the moving of parts and the ordering of parts through this centralised system. But they could be accessed by each of the companies themselves.

So you're moving away here…

Which turned batch processing into online processing.

So you're moving away here from the classic batch processing.

Yeah.

You're moving into online processing.

Yeah.

There's some of the computing power is out on the fringes and inside the organisation in various depots, presumably, and garages and offices, but you have three central mainframes powering the whole thing up. And that's a process that developed at the National Bus Company.

Yeah.

You were four years there and we're talking now, you left in 1980, National Bus Company, and you joined Massey Ferguson Perkins.

Yeah.

[0:35:05]
What's this about?

Okay. I decided that the National Bus Company, although we'd gone to UNIVAC, it was very much all to do with the UK. You know, it was quite exciting but it was all to do with the UK and I couldn't see where the next step was going to come from in terms of innovation, the use of computers at the sharp end, blah-blah-blah. I also decided that ICL wasn't the company to be with if you wanted to be, and what was going to happen in the future, and that was telecommunications. IBM worked. I'll explain in a moment my attitude towards IBM. But IBM were all about big companies, doing big things, and Massey Ferguson was a big company at the sharp end of the automotive industry and they did big things. And I was taken on as their Network Development Manager for voice and data communications through Europe and to their central base, which was in Canada. Massey Ferguson were a Canadian company that had a big presence in America, they're a very big presence in Europe, South America and really all over the world. And they had a centre in Birmingham, what they call a Euro Centre, and this looked after all the computing requirements in Europe. So now I was starting to get involved with projects that were European-wide, and also I had responsibility for telecommunications to the main Massey computers in Canada and also the States.

So…

Not the actual computers over there, but the telecommunications to them. So…

So Massey Ferguson was an IBM user?

Yeah.

So you moved from ICL to Unisys to IBM.

Yeah.

Where did you learn the skills that were needed to be the European network development manager? Where did you learn those skills?

Right. I learnt those skills basically in the work that I'd been doing, you know, both in terms of creating networks. I'd created the network for the UNIVAC system at the National Bus Company.

Yeah.

So I put together how that was all going to work and implemented it. So Massey obviously felt that there was potential in the work that I had done that could be taken forward into what they were doing. Again, we have to remember the environment we were in in those days. We're not talking about the internet, we're talking about the implementation of private circuits from one place to another. So Massey Ferguson, for instance, from their Euro Centre had nodes in France, Germany, Italy, etc, and you would have circuits from BT and from European telcos to connect those up. So you didn't do like you do on the internet now, just have a bit of a circuit to a local node and that's it, you had to have the actual end-to-end connectivity. And there was much more to it in those days, you were actually developing a private network, as it were. And all companies had to do that, it wasn't just Massey Ferguson who did that, banks did it and all the rest. So what I felt interesting was the fact that I could develop this under a kind of an IBM envelope and also I could test myself and develop myself by trying to do what I'd been doing previously within a new environment, which was Europe. So…

[0:39:41]
IBM was notorious, was it not, as a company that would support the customer, that would help you do what you needed to do, because if you had bought IBM or the people at Massey Ferguson decided to have IBM, you had a support organisation in IBM that was going to try and make the user succeed. They didn't just dump the hardware and run away with a cheque, did they? They came in and supported you, so they helped you build this European network did they?

Erm… I have to be a little careful, Richard, now, because IBM at that time, there was a saying – you probably heard it – you never got sacked for buying IBM.

Yeah.

What IBM did - and you may perhaps not want to use this, because it could be derogatory, I don't know – but IBM's interest wasn't in helping the user, in my view, it was controlling the user. And by that I mean controlling what they did in terms of putting in IBM mainframes. As I say, this may be the bit that you want to perhaps edit out.

No, no, it's all part of the story.

Okay. And the interesting thing was, was that it was at Massey Ferguson that I learnt about politics of big business and in particular IT companies. At that time Big Blue, as they were called, when they went into a company, yes, they did support you, but it was support from the point of view that you were going to be IBM from now on. If you did not, if you wanted to put other people's equipment in, you would have problems, and they would be ruthless, they really would, they would have you sacked. So even somebody like me, as the European Development Manager, if I'd said I don't want IBM's whatever, I want something else, believe me, they'd be through the door of my boss like a shot. And this actually happened, not to me, but it did happen.

What IBM equipment did you have?

Okay. Well, we had 3033s…

3033s. So top-end mainframes.

Yeah. We also had, which I was particularly responsible for, were the FEPs, front-end processors. Those were 37… those were 7525s. Was it 7525s? Something like that. And these were basically, the front-end processor was the communication system for bringing in VDUs and stuff like 4300 and computers, things like that.

Now Stephen, did Massey Ferguson have total IBM? IBM disk drives, IBM tape drives, or did they have plug compatible peripherals?

Right. To begin with, yes. But they started to move away from IBM in certain areas, and I'll tell you about that. We put in the 37… I can't remember the number now, it was either 3725s or 7525s, can't remember. And they were using SNA. Now, SNA was IBM's version of X.25 and all the rest of it.

It was Systems Network Architecture.

Yeah.

And the protocol was…

And this was their – yeah – and this was their way of having remote peripherals like 4300 mini-computers, VDUs, etc, all coming into their mainframe. They controlled at the delivery mechanism, they used a program called MSNF – Multi-Service Networking Feature – and what this was designed to do was to bring in these devices to hook up to the mainframe. And if you only had one mainframe and one FEP controlling all this, then that was fine, but Massey Ferguson, we had more than one mainframe and they were starting to develop systems that required a VDU in say, France, to be able to come through the network and hook in to more than one host, more than one mainframe. And with that MSNF in those days, when you signed on, you signed on to the FEP and you were taken through to your host mainframe. If then you wanted to go to another mainframe, then you came back out again and you went to the other mainframe FEP and you went in that way. But you were always logged in to your host mainframe. So if that host went down, even though you were talking to another computer, you'd go down with it.

Oh right, right.

[0:45:53]
And we didn't want that, and we came across a piece of kit called Comten 3800 and this was revolutionary because you didn't have to go up to the IBM mainframe in order to sign on. You went into the Comten and you could go anywhere. And also, you could put a whole variety of devices on to the Comten that weren't recognised by IBM on their FEPs.

I don't think IBM was very pleased about that.

Livid. They were absolutely livid. But what it enabled Massey Ferguson to do was to start introducing all sorts of different types of terminals that weren't IBM, because the Comtens, they worked on the principle that you could just go straight through, it was transparent. But IBM, you have to go through IBM. If your device wasn't recognised by the IBM system, the LU6.2 as it was called, then you didn't buy that device. But now, you could buy anything, and all the IBM mainframe links to the network was just another piece of kit. Whereas under the IBM FEP the mainframe was everything. And what happened was, was that Massey decided that because of that they could start building the confidence in other areas. So they took out all the disks from IBM and they put in CDC disks.

Yeah.

And what happened was that IBM got so upset about it that my boss's boss, who was responsible for the whole computer set-up, he was basically pushed out and the person who came in to take his job had two jobs previously being a vice president in IBM. Within six months everything was taken out that wasn't IBM to be replaced by IBM kit, going back, regressing to really third world thinking in terms of networking. Because networking now was the centre, it wasn't the mainframe anymore, it was the networking capability.

'82 you moved to Milton Bradley Hasbro as the manager of European MIS operations. What was that, briefly?

Okay. The reason for moving was that the Midlands at that stage were going through horrendous job losses. The big jobs that had been there before, big steel companies, etc, they were all coming to an end. So there were job losses all over the place. Massey were going through problems as well. Eventually they had big problems, Massey, but I wasn't there at the time. It's interesting though that Frank Jones actually had some involvement with Massey Ferguson in one of the companies that he

was a director of, they took over the processing that went on. So that was interesting for me to find out when I was reading some of the profiles.

Well, Frank still lives in the Black Country.

Yeah, so I believe, yes, yeah. Yeah. And…

So you moved to Milton Bradley, what is Milton Bradley?

[0:49:50]
Well, Milton Bradley was one of the largest toy and games manufacturers in the UK.

Ah, okay.

Yeah. And they were taken over eventually by Hasbro. Hasbro, My Little Ponies and all this sort of thing.

Was this an IBM user?

Er, ooh, were they an IBM? Yes they were. They used IBM Series/1 computers.

Series/1?

Series/1. So I mean you're going down to really basic stuff.

Yeah. This was a little mini-computer that IBM produced.

Yeah. And I was brought in because they wanted to modernise, basically, on their computers. And I was responsible for Europe and I put in as a result, HP: mini-computer systems and also a telecommunications system. Racal-Milgo Planet, local area networks, things like that. Also voiceover data connections up to the States so they could use spare circuitry for voice communication.

Okay.

So, but also, I wanted to get down to the south. The Midlands to me was going under a huge…

Yeah.

… really industry was falling about like nobody's business.

Yeah, sure.

So I brought my family down south because we felt, my wife and I felt that at the end of the day that was the place to go.

Where did you move to?

Oh, Wokingham.

To where?

Wokingham.

Wokingham? I know it.

Yeah, not far from Reading.

Yeah. And you were Management Information Services, yes?

Yeah.

This was the new title, MIS, Management Information Services. So you were three years there, then you made a very interesting move, you've been in users all the time – London Works, etc, etc – and then in 1985 you moved to System Designers.

Yes.

So you become a consultant, a senior consultant to other users.

Yeah.

Okay.

I'll tell you the reason for that.

Yeah, do.

I'd always wanted to run my own business and I felt that having been in computing for twenty years, I'd got something to offer to other people. I didn't really want to keep having to work for them permanently, because I would go in, normally I would go in on exciting new developments, those would be implemented and then it would be normal day-to-day stuff after that. And obviously when you're in permanent employment, if you skip about too much then people tend to think, well, you know, he's only here for a short time, will I take him on? So it was at the time when contractors were just starting to come on the scene, but I felt I needed to understand what it was like to be a consultant, I needed to understand that environment. So I said to my wife, because she's always been very supportive in what I've done, I said, I think I need to move into this different type, because I would really love at some stage to be able to do my own business. And I went there really, more than anything else, to learn what it was about to be a consultant and work in a consultancy type business.

Right. You really are an autodidact, aren't you, Stephen?

[laughs] Well, as I say, I've never been in a situation where things just dropped into my lap. I have great admiration for anybody who goes to university and gets a degree and all the rest of it, but to walk into a job just because you've got a university degree isn't my way of developing. So, because I knew I'd never get a university degree, I mean, where I lived in Tipton there was no way you would go to university. You know, your parents couldn't afford you to go to university, it was never talked about, so you know, it was never on the agenda for most people.

Sure.

So I felt that all the time I had to basically take charge of the direction of what I wanted to try and do. So I kind of tried to weave, you know, a little pathway to say well, these are the things I need to be involved with in order to perhaps try and achieve something that I felt I could offer.

[0:54:57]
Other people of your age, Stephen, you see, if they'd have joined IBM, yeah? Other people of your age who are born, you know, '48, the great year, '48, they would have had their career looked after for them.

Yeah.

They would have been put in cotton wool and trained up and moved from place to place and their career would have been planned for them, and we've had many people, senior people from IBM and other corporations who operated like that and who were looked after and rose quite close to the top as a result of that. You actually had to do this yourself. So in '87 after just twenty-one years of work, of permanent employment, you decide that's it, it's now going to be Stephen Baker Incorporated and you're going to go on your own, is that right?

Yeah.

Now that was a big, big shift, a big shift.

It was. It was a big shift, not just for me but for my family. And that's why when I was writing up my little paper to you, I put that one of the things that everybody should remember is the support that they get from their family.

Yeah.

And that they should cherish that, and I've always done that.

Now begins this incredible list of companies and organisations you worked for, both in the private and the public sector – one, two, three, four, five, six companies in employment and now forty-nine or so companies as a consultant, as Steve Baker Incorporated. Now, I want to ask you about a number of things in this wonderful portfolio of your work as a consultant for yourself, Stephen. Number one is, do you have a view of the different qualities of public sector IT and the private sector IT? You've worked for both, what's your view of them?

The private sector tends to employ people who are focussed on what has to be done and puts in systems to ensure that they are done. And I'll explain that maybe a little later. In the public sector – this is obviously my own field – but I've found that public sector management were only too pleased to have the responsibility of IT and all the rest of it taken away from them and given to somebody else. And whereas in the private sector, the private sector would say, these are the terms and conditions under which you will do this work for us and these are the qualities and criteria by which we're going to judge you, it tended to be the other way round in the public sector, it tended to be the big consultancies and the big outsourcing companies that say, don't worry about it, we know what we're doing, we'll just do it and when we've done it we'll tell you about it and we'll show you what we've done and off you go. And that was a big relief to most of these people. I - again you may not want to keep this segment in - but I believe the public sector were taken advantage of by these companies and I've often used the phrase that a lot of these management consultancies would create problems and then ride to the rescue by suggesting that they could, for more money, overcome those problems.

Does this lead, Stephen, in your opinion, to such horror stories as the Post Office Horizon system?

Yeah. Oh, absolutely. And it was because, in my opinion, a lot of these companies, their methods of implementing wouldn't be necessarily from the interests of the customer, it would be from their interests of being able to get the job done and it was tested almost when it went wrong and if problems occurred, well, oh yeah, we can sort that problem out for you. It'll cost, you know, six days' worth of work at £1,000

a day, blah-blah-blah. And I mean this is only my cynical view of it, but I've seen a lot of it and I don't, personally I don't have much time for a lot of management consultants. Individuals in there, probably okay, but I've worked on some projects for very, very large companies where the cynicism of the company to the customer was, in my opinion, unbelievable.

[1:00:22]
Okay. Now, you've got a lot of work up until close to the change of century, and I see now a term appearing in your CV, which I want to quiz you quite deeply about, Stephen, and that is Y2K.

Ah, Y2K.

[laughs] Now, we've had a lot of contributions from people in the archives about Y2K, from on the one hand people arguing it was wonderful piece of con work by consultants, right the way through to the other side saying, what a wonderful job the consultants did because nothing really fatally fundamentally cracked, they did their job well. And you became, in '97, the project manager for the Royal Bank of Scotland for Y2K. You worked at the coalface for three or four years, sorting out Y2K issues. My first question to you about it, Stephen, is when you looked at these computer systems that were there inherited, were they really as bad as really needed fixing?

Possibly not as bad as it could have been, but certainly in some areas it would have caused problems. And I can give you a real example…

Good.

… because I've got, I sent you a testimony that was given to me by a company called Aspect Telecommunications, and I can use that as an actual example. When people talked initially about Y2K, it was about the date change and people were saying, well, okay, if we can get the date to change from 31st December 1999 to 1st January 2000, if we can get that done, then that's it, that's all that matters. And a lot of people, you know, sort of went along with the fact that that's all that mattered, because a lot of these companies, a lot of people producing equipment or software, they only felt

that's all that was required. But I did an extra set of tests and one of the big areas I was looking at was the Royal Bank of Scotland's call centre set-ups. So this is where customers would be phoning in and the calls would be managed and all this sort of business – ACD, automatic call distribution – stuff. And Aspect was one of the biggest of those companies in the world. And my job was to get a confirmation from every one of our, the Royal Bank's suppliers on telecommunications systems that their equipment was compliant with year 2000 requirements. And so I started off by writing to Aspect and saying – and this was in 1997, so the Royal Bank of Scotland was way in advance of most organisations at starting to look at them – and I wrote to them and I said, you know, can you tell me your product is either compliant or you will be making it compliant to year 2000 obligations, not that would the date change, but obligations. And they wrote back saying yes, you know, we can tell you that will be the case. And I thought to myself, well, they seemed to come back quite quickly with that answer, is there a way I can test it out. So I had a word with the lady and good friend of mine who worked at the Royal Bank of Scotland who looked after all the ACD equipment, the infrastructure. And I said, you know, will you be having any new ACD being brought on board in the next couple of months, maybe that I could use to test whether or not this is actually going to work or not. So she said, yes, we've got one coming in a couple of months' time, yeah, I can put that over to you and set it up and you can do the testing you want to do.

[1:05:04]

So I thought to myself, well okay, I can do the tests for the date change, but within ACDs there are requirements for functions to be set up that are dependent upon the date, and I thought to myself, I wonder even if the date changes, whether these functions would still work. So we did a test and we set it up and they didn't work, so the date changed but none of the functions that were associated with what they were trying to do worked. So just to give you an example, they may set up for calls to be made, let's say, on 3rd January 2000 at 2 o'clock in the afternoon, and those would be set up by the system automatically. Well, we tested that, so in 1999 we programmed, with the data of 1999, we programmed it to run this particular function on 3rd January 2000. And we altered the date, so I altered the date by ten minutes to midnight, we set the computer clock up, we went over and I ran that then for two days, waiting for this thing to happen, and it didn't happen. So we did it again on a different sort of setting. Didn't happen. So I called up Aspect and I said could you send me one of your

engineers, because I'd like you to tell me if I'm doing this wrong, you know, where am I going wrong. So they sent the engineer in, and two days after the engineer went I had a phone call from Aspect saying we think you've identified a problem. And they said, the problem is, is that we use UNIVAC computers and UNIVAC computers didn't, although they did the date change, the functions that were associated with what you'd set up didn't work. And it was interesting that the Royal Bank had also ACDs from Phillips, from Ericssons, and we tested each of these and sure enough, they didn't work, and the reason was, was because they were using UNIVAC processors as the core of their ACD system. Now, from the time that we identified this, it took Aspect seven weeks to rectify the problem, test it and roll it out to us. Now, if during year 2000 that had happened, then on the- I'm sure maybe the timescale would have been reduced, but you could have been a few weeks without using. So that meant that a bank would be having great difficulty communicating with its customers. But you imagine an emergency service suddenly finding that it can no longer take 999 calls, or things associated with that weren't happening. So what happened then was that Aspect did all their changes and they sent out a new release, and of course that went worldwide to every machine that they had. So…

[both speaking together]

So your argument is that it was essential work and from there on, from the Royal Bank of Scotland you went to Y2K conferences making presentations, Commissioner for Local Administration in Scotland, the Prudential Corporate, First Energy, First Direct, thus 2020 Logistics and the Student Loans Company, all of them using this expertise that you have, you continually developed to make sure that Y2K was not a catastrophe.

Yeah. And it was mainly built on the fact that for instance, as I was saying, when Aspect changed what needed to be changed, as far as the rest of the world of Aspect users were concerned, it's all working. What they didn't know was that a company had found initially that it didn't work and things had changed. So for the vast majority of users of ACD, what's the big deal, what's the fuss, what's all the fuss about Y2K, you know, it's working. Well, it's working because we established that it didn't work in the first place and it was corrected. And that's what annoys me about

when people say, well, Y2K, you know, so what, all that money spent, so what? Believe me, it wasn't, so what?

[1:10:20]
What mistakes have you made in your career, Stephen?

I guess some of the mistakes were, well, some of the mistakes, I guess, were the fact that when you're in business for yourself, no one owes you anything. And during the slump of 2008, getting work for anyone was very difficult, I just felt that I needed to sort of keep going, but from a financial point of view, we were in a little bit of dire straits. Obviously I had my family, I had a house with a mortgage, I was down to my last £1500 and I just happened to get a contract with the Royal Bank of Scotland in Scotland. Now normally I wouldn't have travelled all the way to Scotland to do anything, but I managed to get that work and that introduced me to the banks up in Scotland, like the Bank of Scotland, the Royal Bank of Scotland, etc. So my mistakes in a sense, I'd guess, were not being able always to get the consistency of work. I mean one of the problems is of course, is that when you're working you don't have the time to build up other things. I decided fairly early on that I wasn't going to build a company of consultants, because I was too interested in actually just doing the work myself. So of course you're either a hundred per cent work or you're zero per cent work, there's no in between in a sense. And that was in a sense, because that put pressure on my family…

What's your best advice, Stephen, what is your best advice for people who are going to or are working on their own as many, many more percentage of people within the IT sector are? What is your best advice, given the many years of experience and success that you've had?

You've got to be able to accept the fact that your skills may not always be needed at a point in time. The one thing I always did was that I made sure I either got into projects that were leading edge, or I was getting into companies who were introducing projects at the leading edge. I didn't coast, I took risks. If you're not prepared to take risks, then I wouldn't do it. If you're looking for a comfortable lifestyle of, you know, the money just comes pouring in all the time, well, that isn't how it, you know,

that isn't how it happens. You've got to be able to take the downtimes as much as the good times and if you've got a family then you've got to have everybody on board with you to try and do that, because the problem is, you may know what you're trying to do and where you're trying to go, the family are dependent upon you to get that right. So what I would say is I think these days it's more difficult, perhaps, to be on your own, unless you come up with an idea or a product that basically enables you to attack the market. If you're doing what I was doing, I was very lucky, I was able to get in at the very, very beginnings of computing, and all the work I got was built on my experience and ability and things like, you know, having references and stuff that people could refer back to to make sure my CV wasn't, you know, a sort of a novel. So it's up to the individual at the end of the day as to what they feel they can do.

[1:15:01]
Do you have children?

Yes, I have a daughter.

And is she in the IT industry?

No, absolutely not.

[both laughing]

No. I have grandchildren as well. And one of the big problems as well, of course, is that you've got to go wherever the jobs are. So if you say to yourself I'm only going to do jobs in Milton Keynes – because that's where I live – well, you're going to be limited, so your family has got to also be able to accept that maybe during the week you're not going to be there. And this is what I had. I would leave normally on a Sunday lunchtime, catch the train to wherever I was working, wherever, and I wouldn't be back till 7 o'clock on Friday night. And, you know, you, I mean your family have got to accept that.

That puts a lot of strain on the family.

Yes, it does, and that's one reason why when I kind of stopped in 2011, my focus then was really we need to do things, I need to do things that are family orientated, with my wife. And, you know, we've been very lucky that we've been able to do quite a few different things, cruises and going to America for three months in the winter. And, you know, that I think is sort of the end achievement in a sense in what you're trying to do, but…

Well, thank you very much for your contribution, Stephen Baker. It's been a tremendous story, tremendous story about a boy from Tipton who failed his eleven-plus, didn't go to university, but made a significant contribution to the IT industry over the years, and I'm glad you're enjoying your retirement, you certainly do deserve to enjoy it. Thank you very much, Stephen Baker.

Yeah, thank you Richard, it's been a pleasure talking to you.

[1:17:15 – recording ends]